Prepared for
Dynegy Midwest Generation, LLC

Date
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Project No.
1940103649-010

2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS
CCR UNIT 804

RAMBOLL Bright ideas. Sustainable change.

2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT OLD WEST ASH POND

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ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
40 C.F.R.	Title 40 of the Code of Federal Regulations
A5D	Quarter 3, 2022 Assessment Monitoring resampling event
A6	Quarter 1, 2023 Assessment Monitoring sampling event
A6R	Quarter 2, 2023 Assessment Monitoring resampling event
A6D	Quarter 3, 2023 Assessment Monitoring sampling event
A6DR	Quarter 4, 2023 Assessment Monitoring resampling event
ASD	Alternative Source Demonstration
CCR	coal combustion residuals
CMA	Corrective Measures Assessment
GWPS	groundwater protection standard
HPP	Hennepin Power Plant
IEPA	Illinois Environmental Protection Agency
NA	not applicable
OBG	OBG, Part of Ramboll
OWAP	Old West 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

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.) § 257.90(e) for the Old West Ash Pond (OWAP) located at the Hennepin Power Plant (HPP) near Hennepin, Illinois.

Groundwater is being monitored at the OWAP in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment Monitoring was initiated at the OWAP on April 9, 2018.

As discussed in **Section 3** of this annual report, the monitoring system was updated in 2023 to use the same monitoring system 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 levels (SSLs) of 40 C.F.R. § 257 Appendix IV parameters above groundwater protection standards (GWPSs) were reported in 2023:

- Arsenic at wells 21R and 51
- Cadmium at well 22
- Lithium at well 22

Alternate Source Demonstrations (ASDs) were completed in 2023 for the cadmium SSLs referenced above.

As required by 40 C.F.R. § 257.95(g)(3)(i), a Corrective Measures Assessment (CMA) (OBG, Part of Ramboll [OBG], 2019) following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019 to address SSLs for total arsenic, total lithium, and total molybdenum. The CMA evaluated closure in place with a geomembrane cover system in accordance with the Closure and Post Closure Care Plan submitted to IEPA in January 2018. IEPA approved the Closure and Post Closure Care Plan on June 19, 2018. Closure construction began in August of 2019 and was completed in November of 2020.

The OWAP is also regulated under 35 I.A.C. § 845. Quarterly groundwater sampling for 35 I.A.C. § 845 compliance evaluation was initiated at AP2 during Quarter 2, 2023. Exceedances of GWPSs established under 35 I.A.C. § 845 were determined and require corrective action through a permitting process administered by IEPA. Therefore, remedy selection will take into consideration compliance with both 40 C.F.R. § 257 and 35 I.A.C. § 845.

In accordance with 40 C.F.R. § 257.97, remedy selection is to be completed as soon as feasible following completion of the CMA. As required by 35 I.A.C. § 845.670, a corrective action plan that identifies the selected remedy must be submitted to IEPA within one year after completing the CMA completed in accordance with 35 I.A.C. § 845.660. On December 10, 2023, Ramboll initiated a CMA for the OWAP in accordance with 35 I.A.C. § 845.660. It is anticipated that a corrective action plan will be submitted in 2025 that meets the requirements of both 40 C.F.R. § 257 and 35 I.A.C. § 845.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Dynegy Midwest Generation, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the OWAP located at the HPP near Hennepin, 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 (**Section 2**), summarizes key actions completed (**Section 3**), describes any problems encountered and actions to resolve the problems (**Section 4**), and projects key activities for the upcoming year (**Section 5**). 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 (**Figure 1**).
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 (**Section 3**, paragraph 1).
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 (**Section 3**, **Table A**).
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) (**Section 3)**.
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 (see **Executive Summary**). 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 OWAP for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

Groundwater is being monitored at the OWAP in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment monitoring was initiated on April 9, 2018. SSLs of arsenic, lithium, and molybdenum were determined for the OWAP and alternative source evaluations were inconclusive for these SSLs. In accordance with 40 C.F.R. § 257.95(g)(5), a CMA following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019. A public meeting was held on December 17, 2019 at the St. Margaret's Hospital Presentation Room in Spring Valley, Illinois to discuss the results of the CMA in accordance with 40 C.F.R. § 257.96(e). The CMA evaluated closure in place with a geomembrane cover system in accordance with the Closure and Post Closure Care Plan submitted to the IEPA in January 2018. IEPA approved the Closure and Post Closure Care Plan on June 19, 2018. Closure construction began in August of 2019 and was completed in November of 2020.

Cadmium SSLs were subsequently determined for the OWAP in 2022 and ASDs have been completed for these SSLs.

The OWAP is also regulated under 35 I.A.C. § 845. Groundwater sampling for 35 I.A.C. § 845 compliance was initiated at the OWAP during Quarter 2, 2023. Exceedances of GWPSs established under 35 I.A.C. § 845 were determined and require corrective action through a permitting process administered by IEPA. Therefore, remedy selection will take into consideration compliance with both 40 C.F.R. § 257 and 35 I.A.C. § 845.

In accordance with 40 C.F.R. § 257.97, remedy selection is to be completed as soon as feasible following completion of the CMA. As required by 35 I.A.C. § 845.670, a corrective action plan that identifies the selected remedy must be submitted to IEPA within one year after completing the CMA completed in accordance with 35 I.A.C. § 845.660. It is anticipated that a corrective action plan will be submitted in 2025 that meets the requirements of both 40 C.F.R. § 257 and 35 I.A.C. § 845.

The OWAP remains in the Assessment Monitoring Program in accordance with 40 C.F.R. § 257.96(b).

3. KEY ACTIONS COMPLETED IN 2023

A summary of the samples collected from background and compliance monitoring wells in 2023 under the Assessment Monitoring Program is included 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**. Beginning in 2023, the monitoring system was updated to be consistent with that proposed for compliance with 35 I.A.C. § 845, which includes all of the monitoring wells used in the 2022 40 C.F.R. § 257 monitoring system (Ramboll, 2022a). No wells were installed or decommissioned in 2023 (the wells added from the 35 I.A.C. § 845 monitoring system were installed prior to 2023).

One groundwater sample was collected from each background and compliance well during each monitoring event. The OWAP is also regulated under 35 I.A.C. § 845, which requires quarterly monitoring. The groundwater monitoring systems for both programs (35 I.A.C. § 845 and 40 C.F.R. § 257) are identical, so all available data from the four quarterly monitoring events in 2023 are included in this report. All samples were collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (SAP) (Ramboll, 2023). Data collected in accordance with 35 I.A.C. § 845 was included for statistical calculations performed in accordance with 40 C.F.R. § 257.95(d)(1); however, SSLs are reported semiannually per 40 C.F.R. § 257.

Potentiometric surfaces for the quarterly sampling events are included **in Figures 2 through 5**. All monitoring data and analytical results obtained under 40 C.F.R. § 257.90 through 257.98 and 35 I.A.C. § 845 in 2023 are presented in **Tables 1 through 3**. All associated laboratory reports and field data sheets are included in **Appendix A**. Analytical data received after December 31, 2023 will be reported in the 2024 Annual Groundwater Monitoring and Corrective Action Report.

Analytical data were evaluated in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022b), the Multi-Site Quality Assurance Project Plan (Ramboll, 2022c), and the Multi-Site Data Management Plan (Ramboll, 2022d) to determine any SSLs of Appendix IV parameters over GWPSs and statistically significant increases (SSIs) of Appendix III parameters greater than background values. SSL notifications were completed in accordance with 40 C.F.R. § 257.95(g). 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**.

Potential alternative sources were evaluated as outlined in the 40 C.F.R. § 257.95(g)(3)(ii). ASDs were completed in 2023 for the cadmium SSLs. The dates the ASDs were completed are provided in **Table A**. The ASDs were certified by a qualified professional engineer and are included in **Appendix D**.

A CMA was completed in 2019 to address arsenic, lithium, and molybdenum SSLs. The OWAP remains in the Assessment Monitoring Program.

Table A. 2023 Assessment Monitoring Program Summary

Event ID	Sampling Dates [1, 2, 3]	Analytical Data Receipt Date [4,5]	SSL(s) Determination Date	SSL(s)	ASD Completion Date
A5D [6]	September 13 - 14, 2022	October 31, 2022	January 31, 2023	Arsenic at well 21R and 51; Cadmium and Lithium at well 22	May 1, 2023
A6	February 28 – March 2, 2023	April 14, 2023	July 13, 2023	Arsenic at well 21R and 51; Cadmium at well 22	October 11, 2023
A6R	May 31 – June 1, 2023	July 13, 2023	NA	NA	NA
A6D	August 22 - 28, 2023	November 16, 2023	February 14, 2024	TBD	NA
A6DR	November 14 - 15, 2023	TBD	NA	NA	NA

Notes:

ASD: Alternative Source Demonstration

NA: not applicable

SSL: Statistically Significant Level

TBD: to be determined in 2024

[1] All samples were analyzed for Appendix III parameters listed in 40 C.F.R. § 257.94(e) and Appendix IV parameters listed in 40 C.F.R. § 257.95(g).

[2] The following background wells were sampled for each event: 32 and 34

[3] The following compliance wells were sampled for each event: 21R, 22, 22D, 23, 27, 35, 49, 50, and 51

[4] Data collected in accordance with 35 I.A.C. § 845 was included for statistical calculations performed in accordance with 40 C.F.R. § 257.95(d)(1); however, SSLs are reported semiannually per 40 C.F.R. § 257.

[5] Analytical data received after December 31, 2023 will be reported in the 2024 Annual Groundwater Monitoring and Corrective Action Report.

[6] Laboratory reports and associated analytical data tables were included in the 2022 Annual Groundwater Monitoring and Corrective Action Report.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the groundwater monitoring program during 2023. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

- Continuation of the Assessment Monitoring Program with semiannual sampling for reporting purposes scheduled for the first and third quarters of 2024 (and sampling for 35 I.A.C. § 845 scheduled for the second and fourth quarters).
- 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 alternative 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 alternative 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 2024 Annual Groundwater Monitoring and Corrective Action Report.
- If an alternative 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 2024 will be met, including associated recordkeeping/notifications required by 40 C.F.R. § 257.105 through 257.108.
- Remedy selection will continue considering compliance with both 40 C.F.R. § 257 and 35 I.A.C. § 845; semiannual progress reports required by 40 C.F.R. § 257.97(a) will be completed and posted to the publicly accessible website as required by 40 C.F.R. § 257.107(h)(9).

6. REFERENCES

Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 257, Subpart D, Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, effective April 17, 2015. Accessed from URL https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-257/subpart-D#page-top

OBG, Part of Ramboll (OBG), 2019. Corrective Measures Assessment, Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond, Hennepin Power Station, 13498 East 800th Street, Hennepin, Illinois, Dynegy Midwest Generation, LLC, September 5, 2019.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022a. 40 C.F.R. § 257 Groundwater Monitoring Plan, Ash Pond No. 2, Hennepin Power Plant, Hennepin, Illinois. December 28, 2022.

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

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

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

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023. Multi-Site Sampling and Analysis Plan, Revision 1. October 10, 2023.

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
21R	Compliance	UA	02/28/2023	5.25	446.80
21R	Compliance	UA	04/30/2023	5.16	446.88
21R	Compliance	UA	05/30/2023	5.92	446.13
21R	Compliance	UA	06/21/2023	6.36	445.68
21R	Compliance	UA	07/21/2023	6.11	445.93
21R	Compliance	UA	08/21/2023	6.36	445.68
21R	Compliance	UA	09/30/2023	6.52	445.53
21R	Compliance	UA	10/31/2023	5.67	446.38
21R	Compliance	UA	11/13/2023	5.77	446.28
21R	Compliance	UA	12/21/2023	6.18	445.87
22	Compliance	UA	02/28/2023	17.30	447.15
22	Compliance	UA	04/30/2023	17.85	446.59
22	Compliance	UA	05/30/2023	18.45	446.00
22	Compliance	UA	06/21/2023	18.73	445.71
22	Compliance	UA	07/21/2023	18.52	445.92
22	Compliance	UA	08/21/2023	18.68	445.76
22	Compliance	UA	09/30/2023	19.54	444.91
22	Compliance	UA	10/31/2023	18.87	445.58
22	Compliance	UA	11/13/2023	18.43	446.02
22	Compliance	UA	12/21/2023	18.84	445.61
22D	Compliance	UA	02/28/2023	18.45	446.98
22D	Compliance	UA	04/30/2023	18.43	446.99
22D	Compliance	UA	05/30/2023	19.10	446.33
22D	Compliance	UA	06/21/2023	19.42	446.00
22D	Compliance	UA	07/21/2023	19.19	446.23
22D	Compliance	UA	08/21/2023	19.40	446.02
22D	Compliance	UA	10/31/2023	18.90	446.53
22D	Compliance	UA	11/13/2023	22.10	443.33
22D	Compliance	UA	12/21/2023	19.54	445.89
23	Compliance	UA	02/28/2023	17.30	446.09
23	Compliance	UA	04/30/2023	15.90	447.48
23	Compliance	UA	05/30/2023	16.72	446.67
23	Compliance	UA	06/21/2023	17.08	446.30
23	Compliance	UA	07/21/2023	16.83	446.55
23	Compliance	UA	08/21/2023	17.08	446.30
23	Compliance	UA	09/30/2023	17.38	446.01
23	Compliance	UA	10/31/2023	16.45	446.94
23	Compliance	UA	11/13/2023	17.64	445.75
23	Compliance	UA	12/21/2023	17.18	446.21
27	Compliance	UA	02/28/2023	3.90	446.68
27	Compliance	UA	04/30/2023	3.33	447.24
27	Compliance	UA	05/30/2023	4.14	446.44
27	Compliance	UA	06/21/2023	4.53	446.04
27	Compliance	UA	07/21/2023	4.31	446.27
27	Compliance	UA	08/21/2023	4.56	446.02
27	Compliance	UA	10/31/2023	3.72	446.86

TABLE 1
GROUNDWATER ELEVATION DATA
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
27	Compliance	UA	11/13/2023	3.91	446.67
27	Compliance	UA	12/21/2023	4.38	446.20
32	Background	UA	02/28/2023	4.62	446.76
32	Background	UA	04/30/2023	4.36	447.02
32	Background	UA	05/30/2023	5.22	446.16
32	Background	UA	06/21/2023	5.63	445.75
32	Background	UA	07/21/2023	5.42	445.96
32	Background	UA	08/21/2023	5.60	445.78
32	Background	UA	09/30/2023	5.74	445.64
32	Background	UA	10/31/2023	4.62	446.76
32	Background	UA	11/13/2023	4.79	446.59
32	Background	UA	12/21/2023	5.20	446.18
34	Background	UA	02/28/2023	2.45	447.11
34	Background	UA	04/30/2023	7.69	441.86
34	Background	UA	05/30/2023	8.66	440.90
34	Background	UA	06/21/2023	9.16	440.39
34	Background	UA	08/25/2023	NA	[440.58]
34	Background	UA	08/25/2023	NA	[440.58]
34	Background	UA	10/31/2023	7.74	441.82
34	Background	UA	11/13/2023	8.37	441.19
34	Background	UA	12/21/2023	7.76	441.80
35	Compliance	UA	02/28/2023	8.20	446.63
35	Compliance	UA	04/30/2023	7.69	447.13
35	Compliance	UA	05/30/2023	8.30	446.53
35	Compliance	UA	06/21/2023	8.84	445.98
35	Compliance	UA	07/21/2023	8.58	446.24
35	Compliance	UA	08/21/2023	8.87	445.96
35	Compliance	UA	09/30/2023	9.05	445.78
35	Compliance	UA	10/31/2023	7.97	446.86
35	Compliance	UA	11/13/2023	8.15	446.68
35	Compliance	UA	12/21/2023	8.70	446.13
49	Compliance	UA	02/28/2023	21.30	446.87
49	Compliance	UA	05/30/2023	21.54	446.63
49	Compliance	UA	08/25/2023	[19.65]	[448.52]
49	Compliance	UA	08/25/2023	[19.65]	[448.52]
49	Compliance	UA	09/30/2023	22.16	446.01
49	Compliance	UA	10/31/2023	21.33	446.84
49	Compliance	UA	11/13/2023	21.49	446.68
49	Compliance	UA	12/21/2023	22.02	446.15
50	Compliance	UA	02/28/2023	16.74	447.20
50	Compliance	UA	05/30/2023	18.25	445.69
50	Compliance	UA	10/31/2023	18.06	445.88
50	Compliance	UA	11/13/2023	18.24	445.70
50	Compliance	UA	12/21/2023	18.61	445.33
51	Compliance	UA	02/28/2023	17.91	446.89
51	Compliance	UA	04/30/2023	17.74	447.05

TABLE 1
GROUNDWATER ELEVATION DATA
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
51	Compliance	UA	05/30/2023	18.50	446.30
51	Compliance	UA	06/21/2023	18.94	445.85
51	Compliance	UA	07/21/2023	18.69	446.10
51	Compliance	UA	08/21/2023	18.92	445.87
51	Compliance	UA	09/30/2023	19.17	445.63
51	Compliance	UA	10/31/2023	18.22	446.58
51	Compliance	UA	11/13/2023	18.59	446.21
51	Compliance	UA	12/21/2023	18.84	445.96

Notes:
Only wells with groundwater elevations measured are included.
BMP = below measuring point
Bracketing [ ] indicates that the measurement was obtained outside of the episodic depth to groundwater measurements time frame.
NA = not available/not applicable
NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:
UA = uppermost aquifer

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TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
32	UA	Background	02/28/2023	A6	Boron, total	mg/L	0.199	NA	NA
32	UA	Background	05/31/2023	A6R	Boron, total	mg/L	0.143	NA	NA
32	UA	Background	08/22/2023	A6D	Boron, total	mg/L	0.140	NA	NA
32	UA	Background	11/14/2023	A6DR	Boron, total	mg/L	0.180 J+	NA	NA
32	UA	Background	02/28/2023	A6	Calcium, total	mg/L	122	NA	NA
32	UA	Background	05/31/2023	A6R	Calcium, total	mg/L	102	NA	NA
32	UA	Background	08/22/2023	A6D	Calcium, total	mg/L	100	NA	NA
32	UA	Background	11/14/2023	A6DR	Calcium, total	mg/L	110	NA	NA
32	UA	Background	02/28/2023	A6	Chloride, total	mg/L	83.0	NA	NA
32	UA	Background	05/31/2023	A6R	Chloride, total	mg/L	70.0	NA	NA
32	UA	Background	08/22/2023	A6D	Chloride, total	mg/L	68.0	NA	NA
32	UA	Background	11/14/2023	A6DR	Chloride, total	mg/L	67.0	NA	NA
32	UA	Background	02/28/2023	A6	Fluoride, total	mg/L	0.130	NA	NA
32	UA	Background	05/31/2023	A6R	Fluoride, total	mg/L	0.100	NA	NA
32	UA	Background	08/22/2023	A6D	Fluoride, total	mg/L	0.22 J	NA	NA
32	UA	Background	11/14/2023	A6DR	Fluoride, total	mg/L	0.130	NA	NA
32	UA	Background	02/28/2023	A6	pH (field)	SU	7.0	NA	NA
32	UA	Background	05/31/2023	A6R	pH (field)	SU	6.9	NA	NA
32	UA	Background	08/22/2023	A6D	pH (field)	SU	7.1	NA	NA
32	UA	Background	11/14/2023	A6DR	pH (field)	SU	7.2	NA	NA
32	UA	Background	02/28/2023	A6	Sulfate, total	mg/L	82.0	NA	NA
32	UA	Background	05/31/2023	A6R	Sulfate, total	mg/L	63.0	NA	NA
32	UA	Background	08/22/2023	A6D	Sulfate, total	mg/L	66.0	NA	NA
32	UA	Background	11/14/2023	A6DR	Sulfate, total	mg/L	65.0	NA	NA
32	UA	Background	02/28/2023	A6	Total Dissolved Solids	mg/L	564	NA	NA
32	UA	Background	05/31/2023	A6R	Total Dissolved Solids	mg/L	550	NA	NA
32	UA	Background	08/22/2023	A6D	Total Dissolved Solids	mg/L	570	NA	NA
32	UA	Background	11/14/2023	A6DR	Total Dissolved Solids	mg/L	600	NA	NA
34	UA	Background	02/28/2023	A6	Boron, total	mg/L	0.206	NA	NA
34	UA	Background	05/31/2023	A6R	Boron, total	mg/L	0.125	NA	NA
34	UA	Background	08/25/2023	A6D	Boron, total	mg/L	0.0750	NA	NA
34	UA	Background	11/14/2023	A6DR	Boron, total	mg/L	0.110 J+	NA	NA
34	UA	Background	02/28/2023	A6	Calcium, total	mg/L	184	NA	NA
34	UA	Background	05/31/2023	A6R	Calcium, total	mg/L	149	NA	NA
34	UA	Background	08/25/2023	A6D	Calcium, total	mg/L	150	NA	NA
34	UA	Background	11/14/2023	A6DR	Calcium, total	mg/L	150	NA	NA
34	UA	Background	02/28/2023	A6	Chloride, total	mg/L	80.0	NA	NA
34	UA	Background	05/31/2023	A6R	Chloride, total	mg/L	71.0	NA	NA
34	UA	Background	08/25/2023	A6D	Chloride, total	mg/L	69.0	NA	NA
34	UA	Background	11/14/2023	A6DR	Chloride, total	mg/L	67.0	NA	NA
34	UA	Background	02/28/2023	A6	Fluoride, total	mg/L	0.160	NA	NA
34	UA	Background	05/31/2023	A6R	Fluoride, total	mg/L	0.120	NA	NA
34	UA	Background	08/25/2023	A6D	Fluoride, total	mg/L	0.19 J	NA	NA
34	UA	Background	11/14/2023	A6DR	Fluoride, total	mg/L	0.150	NA	NA
34	UA	Background	02/28/2023	A6	pH (field)	SU	6.9	NA	NA
34	UA	Background	05/31/2023	A6R	pH (field)	SU	6.9	NA	NA

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
34	UA	Background	08/25/2023	A6D	pH (field)	SU	7.1	NA	NA
34	UA	Background	11/14/2023	A6DR	pH (field)	SU	7.2	NA	NA
34	UA	Background	02/28/2023	A6	Sulfate, total	mg/L	48.0	NA	NA
34	UA	Background	05/31/2023	A6R	Sulfate, total	mg/L	49.0	NA	NA
34	UA	Background	08/25/2023	A6D	Sulfate, total	mg/L	46.0	NA	NA
34	UA	Background	11/14/2023	A6DR	Sulfate, total	mg/L	49.0	NA	NA
34	UA	Background	02/28/2023	A6	Total Dissolved Solids	mg/L	685	NA	NA
34	UA	Background	05/31/2023	A6R	Total Dissolved Solids	mg/L	845	NA	NA
34	UA	Background	08/25/2023	A6D	Total Dissolved Solids	mg/L	760	NA	NA
34	UA	Background	11/14/2023	A6DR	Total Dissolved Solids	mg/L	700	NA	NA
21R	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	3.28	0.199	Confirmed
21R	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	2.32	0.199	Confirmed
21R	UA	Compliance	08/22/2023	A6D	Boron, total	mg/L	1.70	0.199	TBD
21R	UA	Compliance	11/14/2023	A6DR	Boron, total	mg/L	2.10	0.199	TBD
21R	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	147	170	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	121	170	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	Calcium, total	mg/L	120	170	TBD
21R	UA	Compliance	11/14/2023	A6DR	Calcium, total	mg/L	120	170	TBD
21R	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	108	108	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	103	108	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	Chloride, total	mg/L	95.0	108	TBD
21R	UA	Compliance	11/14/2023	A6DR	Chloride, total	mg/L	89.0	108	TBD
21R	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.150	0.170	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.120	0.170	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	Fluoride, total	mg/L	0.23 J	0.170	TBD
21R	UA	Compliance	11/14/2023	A6DR	Fluoride, total	mg/L	0.140	0.170	TBD
21R	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.3	6.8/7.4	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.4	6.8/7.4	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	pH (field)	SU	7.5	6.8/7.4	TBD
21R	UA	Compliance	11/14/2023	A6DR	pH (field)	SU	7.7	6.8/7.4	TBD
21R	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	105	117	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	91.0	117	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	Sulfate, total	mg/L	94.0	117	TBD
21R	UA	Compliance	11/14/2023	A6DR	Sulfate, total	mg/L	81.0	117	TBD
21R	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	678	830	No Exceedance
21R	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	695	830	No Exceedance
21R	UA	Compliance	08/22/2023	A6D	Total Dissolved Solids	mg/L	730	830	TBD
21R	UA	Compliance	11/14/2023	A6DR	Total Dissolved Solids	mg/L	700	830	TBD
22	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	4.51	0.199	Confirmed
22	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	3.44	0.199	Confirmed
22	UA	Compliance	08/25/2023	A6D	Boron, total	mg/L	0.130	0.199	TBD
22	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	3.20	0.199	TBD
22	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	102	170	No Exceedance
22	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	87.1	170	No Exceedance
22	UA	Compliance	08/25/2023	A6D	Calcium, total	mg/L	23.0	170	TBD
22	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	87.0	170	TBD

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
22	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	100	108	No Exceedance
22	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	97.0	108	No Exceedance
22	UA	Compliance	08/25/2023	A6D	Chloride, total	mg/L	89.0	108	TBD
22	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	92.0	108	TBD
22	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.160	0.170	No Exceedance
22	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.130	0.170	No Exceedance
22	UA	Compliance	08/25/2023	A6D	Fluoride, total	mg/L	0.22 J	0.170	TBD
22	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.150	0.170	TBD
22	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.6	6.8/7.4	Confirmed
22	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.6	6.8/7.4	Confirmed
22	UA	Compliance	08/25/2023	A6D	pH (field)	SU	7.7	6.8/7.4	TBD
22	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	7.7	6.8/7.4	TBD
22	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	145	117	Confirmed
22	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	123	117	Confirmed
22	UA	Compliance	08/25/2023	A6D	Sulfate, total	mg/L	120	117	TBD
22	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	120	117	TBD
22	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	598	830	No Exceedance
22	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	586	830	No Exceedance
22	UA	Compliance	08/25/2023	A6D	Total Dissolved Solids	mg/L	640	830	TBD
22	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	590	830	TBD
22D	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	2.40	0.199	Confirmed
22D	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	1.57	0.199	Confirmed
22D	UA	Compliance	08/22/2023	A6D	Boron, total	mg/L	1.30	0.199	TBD
22D	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	1.50	0.199	TBD
22D	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	137	170	No Exceedance
22D	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	113	170	No Exceedance
22D	UA	Compliance	08/22/2023	A6D	Calcium, total	mg/L	120	170	TBD
22D	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	120	170	TBD
22D	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	113	108	Confirmed
22D	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	110	108	Confirmed
22D	UA	Compliance	08/22/2023	A6D	Chloride, total	mg/L	97.0	108	TBD
22D	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	93.0	108	TBD
22D	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.110	0.170	No Exceedance
22D	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.09 J	0.170	No Exceedance
22D	UA	Compliance	08/22/2023	A6D	Fluoride, total	mg/L	0.22 J	0.170	TBD
22D	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.110	0.170	TBD
22D	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.2	6.8/7.4	No Exceedance
22D	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.2	6.8/7.4	No Exceedance
22D	UA	Compliance	08/22/2023	A6D	pH (field)	SU	7.3	6.8/7.4	TBD
22D	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	7.4	6.8/7.4	TBD
22D	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	112	117	No Exceedance
22D	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	104	117	No Exceedance
22D	UA	Compliance	08/22/2023	A6D	Sulfate, total	mg/L	96.0	117	TBD
22D	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	89.0	117	TBD
22D	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	680	830	No Exceedance
22D	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	640	830	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
22D	UA	Compliance	08/22/2023	A6D	Total Dissolved Solids	mg/L	690	830	TBD
22D	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	640	830	TBD
23	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	12.8	0.199	Confirmed
23	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	8.79	0.199	Confirmed
23	UA	Compliance	08/22/2023	A6D	Boron, total	mg/L	8.10	0.199	TBD
23	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	8.70	0.199	TBD
23	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	122	170	No Exceedance
23	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	105	170	No Exceedance
23	UA	Compliance	08/22/2023	A6D	Calcium, total	mg/L	110	170	TBD
23	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	110	170	TBD
23	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	66.0	108	No Exceedance
23	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	55.0	108	No Exceedance
23	UA	Compliance	08/22/2023	A6D	Chloride, total	mg/L	53.0	108	TBD
23	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	56.0	108	TBD
23	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.170	0.170	No Exceedance
23	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.140	0.170	No Exceedance
23	UA	Compliance	08/22/2023	A6D	Fluoride, total	mg/L	0.23 J	0.170	TBD
23	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.150	0.170	TBD
23	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.4	6.8/7.4	No Exceedance
23	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.4	6.8/7.4	No Exceedance
23	UA	Compliance	08/22/2023	A6D	pH (field)	SU	7.4	6.8/7.4	TBD
23	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	7.5	6.8/7.4	TBD
23	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	433	117	Confirmed
23	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	450	117	Confirmed
23	UA	Compliance	08/22/2023	A6D	Sulfate, total	mg/L	460	117	TBD
23	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	430	117	TBD
23	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	856	830	Confirmed
23	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	876	830	Confirmed
23	UA	Compliance	08/22/2023	A6D	Total Dissolved Solids	mg/L	950	830	TBD
23	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	890	830	TBD
27	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	2.73	0.199	Confirmed
27	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	2.27	0.199	Confirmed
27	UA	Compliance	08/24/2023	A6D	Boron, total	mg/L	2.00	0.199	TBD
27	UA	Compliance	11/14/2023	A6DR	Boron, total	mg/L	2.40	0.199	TBD
27	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	141	170	No Exceedance
27	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	117	170	No Exceedance
27	UA	Compliance	08/24/2023	A6D	Calcium, total	mg/L	120	170	TBD
27	UA	Compliance	11/14/2023	A6DR	Calcium, total	mg/L	120	170	TBD
27	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	99.0	108	No Exceedance
27	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	107	108	No Exceedance
27	UA	Compliance	08/24/2023	A6D	Chloride, total	mg/L	91.0	108	TBD
27	UA	Compliance	11/14/2023	A6DR	Chloride, total	mg/L	88.0	108	TBD
27	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.130	0.170	No Exceedance
27	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.100	0.170	No Exceedance
27	UA	Compliance	08/24/2023	A6D	Fluoride, total	mg/L	0.22 J	0.170	TBD
27	UA	Compliance	11/14/2023	A6DR	Fluoride, total	mg/L	0.120	0.170	TBD

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
27	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.0	6.8/7.4	No Exceedance
27	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.0	6.8/7.4	No Exceedance
27	UA	Compliance	08/24/2023	A6D	pH (field)	SU	7.3	6.8/7.4	TBD
27	UA	Compliance	11/14/2023	A6DR	pH (field)	SU	7.3	6.8/7.4	TBD
27	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	159	117	Confirmed
27	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	118	117	Confirmed
27	UA	Compliance	08/24/2023	A6D	Sulfate, total	mg/L	110	117	TBD
27	UA	Compliance	11/14/2023	A6DR	Sulfate, total	mg/L	120	117	TBD
27	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	636	830	No Exceedance
27	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	658	830	No Exceedance
27	UA	Compliance	08/24/2023	A6D	Total Dissolved Solids	mg/L	660	830	TBD
27	UA	Compliance	11/14/2023	A6DR	Total Dissolved Solids	mg/L	660	830	TBD
35	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	9.58	0.199	Confirmed
35	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	12.6	0.199	Confirmed
35	UA	Compliance	08/24/2023	A6D	Boron, total	mg/L	12.0	0.199	TBD
35	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	11.0	0.199	TBD
35	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	268	170	Confirmed
35	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	291	170	Confirmed
35	UA	Compliance	08/24/2023	A6D	Calcium, total	mg/L	320	170	TBD
35	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	320	170	TBD
35	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	26.0	108	No Exceedance
35	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	32.0	108	No Exceedance
35	UA	Compliance	08/24/2023	A6D	Chloride, total	mg/L	37.0	108	TBD
35	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	24.0	108	TBD
35	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.190	0.170	Exceedance Not Confirmed
35	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.110	0.170	No Exceedance
35	UA	Compliance	08/24/2023	A6D	Fluoride, total	mg/L	0.2 J	0.170	TBD
35	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.150	0.170	TBD
35	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.0	6.8/7.4	No Exceedance
35	UA	Compliance	05/31/2023	A6R	pH (field)	SU	6.9	6.8/7.4	No Exceedance
35	UA	Compliance	08/24/2023	A6D	pH (field)	SU	7.0	6.8/7.4	TBD
35	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	6.9	6.8/7.4	TBD
35	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	476	117	Confirmed
35	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	670	117	Confirmed
35	UA	Compliance	08/24/2023	A6D	Sulfate, total	mg/L	890	117	TBD
35	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	730	117	TBD
35	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	918	830	Confirmed
35	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	1,300	830	Confirmed
35	UA	Compliance	08/24/2023	A6D	Total Dissolved Solids	mg/L	1,600	830	TBD
35	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	1,500	830	TBD
49	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	0.703	0.199	Confirmed
49	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	0.758	0.199	Confirmed
49	UA	Compliance	08/25/2023	A6D	Boron, total	mg/L	0.690	0.199	TBD
49	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	0.890	0.199	TBD
49	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	127	170	No Exceedance
49	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	115	170	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
49	UA	Compliance	08/25/2023	A6D	Calcium, total	mg/L	99.0	170	TBD
49	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	100	170	TBD
49	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	104	108	No Exceedance
49	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	102	108	No Exceedance
49	UA	Compliance	08/25/2023	A6D	Chloride, total	mg/L	95.0	108	TBD
49	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	95.0	108	TBD
49	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.150	0.170	No Exceedance
49	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.120	0.170	No Exceedance
49	UA	Compliance	08/25/2023	A6D	Fluoride, total	mg/L	0.24 J	0.170	TBD
49	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.150	0.170	TBD
49	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.0	6.8/7.4	No Exceedance
49	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.0	6.8/7.4	No Exceedance
49	UA	Compliance	08/25/2023	A6D	pH (field)	SU	7.1	6.8/7.4	TBD
49	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	7.2	6.8/7.4	TBD
49	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	108	117	No Exceedance
49	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	84.0	117	No Exceedance
49	UA	Compliance	08/25/2023	A6D	Sulfate, total	mg/L	78.0	117	TBD
49	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	77.0	117	TBD
49	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	618	830	No Exceedance
49	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	602	830	No Exceedance
49	UA	Compliance	08/25/2023	A6D	Total Dissolved Solids	mg/L	620	830	TBD
49	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	580	830	TBD
50	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	1.43	0.199	Confirmed
50	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	0.784	0.199	Confirmed
50	UA	Compliance	08/25/2023	A6D	Boron, total	mg/L	0.590	0.199	TBD
50	UA	Compliance	11/14/2023	A6DR	Boron, total	mg/L	1.00	0.199	TBD
50	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	121	170	No Exceedance
50	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	122	170	No Exceedance
50	UA	Compliance	08/25/2023	A6D	Calcium, total	mg/L	100	170	TBD
50	UA	Compliance	11/14/2023	A6DR	Calcium, total	mg/L	110	170	TBD
50	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	101	108	No Exceedance
50	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	90.0	108	No Exceedance
50	UA	Compliance	08/25/2023	A6D	Chloride, total	mg/L	87.0	108	TBD
50	UA	Compliance	11/14/2023	A6DR	Chloride, total	mg/L	83.0	108	TBD
50	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.140	0.170	No Exceedance
50	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.09 J	0.170	No Exceedance
50	UA	Compliance	08/25/2023	A6D	Fluoride, total	mg/L	0.2 J	0.170	TBD
50	UA	Compliance	11/14/2023	A6DR	Fluoride, total	mg/L	0.120	0.170	TBD
50	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.4	6.8/7.4	No Exceedance
50	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.3	6.8/7.4	No Exceedance
50	UA	Compliance	08/25/2023	A6D	pH (field)	SU	7.5	6.8/7.4	TBD
50	UA	Compliance	11/14/2023	A6DR	pH (field)	SU	7.5	6.8/7.4	TBD
50	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	136	117	Exceedance Not Confirmed
50	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	88.0	117	No Exceedance
50	UA	Compliance	08/25/2023	A6D	Sulfate, total	mg/L	93.0	117	TBD
50	UA	Compliance	11/14/2023	A6DR	Sulfate, total	mg/L	91.0	117	TBD

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
50	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	580	830	No Exceedance
50	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	632	830	No Exceedance
50	UA	Compliance	08/25/2023	A6D	Total Dissolved Solids	mg/L	610	830	TBD
50	UA	Compliance	11/14/2023	A6DR	Total Dissolved Solids	mg/L	610	830	TBD
51	UA	Compliance	02/28/2023	A6	Boron, total	mg/L	1.54	0.199	Confirmed
51	UA	Compliance	05/31/2023	A6R	Boron, total	mg/L	1.63	0.199	Confirmed
51	UA	Compliance	08/22/2023	A6D	Boron, total	mg/L	1.30	0.199	TBD
51	UA	Compliance	11/15/2023	A6DR	Boron, total	mg/L	1.60	0.199	TBD
51	UA	Compliance	02/28/2023	A6	Calcium, total	mg/L	132	170	No Exceedance
51	UA	Compliance	05/31/2023	A6R	Calcium, total	mg/L	127	170	No Exceedance
51	UA	Compliance	08/22/2023	A6D	Calcium, total	mg/L	110	170	TBD
51	UA	Compliance	11/15/2023	A6DR	Calcium, total	mg/L	110	170	TBD
51	UA	Compliance	02/28/2023	A6	Chloride, total	mg/L	110	108	Confirmed
51	UA	Compliance	05/31/2023	A6R	Chloride, total	mg/L	109	108	Confirmed
51	UA	Compliance	08/22/2023	A6D	Chloride, total	mg/L	94.0	108	TBD
51	UA	Compliance	11/15/2023	A6DR	Chloride, total	mg/L	92.0	108	TBD
51	UA	Compliance	02/28/2023	A6	Fluoride, total	mg/L	0.140	0.170	No Exceedance
51	UA	Compliance	05/31/2023	A6R	Fluoride, total	mg/L	0.110	0.170	No Exceedance
51	UA	Compliance	08/22/2023	A6D	Fluoride, total	mg/L	0.23 J	0.170	TBD
51	UA	Compliance	11/15/2023	A6DR	Fluoride, total	mg/L	0.130	0.170	TBD
51	UA	Compliance	02/28/2023	A6	pH (field)	SU	7.2	6.8/7.4	No Exceedance
51	UA	Compliance	05/31/2023	A6R	pH (field)	SU	7.2	6.8/7.4	No Exceedance
51	UA	Compliance	08/22/2023	A6D	pH (field)	SU	7.4	6.8/7.4	TBD
51	UA	Compliance	11/15/2023	A6DR	pH (field)	SU	7.4	6.8/7.4	TBD
51	UA	Compliance	02/28/2023	A6	Sulfate, total	mg/L	105	117	No Exceedance
51	UA	Compliance	05/31/2023	A6R	Sulfate, total	mg/L	97.0	117	No Exceedance
51	UA	Compliance	08/22/2023	A6D	Sulfate, total	mg/L	90.0	117	TBD
51	UA	Compliance	11/15/2023	A6DR	Sulfate, total	mg/L	87.0	117	TBD
51	UA	Compliance	02/28/2023	A6	Total Dissolved Solids	mg/L	630	830	No Exceedance
51	UA	Compliance	05/31/2023	A6R	Total Dissolved Solids	mg/L	630	830	No Exceedance
51	UA	Compliance	08/22/2023	A6D	Total Dissolved Solids	mg/L	680	830	TBD
51	UA	Compliance	11/15/2023	A6DR	Total Dissolved Solids	mg/L	650	830	TBD

Notes:
HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

ID = identification
mg/L = milligrams per liter
NA = not applicable
R = resample
Statistically Significant Increase (SSI) Type:

TBD: To be determined in 2024.

No Exceedance: No exceedance of the background.

Exceedance Not Confirmed: An exceedance was determined in the parent event, a resample was collected, and the resample did not confirm the exceedance.

Confirmed: An exceedance was determined with comparison to a resample. If a determined exceedance is confirmed by resample, both the sample and resample are noted as confirmed.

SU = Standard Units
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.

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TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Date	Event ID	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)
32	B	02/28/2023	A6	0.0004 U	0.0004 U	0.0590	0.0002 U	0.0002 J	0.0014 J	0.00290	0.130	0.0006 U	0.00310	0.00007 U	0.0007 J	0.886	0.0006 U	0.001 U
32	B	05/31/2023	A6R	0.0004 U	0.0087 U	0.0410	0.0002 U	0.0005 U	0.0028 U	0.00180	0.100	0.004 U	0.0029 J	0.00006 U	0.0037 U	0.312	0.0006 U	0.001 U
32	B	08/22/2023	A6D	0.0013 U	0.00049 J	0.0390	0.00053 U	0.00021 J	0.0011 U	0.00140	0.22 J	0.00019 U	0.0048 J	0.000079 U	0.0025 U	0.636	0.00098 U	0.00057 U
34	B	02/28/2023	A6	0.0004 U	0.0007 J	0.139	0.0002 U	0.0002 U	0.0007 U	0.0003 J	0.160	0.0006 J	0.0111	0.00007 U	0.00170	1.55	0.0006 U	0.001 U
34	B	05/31/2023	A6R	0.0004 U	0.0087 U	0.0995	0.0002 U	0.0005 U	0.0028 U	0.0007 J	0.120	0.004 U	0.0032 J	0.00006 U	0.0037 U	0.492	0.0006 U	0.001 U
34	B	08/25/2023	A6D	0.0013 U	0.001 UJ	0.110	0.00053 U	0.00017 U	0.0011 U	0.0004 U	0.19 J	0.00019 U	0.0130	0.0002 UJ	0.0025 U	0.823	0.00098 U	0.00057 U
21R	C	02/28/2023	A6	0.0004 U	0.0345	0.398	0.0002 U	0.0002 J	0.00240	0.00170	0.150	0.00540	0.0199	0.00006 U	0.0109	1.75	0.0006 U	0.001 U
21R	C	05/31/2023	A6R	0.0004 U	0.0274	0.296	0.0002 U	0.0005 U	0.0028 U	0.00130	0.120	0.004 U	0.0167 J+	0.00006 U	0.008 J	2.44	0.0006 U	0.001 U
21R	C	08/22/2023	A6D	0.0013 U	0.0230	0.300	0.00053 U	0.00017 U	0.0026 J	0.00140	0.23 J	0.00280	0.0260 J	0.000079 U	0.00970	0.855	0.00098 U	0.00057 U
22	C	02/28/2023	A6	0.00100 J	0.00140	0.0900	0.0002 U	0.00960	0.0007 U	0.00380	0.160	0.0007 J	0.0419	0.00007 U	0.156	0.324	0.0322	0.001 U
22	C	05/31/2023	A6R	0.0008 J	0.0087 U	0.0585	0.0002 U	0.00520	0.0028 U	0.00240	0.130	0.004 U	0.0500 J+	0.00006 U	0.0829	0.781	0.0157	0.001 U
22	C	08/25/2023	A6D	0.0013 U	0.00023 U	0.0130	0.00053 U	0.0005 UJ	0.0011 U	0.00076 J	0.22 J	0.00019 U	0.0490	0.000079 U	0.00500	0.492	0.0150	0.00057 U
22D	C	02/28/2023	A6	0.0004 U	0.00160	0.0783	0.0002 U	0.0002 U	0.0014 U	0.0005 J	0.110	0.0006 J	0.0129	0.00006 U	0.00820	1.25	0.0006 U	0.001 U
22D	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0669	0.0002 U	0.0005 U	0.0028 U	0.0004 J	0.09 J	0.004 U	0.0150 J+	0.00006 U	0.0054 J	0.104	0.0006 U	0.001 U
22D	C	08/22/2023	A6D	0.0013 U	0.00130	0.0660	0.00053 U	0.00017 U	0.0011 U	0.0004 U	0.22 J	0.00019 U	0.0170	0.000079 U	0.00670	1.26	0.00098 U	0.00057 U
23	C	02/28/2023	A6	0.0004 U	0.00130	0.0685	0.0002 U	0.0002 U	0.0007 U	0.0004 J	0.170	0.0006 U	0.00420	0.00007 U	0.0213	0.727	0.0006 U	0.001 U
23	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0481	0.0003 J	0.0005 U	0.0028 U	0.0004 J	0.140	0.004 U	0.0019 U	0.00006 U	0.0146	0.392	0.0006 U	0.001 U
23	C	08/22/2023	A6D	0.0013 U	0.00089 J	0.0420	0.00053 U	0.00017 U	0.0011 U	0.00047 J	0.23 J	0.00019 U	0.00630	0.000079 U	0.0150	0.658	0.00098 U	0.00057 U
27	C	02/28/2023	A6	0.0004 U	0.00130	0.0971	0.0002 U	0.0003 J	0.00160	0.00210	0.130	0.00100 J	0.0174	0.00007 U	0.00520	0.671	0.0006 U	0.001 U
27	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0837	0.0002 U	0.0005 U	0.0028 U	0.00330	0.100	0.004 U	0.0225 J+	0.00006 U	0.0037 U	0.219	0.0006 U	0.001 U
27	C	08/24/2023	A6D	0.0013 U	0.00100	0.0840	0.00053 U	0.00025 J	0.0011 U	0.00260	0.22 J	0.0002 J+	0.0240	0.0002 UJ	0.0047 J	0.589	0.00098 U	0.00057 U
35	C	02/28/2023	A6	0.0004 U	0.0008 J	0.0591	0.0002 U	0.0005 J	0.0007 U	0.00140	0.190	0.0006 U	0.0128	0.00007 U	0.0711	1.99	0.0006 U	0.001 U
35	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0381	0.0002 U	0.0005 U	0.0028 U	0.00140	0.110	0.004 U	0.0210 J+	0.00006 U	0.0798	0.353	0.0006 U	0.001 U
35	C	08/24/2023	A6D	0.0013 U	0.001 UJ	0.0470	0.00053 U	0.0005 UJ	0.0011 U	0.00120	0.2 J	0.00019 U	0.0340	0.000079 U	0.0760	0.626	0.00098 U	0.00057 U
49	C	02/28/2023	A6	0.0004 U	0.0006 J	0.0827	0.0002 U	0.00250	0.0013 J	0.00370	0.150	0.0008 J	0.0207	0.00006 U	0.0355	0.231	0.0006 U	0.001 U
49	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0711	0.0002 U	0.0011 J	0.0028 U	0.00670	0.120	0.004 U	0.0202 J+	0.00006 U	0.0243	0.583	0.0006 U	0.001 U
49	C	08/25/2023	A6D	0.0013 U	0.00049 J	0.0620	0.00053 U	0.00130	0.0011 U	0.00330	0.24 J	0.0005 UJ	0.0230	0.000079 U	0.0230	0.793	0.00098 U	0.00057 U

TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Date	Event ID	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)
50	C	02/28/2023	A6	0.0004 U	0.00100	0.103	0.0002 U	0.00370	0.0007 U	0.00990	0.140	0.0006 U	0.0242	0.00006 U	0.0971	0.608	0.0007 J	0.001 U
50	C	05/31/2023	A6R	0.0004 U	0.0087 U	0.0888	0.0002 U	0.0005 U	0.0028 U	0.00510	0.09 J	0.004 U	0.00710 J+	0.00006 U	0.0411	0.580	0.0008 J	0.001 U
50	C	08/25/2023	A6D	0.0013 U	0.001 UJ	0.0640	0.00053 U	0.00140 J+	0.0011 U	0.00350	0.2 J	0.0005 UJ	0.0250	0.000079 U	0.0250	0.752	0.00098 U	0.00057 U
51	C	02/28/2023	A6	0.0004 U	0.0308	0.134	0.0002 U	0.0002 U	0.0007 J	0.0009 J	0.140	0.0009 J	0.0210	0.00006 U	0.0135	1.35	0.0006 U	0.001 U
51	C	05/31/2023	A6R	0.0004 U	0.0182	0.109	0.0002 U	0.0005 U	0.0028 U	0.0008 J	0.110	0.004 U	0.0714 J+	0.00006 U	0.0067 J	2.43	0.0006 U	0.001 U
51	C	08/22/2023	A6D	0.0013 U	0.0190	0.100	0.00053 U	0.00017 U	0.0011 J	0.00086 J	0.23 J	0.00120 J+	0.0250	0.000079 U	0.00890	1.03	0.00098 U	0.00057 U

Notes:
ID = identification
mg/L = milligrams per liter
pCi/L = picoCuries per liter
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Well Type:

B = Background
C = Compliance

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TABLE 4
STATISTICAL BACKGROUND VALUES
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Parameter	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Background Value (LPL/UPL)
Boron (mg/L)	12/09/2015 - 06/08/2017	16	0	Parametric UPL	0.199
Calcium (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UPL	170
Chloride (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UPL	108
Fluoride (mg/L)	12/09/2015 - 06/08/2017	16	0	Parametric UPL	0.170
pH (field) (SU)	12/09/2015 - 06/08/2017	16	0	Parametric LPL/UPL	6.8/7.4
Sulfate (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UPL	117
Total Dissolved Solids (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UPL	830

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

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TABLE 5
GROUNDWATER PROTECTION STANDARDS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, 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)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.006	0.006	MCL/HBL
Arsenic (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.010	0.010	MCL/HBL
Barium (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UTL	0.156	2.0	2.0	MCL/HBL
Beryllium (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.004	0.004	MCL/HBL
Cadmium (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.005	0.005	MCL/HBL
Chromium (mg/L)	12/09/2015 - 06/08/2017	16	94	Non-parametric UTL	0.00130	0.1	0.1	MCL/HBL
Cobalt (mg/L)	12/09/2015 - 06/08/2017	16	75	Non-parametric UTL	0.00170	0.006	0.006	MCL/HBL
Fluoride (mg/L)	12/09/2015 - 06/08/2017	16	0	Parametric UTL	0.172	4.0	4.0	MCL/HBL
Lead (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.015	0.015	MCL/HBL
Lithium (mg/L)	12/09/2015 - 06/08/2017	16	0	Non-parametric UTL	0.0135	0.04	0.04	MCL/HBL
Mercury (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.0002	0.002	0.002	MCL/HBL
Molybdenum (mg/L)	12/09/2015 - 06/08/2017	16	50	Non-parametric UTL	0.00200	0.1	0.1	MCL/HBL
Radium 226 + Radium 228 (pCi/L)	12/09/2015 - 06/08/2017	16	0	Parametric UTL	2.64	5	5	MCL/HBL
Selenium (mg/L)	12/09/2015 - 06/08/2017	16	81	Non-parametric UTL	0.00110	0.05	0.05	MCL/HBL
Thallium (mg/L)	12/09/2015 - 06/08/2017	16	100	All ND - Last Reporting Limit	0.001	0.002	0.002	MCL/HBL

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

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TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
21/21R	UA	A6	Antimony, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
21/21R	UA	A6R	Antimony, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
21/21R	UA	A6	Arsenic, total	mg/L	12/10/2015 - 02/28/2023	26	0	CB around T-S line	0.0208	0.010	MCL/HBL	Confirmed
21/21R	UA	A6R	Arsenic, total	mg/L	12/10/2015 - 05/31/2023	27	0	CB around T-S line	0.0198	0.010	MCL/HBL	Confirmed
21/21R	UA	A6	Barium, total	mg/L	12/10/2015 - 02/28/2023	26	0	CB around linear reg	0.322	2.0	MCL/HBL	No Exceedance
21/21R	UA	A6R	Barium, total	mg/L	12/10/2015 - 05/31/2023	27	0	CB around linear reg	0.32	2.0	MCL/HBL	No Exceedance
21/21R	UA	A6	Beryllium, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
21/21R	UA	A6R	Beryllium, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
21/21R	UA	A6	Cadmium, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
21/21R	UA	A6R	Cadmium, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
21/21R	UA	A6	Chromium, total	mg/L	12/10/2015 - 02/28/2023	26	54	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
21/21R	UA	A6R	Chromium, total	mg/L	12/10/2015 - 05/31/2023	27	56	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
21/21R	UA	A6	Cobalt, total	mg/L	12/10/2015 - 02/28/2023	26	77	CI around median	0.001	0.006	MCL/HBL	No Exceedance
21/21R	UA	A6R	Cobalt, total	mg/L	12/10/2015 - 05/31/2023	27	74	CB around T-S line	0.001	0.006	MCL/HBL	No Exceedance
21/21R	UA	A6	Fluoride, total	mg/L	12/10/2015 - 02/28/2023	27	7.4	CI around median	0.14	4.0	MCL/HBL	No Exceedance
21/21R	UA	A6R	Fluoride, total	mg/L	12/10/2015 - 05/31/2023	28	7.1	CI around median	0.14	4.0	MCL/HBL	No Exceedance
21/21R	UA	A6	Lead, total	mg/L	12/10/2015 - 02/28/2023	26	50	CB around T-S line	0.001	0.015	MCL/HBL	No Exceedance
21/21R	UA	A6R	Lead, total	mg/L	12/10/2015 - 05/31/2023	27	52	CB around T-S line	0.001	0.015	MCL/HBL	No Exceedance
21/21R	UA	A6	Lithium, total	mg/L	12/10/2015 - 02/28/2023	26	0	CB around linear reg	0.0201	0.04	MCL/HBL	No Exceedance
21/21R	UA	A6R	Lithium, total	mg/L	12/10/2015 - 05/31/2023	27	0	CB around linear reg	0.0195	0.04	MCL/HBL	No Exceedance
21/21R	UA	A6	Mercury, total	mg/L	12/10/2015 - 02/28/2023	26	96	CI around median	0.0002	0.002	MCL/HBL	No Exceedance
21/21R	UA	A6R	Mercury, total	mg/L	12/10/2015 - 05/31/2023	27	96	CI around median	0.0002	0.002	MCL/HBL	No Exceedance
21/21R	UA	A6	Molybdenum, total	mg/L	12/10/2015 - 02/28/2023	26	0	CB around linear reg	0.00766	0.1	MCL/HBL	No Exceedance
21/21R	UA	A6R	Molybdenum, total	mg/L	12/10/2015 - 05/31/2023	27	3.7	CI around mean	0.00656	0.1	MCL/HBL	No Exceedance
21/21R	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 02/28/2023	19	0	CI around mean	0.752	5	MCL/HBL	No Exceedance
21/21R	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 05/31/2023	20	0	CI around mean	0.805	5	MCL/HBL	No Exceedance
21/21R	UA	A6	Selenium, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
21/21R	UA	A6R	Selenium, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
21/21R	UA	A6	Thallium, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
21/21R	UA	A6R	Thallium, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
22	UA	A6	Antimony, total	mg/L	12/10/2015 - 02/28/2023	29	90	CI around median	0.001	0.006	MCL/HBL	No Exceedance
22	UA	A6R	Antimony, total	mg/L	12/10/2015 - 05/31/2023	30	90	CI around median	0.001	0.006	MCL/HBL	No Exceedance
22	UA	A6	Arsenic, total	mg/L	12/10/2015 - 02/28/2023	33	70	CI around median	0.001	0.010	MCL/HBL	No Exceedance
22	UA	A6R	Arsenic, total	mg/L	12/10/2015 - 05/31/2023	34	71	CI around median	0.001	0.010	MCL/HBL	No Exceedance
22	UA	A6	Barium, total	mg/L	12/10/2015 - 02/28/2023	29	0	CI around median	0.0652	2.0	MCL/HBL	No Exceedance
22	UA	A6R	Barium, total	mg/L	12/10/2015 - 05/31/2023	30	0	CI around median	0.0635	2.0	MCL/HBL	No Exceedance
22	UA	A6	Beryllium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
22	UA	A6R	Beryllium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
22	UA	A6	Cadmium, total	mg/L	12/10/2015 - 02/28/2023	29	0	CB around T-S line	0.00614	0.005	MCL/HBL	Confirmed
22	UA	A6R	Cadmium, total	mg/L	12/10/2015 - 05/31/2023	30	0	CB around T-S line	0.00587	0.005	MCL/HBL	Confirmed
22	UA	A6	Chromium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.0015	0.1	MCL/HBL	No Exceedance
22	UA	A6R	Chromium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.005	0.1	MCL/HBL	No Exceedance
22	UA	A6	Cobalt, total	mg/L	12/10/2015 - 02/28/2023	29	0	CB around T-S line	0.0021	0.006	MCL/HBL	No Exceedance
22	UA	A6R	Cobalt, total	mg/L	12/10/2015 - 05/31/2023	30	0	CB around T-S line	0.00215	0.006	MCL/HBL	No Exceedance
22	UA	A6	Fluoride, total	mg/L	12/10/2015 - 02/28/2023	29	3.4	CB around T-S line	0.15	4.0	MCL/HBL	No Exceedance
22	UA	A6R	Fluoride, total	mg/L	12/10/2015 - 05/31/2023	30	3.3	CI around median	0.15	4.0	MCL/HBL	No Exceedance
22	UA	A6	Lead, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.015	MCL/HBL	No Exceedance
22	UA	A6R	Lead, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.0075	0.015	MCL/HBL	No Exceedance
22	UA	A6	Lithium, total	mg/L	12/10/2015 - 02/28/2023	33	0	CB around T-S line	0.0407	0.04	MCL/HBL	Exceedance Not Confirmed
22	UA	A6R	Lithium, total	mg/L	12/10/2015 - 05/31/2023	34	0	CB around T-S line	0.0395	0.04	MCL/HBL	No Exceedance
22	UA	A6	Mercury, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
22	UA	A6R	Mercury, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
22	UA	A6	Molybdenum, total	mg/L	12/10/2015 - 02/28/2023	33	0	CB around T-S line	0.087	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
22	UA	A6R	Molybdenum, total	mg/L	12/10/2015 - 05/31/2023	34	0	CB around T-S line	0.082	0.1	MCL/HBL	No Exceedance
22	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 02/28/2023	20	0	CI around mean	0.323	5	MCL/HBL	No Exceedance
22	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 05/31/2023	21	0	CI around mean	0.344	5	MCL/HBL	No Exceedance
22	UA	A6	Selenium, total	mg/L	12/10/2015 - 02/28/2023	29	0	CB around linear reg	0.0163	0.05	MCL/HBL	No Exceedance
22	UA	A6R	Selenium, total	mg/L	12/10/2015 - 05/31/2023	30	0	CB around linear reg	0.0161	0.05	MCL/HBL	No Exceedance
22	UA	A6	Thallium, total	mg/L	12/10/2015 - 02/28/2023	29	93	CB around T-S line	0.002	0.002	MCL/HBL	No Exceedance
22	UA	A6R	Thallium, total	mg/L	12/10/2015 - 05/31/2023	30	93	CB around T-S line	0.002	0.002	MCL/HBL	No Exceedance
22D	UA	A6	Antimony, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
22D	UA	A6R	Antimony, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
22D	UA	A6	Arsenic, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.00122	0.010	MCL/HBL	No Exceedance
22D	UA	A6R	Arsenic, total	mg/L	09/17/2019 - 05/31/2023	14	7.1	CI around median	0.0012	0.010	MCL/HBL	No Exceedance
22D	UA	A6	Barium, total	mg/L	09/17/2019 - 02/28/2023	13	0	CB around T-S line	0.0636	2.0	MCL/HBL	No Exceedance
22D	UA	A6R	Barium, total	mg/L	09/17/2019 - 05/31/2023	14	0	CB around T-S line	0.0606	2.0	MCL/HBL	No Exceedance
22D	UA	A6	Beryllium, total	mg/L	09/17/2019 - 02/28/2023	12	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
22D	UA	A6R	Beryllium, total	mg/L	09/17/2019 - 05/31/2023	13	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
22D	UA	A6	Cadmium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
22D	UA	A6R	Cadmium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
22D	UA	A6	Chromium, total	mg/L	09/17/2019 - 02/28/2023	13	85	CI around median	0.0015	0.1	MCL/HBL	No Exceedance
22D	UA	A6R	Chromium, total	mg/L	09/17/2019 - 05/31/2023	14	86	CI around median	0.0015	0.1	MCL/HBL	No Exceedance
22D	UA	A6	Cobalt, total	mg/L	09/17/2019 - 02/28/2023	13	92	CI around median	0.001	0.006	MCL/HBL	No Exceedance
22D	UA	A6R	Cobalt, total	mg/L	09/17/2019 - 05/31/2023	14	93	CI around median	0.001	0.006	MCL/HBL	No Exceedance
22D	UA	A6	Fluoride, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.114	4.0	MCL/HBL	No Exceedance
22D	UA	A6R	Fluoride, total	mg/L	09/17/2019 - 05/31/2023	14	7.1	CI around median	0.11	4.0	MCL/HBL	No Exceedance
22D	UA	A6	Lead, total	mg/L	09/17/2019 - 02/28/2023	13	92	CI around median	0.001	0.015	MCL/HBL	No Exceedance
22D	UA	A6R	Lead, total	mg/L	09/17/2019 - 05/31/2023	14	93	CI around median	0.001	0.015	MCL/HBL	No Exceedance
22D	UA	A6	Lithium, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.0143	0.04	MCL/HBL	No Exceedance
22D	UA	A6R	Lithium, total	mg/L	09/17/2019 - 05/31/2023	14	0	CI around mean	0.0144	0.04	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
22D	UA	A6	Mercury, total	mg/L	12/11/2019 - 02/28/2023	12	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
22D	UA	A6R	Mercury, total	mg/L	12/11/2019 - 05/31/2023	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
22D	UA	A6	Molybdenum, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around median	0.0068	0.1	MCL/HBL	No Exceedance
22D	UA	A6R	Molybdenum, total	mg/L	09/17/2019 - 05/31/2023	14	7.1	CI around mean	0.00654	0.1	MCL/HBL	No Exceedance
22D	UA	A6	Radium 226 + Radium 228, total	pCi/L	09/17/2019 - 02/28/2023	10	0	CI around mean	0.621	5	MCL/HBL	No Exceedance
22D	UA	A6R	Radium 226 + Radium 228, total	pCi/L	09/17/2019 - 05/31/2023	11	0	CI around mean	0.518	5	MCL/HBL	No Exceedance
22D	UA	A6	Selenium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
22D	UA	A6R	Selenium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
22D	UA	A6	Thallium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
22D	UA	A6R	Thallium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
23	UA	A6	Antimony, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
23	UA	A6R	Antimony, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
23	UA	A6	Arsenic, total	mg/L	12/10/2015 - 02/28/2023	33	94	CB around T-S line	0.001	0.010	MCL/HBL	No Exceedance
23	UA	A6R	Arsenic, total	mg/L	12/10/2015 - 05/31/2023	34	94	CB around T-S line	0.001	0.010	MCL/HBL	No Exceedance
23	UA	A6	Barium, total	mg/L	12/10/2015 - 02/28/2023	29	0	CB around T-S line	0.0336	2.0	MCL/HBL	No Exceedance
23	UA	A6R	Barium, total	mg/L	12/10/2015 - 05/31/2023	30	0	CB around T-S line	0.0365	2.0	MCL/HBL	No Exceedance
23	UA	A6	Beryllium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
23	UA	A6R	Beryllium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
23	UA	A6	Cadmium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
23	UA	A6R	Cadmium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
23	UA	A6	Chromium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.0015	0.1	MCL/HBL	No Exceedance
23	UA	A6R	Chromium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.005	0.1	MCL/HBL	No Exceedance
23	UA	A6	Cobalt, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
23	UA	A6R	Cobalt, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
23	UA	A6	Fluoride, total	mg/L	12/10/2015 - 02/28/2023	29	3.4	CI around median	0.15	4.0	MCL/HBL	No Exceedance
23	UA	A6R	Fluoride, total	mg/L	12/10/2015 - 05/31/2023	30	3.3	CI around median	0.15	4.0	MCL/HBL	No Exceedance
23	UA	A6	Lead, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.015	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
23	UA	A6R	Lead, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.0075	0.015	MCL/HBL	No Exceedance
23	UA	A6	Lithium, total	mg/L	12/10/2015 - 02/28/2023	33	3.0	CI around mean	0.00465	0.04	MCL/HBL	No Exceedance
23	UA	A6R	Lithium, total	mg/L	12/10/2015 - 05/31/2023	34	5.9	CI around median	0.0048	0.04	MCL/HBL	No Exceedance
23	UA	A6	Mercury, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
23	UA	A6R	Mercury, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
23	UA	A6	Molybdenum, total	mg/L	12/10/2015 - 02/28/2023	33	0	CI around median	0.0141	0.1	MCL/HBL	No Exceedance
23	UA	A6R	Molybdenum, total	mg/L	12/10/2015 - 05/31/2023	34	0	CI around median	0.0146	0.1	MCL/HBL	No Exceedance
23	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 02/28/2023	20	0	CI around mean	0.245	5	MCL/HBL	No Exceedance
23	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 05/31/2023	21	0	CI around mean	0.253	5	MCL/HBL	No Exceedance
23	UA	A6	Selenium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
23	UA	A6R	Selenium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
23	UA	A6	Thallium, total	mg/L	12/10/2015 - 02/28/2023	29	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
23	UA	A6R	Thallium, total	mg/L	12/10/2015 - 05/31/2023	30	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
24/51	UA	A6	Antimony, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
24/51	UA	A6R	Antimony, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
24/51	UA	A6	Arsenic, total	mg/L	12/10/2015 - 02/28/2023	31	0	CI around mean	0.0205	0.010	MCL/HBL	Confirmed
24/51	UA	A6R	Arsenic, total	mg/L	12/10/2015 - 05/31/2023	32	0	CI around mean	0.0204	0.010	MCL/HBL	Confirmed
24/51	UA	A6	Barium, total	mg/L	12/10/2015 - 02/28/2023	27	0	CB around linear reg	0.111	2.0	MCL/HBL	No Exceedance
24/51	UA	A6R	Barium, total	mg/L	12/10/2015 - 05/31/2023	28	0	CB around linear reg	0.112	2.0	MCL/HBL	No Exceedance
24/51	UA	A6	Beryllium, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
24/51	UA	A6R	Beryllium, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
24/51	UA	A6	Cadmium, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
24/51	UA	A6R	Cadmium, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
24/51	UA	A6	Chromium, total	mg/L	12/10/2015 - 02/28/2023	27	74	CB around T-S line	0.00148	0.1	MCL/HBL	No Exceedance
24/51	UA	A6R	Chromium, total	mg/L	12/10/2015 - 05/31/2023	28	75	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
24/51	UA	A6	Cobalt, total	mg/L	12/10/2015 - 02/28/2023	27	70	CI around median	0.001	0.006	MCL/HBL	No Exceedance
24/51	UA	A6R	Cobalt, total	mg/L	12/10/2015 - 05/31/2023	28	71	CI around median	0.001	0.006	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
24/51	UA	A6	Fluoride, total	mg/L	12/10/2015 - 02/28/2023	27	3.7	CI around median	0.14	4.0	MCL/HBL	No Exceedance
24/51	UA	A6R	Fluoride, total	mg/L	12/10/2015 - 05/31/2023	28	3.6	CB around T-S line	0.114	4.0	MCL/HBL	No Exceedance
24/51	UA	A6	Lead, total	mg/L	12/10/2015 - 02/28/2023	27	67	CI around median	0.001	0.015	MCL/HBL	No Exceedance
24/51	UA	A6R	Lead, total	mg/L	12/10/2015 - 05/31/2023	28	68	CI around median	0.001	0.015	MCL/HBL	No Exceedance
24/51	UA	A6	Lithium, total	mg/L	12/10/2015 - 02/28/2023	31	0	CI around mean	0.0223	0.04	MCL/HBL	No Exceedance
24/51	UA	A6R	Lithium, total	mg/L	12/10/2015 - 05/31/2023	32	0	CB around T-S line	0.0224	0.04	MCL/HBL	No Exceedance
24/51	UA	A6	Mercury, total	mg/L	12/10/2015 - 02/28/2023	26	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
24/51	UA	A6R	Mercury, total	mg/L	12/10/2015 - 05/31/2023	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
24/51	UA	A6	Molybdenum, total	mg/L	12/10/2015 - 02/28/2023	31	0	CI around mean	0.0102	0.1	MCL/HBL	No Exceedance
24/51	UA	A6R	Molybdenum, total	mg/L	12/10/2015 - 05/31/2023	32	3.1	CI around mean	0.00992	0.1	MCL/HBL	No Exceedance
24/51	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 02/28/2023	19	0	CB around linear reg	0.939	5	MCL/HBL	No Exceedance
24/51	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 05/31/2023	20	0	CB around linear reg	1.12	5	MCL/HBL	No Exceedance
24/51	UA	A6	Selenium, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
24/51	UA	A6R	Selenium, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
24/51	UA	A6	Thallium, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
24/51	UA	A6R	Thallium, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
27	UA	A6	Antimony, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
27	UA	A6R	Antimony, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
27	UA	A6	Arsenic, total	mg/L	09/12/2018 - 02/28/2023	16	62	CI around median	0.001	0.010	MCL/HBL	No Exceedance
27	UA	A6R	Arsenic, total	mg/L	09/12/2018 - 05/31/2023	17	65	CI around median	0.001	0.010	MCL/HBL	No Exceedance
27	UA	A6	Barium, total	mg/L	09/12/2018 - 02/28/2023	16	0	CI around mean	0.0836	2.0	MCL/HBL	No Exceedance
27	UA	A6R	Barium, total	mg/L	09/12/2018 - 05/31/2023	17	0	CI around mean	0.0835	2.0	MCL/HBL	No Exceedance
27	UA	A6	Beryllium, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
27	UA	A6R	Beryllium, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
27	UA	A6	Cadmium, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
27	UA	A6R	Cadmium, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
27	UA	A6	Chromium, total	mg/L	09/12/2018 - 02/28/2023	16	75	CI around median	0.0015	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
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HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
27	UA	A6R	Chromium, total	mg/L	09/12/2018 - 05/31/2023	17	76	CI around median	0.0015	0.1	MCL/HBL	No Exceedance
27	UA	A6	Cobalt, total	mg/L	09/12/2018 - 02/28/2023	16	0	CI around mean	0.00179	0.006	MCL/HBL	No Exceedance
27	UA	A6R	Cobalt, total	mg/L	09/12/2018 - 05/31/2023	17	0	CI around mean	0.00185	0.006	MCL/HBL	No Exceedance
27	UA	A6	Fluoride, total	mg/L	09/12/2018 - 02/28/2023	16	0	CB around linear reg	0.13	4.0	MCL/HBL	No Exceedance
27	UA	A6R	Fluoride, total	mg/L	09/12/2018 - 05/31/2023	17	0	CI around median	0.12	4.0	MCL/HBL	No Exceedance
27	UA	A6	Lead, total	mg/L	09/12/2018 - 02/28/2023	16	50	CI around median	0.001	0.015	MCL/HBL	No Exceedance
27	UA	A6R	Lead, total	mg/L	09/12/2018 - 05/31/2023	17	53	CI around median	0.001	0.015	MCL/HBL	No Exceedance
27	UA	A6	Lithium, total	mg/L	09/12/2018 - 02/28/2023	16	0	CI around mean	0.0211	0.04	MCL/HBL	No Exceedance
27	UA	A6R	Lithium, total	mg/L	09/12/2018 - 05/31/2023	17	0	CI around mean	0.0212	0.04	MCL/HBL	No Exceedance
27	UA	A6	Mercury, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
27	UA	A6R	Mercury, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
27	UA	A6	Molybdenum, total	mg/L	09/12/2018 - 02/28/2023	16	0	CI around mean	0.0043	0.1	MCL/HBL	No Exceedance
27	UA	A6R	Molybdenum, total	mg/L	09/12/2018 - 05/31/2023	17	5.9	CI around mean	0.00434	0.1	MCL/HBL	No Exceedance
27	UA	A6	Radium 226 + Radium 228, total	pCi/L	09/12/2018 - 02/28/2023	10	0	CI around geomean	0.187	5	MCL/HBL	No Exceedance
27	UA	A6R	Radium 226 + Radium 228, total	pCi/L	09/12/2018 - 05/31/2023	11	0	CI around geomean	0.189	5	MCL/HBL	No Exceedance
27	UA	A6	Selenium, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
27	UA	A6R	Selenium, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
27	UA	A6	Thallium, total	mg/L	09/12/2018 - 02/28/2023	16	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
27	UA	A6R	Thallium, total	mg/L	09/12/2018 - 05/31/2023	17	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
35	UA	A6	Antimony, total	mg/L	12/09/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
35	UA	A6R	Antimony, total	mg/L	12/09/2015 - 05/31/2023	29	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
35	UA	A6	Arsenic, total	mg/L	12/09/2015 - 02/28/2023	28	79	CI around median	0.001	0.010	MCL/HBL	No Exceedance
35	UA	A6R	Arsenic, total	mg/L	12/09/2015 - 05/31/2023	29	79	CI around median	0.001	0.010	MCL/HBL	No Exceedance
35	UA	A6	Barium, total	mg/L	12/09/2015 - 02/28/2023	28	0	CI around geomean	0.0394	2.0	MCL/HBL	No Exceedance
35	UA	A6R	Barium, total	mg/L	12/09/2015 - 05/31/2023	29	0	CI around geomean	0.0394	2.0	MCL/HBL	No Exceedance
35	UA	A6	Beryllium, total	mg/L	12/09/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
35	UA	A6R	Beryllium, total	mg/L	12/09/2015 - 05/31/2023	29	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
35	UA	A6	Cadmium, total	mg/L	12/09/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
35	UA	A6R	Cadmium, total	mg/L	12/09/2015 - 05/31/2023	29	100	All ND - Last	0.002	0.005	MCL/HBL	No Exceedance
35	UA	A6	Chromium, total	mg/L	12/09/2015 - 02/28/2023	28	96	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
35	UA	A6R	Chromium, total	mg/L	12/09/2015 - 05/31/2023	29	97	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
35	UA	A6	Cobalt, total	mg/L	12/09/2015 - 02/28/2023	28	46	CI around median	0.001	0.006	MCL/HBL	No Exceedance
35	UA	A6R	Cobalt, total	mg/L	12/09/2015 - 05/31/2023	29	45	CB around T-S line	0.001	0.006	MCL/HBL	No Exceedance
35	UA	A6	Fluoride, total	mg/L	12/09/2015 - 02/28/2023	29	0	CI around mean	0.179	4.0	MCL/HBL	No Exceedance
35	UA	A6R	Fluoride, total	mg/L	12/09/2015 - 05/31/2023	30	0	CI around mean	0.175	4.0	MCL/HBL	No Exceedance
35	UA	A6	Lead, total	mg/L	12/09/2015 - 02/28/2023	28	89	CI around median	0.001	0.015	MCL/HBL	No Exceedance
35	UA	A6R	Lead, total	mg/L	12/09/2015 - 05/31/2023	29	90	CI around median	0.001	0.015	MCL/HBL	No Exceedance
35	UA	A6	Lithium, total	mg/L	12/09/2015 - 02/28/2023	28	0	CI around mean	0.0247	0.04	MCL/HBL	No Exceedance
35	UA	A6R	Lithium, total	mg/L	12/09/2015 - 05/31/2023	29	0	CI around mean	0.0245	0.04	MCL/HBL	No Exceedance
35	UA	A6	Mercury, total	mg/L	12/09/2015 - 02/28/2023	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
35	UA	A6R	Mercury, total	mg/L	12/09/2015 - 05/31/2023	28	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
35	UA	A6	Molybdenum, total	mg/L	12/09/2015 - 02/28/2023	28	0	CI around mean	0.066	0.1	MCL/HBL	No Exceedance
35	UA	A6R	Molybdenum, total	mg/L	12/09/2015 - 05/31/2023	29	0	CI around mean	0.0664	0.1	MCL/HBL	No Exceedance
35	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/09/2015 - 02/28/2023	21	0	CI around mean	0.34	5	MCL/HBL	No Exceedance
35	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/09/2015 - 05/31/2023	22	0	CI around median	0.25	5	MCL/HBL	No Exceedance
35	UA	A6	Selenium, total	mg/L	12/09/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
35	UA	A6R	Selenium, total	mg/L	12/09/2015 - 05/31/2023	29	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
35	UA	A6	Thallium, total	mg/L	12/09/2015 - 02/28/2023	28	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
35	UA	A6R	Thallium, total	mg/L	12/09/2015 - 05/31/2023	29	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
49	UA	A6	Antimony, total	mg/L	12/10/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
49	UA	A6R	Antimony, total	mg/L	12/10/2015 - 05/31/2023	29	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
49	UA	A6	Arsenic, total	mg/L	12/10/2015 - 02/28/2023	28	96	CI around median	0.001	0.010	MCL/HBL	No Exceedance
49	UA	A6R	Arsenic, total	mg/L	12/10/2015 - 05/31/2023	29	97	CI around median	0.001	0.010	MCL/HBL	No Exceedance
49	UA	A6	Barium, total	mg/L	12/10/2015 - 02/28/2023	28	0	CB around T-S line	0.0596	2.0	MCL/HBL	No Exceedance

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HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
49	UA	A6R	Barium, total	mg/L	12/10/2015 - 05/31/2023	29	0	CB around linear reg	0.0617	2.0	MCL/HBL	No Exceedance
49	UA	A6	Beryllium, total	mg/L	12/10/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
49	UA	A6R	Beryllium, total	mg/L	12/10/2015 - 05/31/2023	29	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
49	UA	A6	Cadmium, total	mg/L	12/10/2015 - 02/28/2023	28	29	CB around linear reg	0.0016	0.005	MCL/HBL	No Exceedance
49	UA	A6R	Cadmium, total	mg/L	12/10/2015 - 05/31/2023	29	31	CB around linear reg	0.00165	0.005	MCL/HBL	No Exceedance
49	UA	A6	Chromium, total	mg/L	12/10/2015 - 02/28/2023	28	96	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
49	UA	A6R	Chromium, total	mg/L	12/10/2015 - 05/31/2023	29	97	CB around T-S line	0.0015	0.1	MCL/HBL	No Exceedance
49	UA	A6	Cobalt, total	mg/L	12/10/2015 - 02/28/2023	28	0	CI around mean	0.0045	0.006	MCL/HBL	No Exceedance
49	UA	A6R	Cobalt, total	mg/L	12/10/2015 - 05/31/2023	29	0	CI around mean	0.00456	0.006	MCL/HBL	No Exceedance
49	UA	A6	Fluoride, total	mg/L	12/10/2015 - 02/28/2023	29	0	CI around mean	0.15	4.0	MCL/HBL	No Exceedance
49	UA	A6R	Fluoride, total	mg/L	12/10/2015 - 05/31/2023	30	0	CI around mean	0.148	4.0	MCL/HBL	No Exceedance
49	UA	A6	Lead, total	mg/L	12/10/2015 - 02/28/2023	28	93	CI around median	0.001	0.015	MCL/HBL	No Exceedance
49	UA	A6R	Lead, total	mg/L	12/10/2015 - 05/31/2023	29	93	CB around T-S line	0.001	0.015	MCL/HBL	No Exceedance
49	UA	A6	Lithium, total	mg/L	12/10/2015 - 02/28/2023	28	0	CI around mean	0.0242	0.04	MCL/HBL	No Exceedance
49	UA	A6R	Lithium, total	mg/L	12/10/2015 - 05/31/2023	29	0	CI around mean	0.024	0.04	MCL/HBL	No Exceedance
49	UA	A6	Mercury, total	mg/L	12/10/2015 - 02/28/2023	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
49	UA	A6R	Mercury, total	mg/L	12/10/2015 - 05/31/2023	28	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
49	UA	A6	Molybdenum, total	mg/L	12/10/2015 - 02/28/2023	28	0	CB around linear reg	0.0244	0.1	MCL/HBL	No Exceedance
49	UA	A6R	Molybdenum, total	mg/L	12/10/2015 - 05/31/2023	29	0	CB around linear reg	0.0233	0.1	MCL/HBL	No Exceedance
49	UA	A6	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 02/28/2023	21	0	CI around mean	0.275	5	MCL/HBL	No Exceedance
49	UA	A6R	Radium 226 + Radium 228, total	pCi/L	12/10/2015 - 05/31/2023	22	0	CI around mean	0.29	5	MCL/HBL	No Exceedance
49	UA	A6	Selenium, total	mg/L	12/10/2015 - 02/28/2023	28	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
49	UA	A6R	Selenium, total	mg/L	12/10/2015 - 05/31/2023	29	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
49	UA	A6	Thallium, total	mg/L	12/10/2015 - 02/28/2023	28	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
49	UA	A6R	Thallium, total	mg/L	12/10/2015 - 05/31/2023	29	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
50	UA	A6	Antimony, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance
50	UA	A6R	Antimony, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.001	0.006	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
50	UA	A6	Arsenic, total	mg/L	09/17/2019 - 02/28/2023	13	92	Most recent sample	0.001	0.010	MCL/HBL	No Exceedance
50	UA	A6R	Arsenic, total	mg/L	09/17/2019 - 05/31/2023	14	93	CI around median	0.001	0.010	MCL/HBL	No Exceedance
50	UA	A6	Barium, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.0901	2.0	MCL/HBL	No Exceedance
50	UA	A6R	Barium, total	mg/L	09/17/2019 - 05/31/2023	14	0	CI around mean	0.0899	2.0	MCL/HBL	No Exceedance
50	UA	A6	Beryllium, total	mg/L	09/17/2019 - 02/28/2023	12	100	All ND - Last	0.001	0.004	MCL/HBL	No Exceedance
50	UA	A6R	Beryllium, total	mg/L	09/17/2019 - 05/31/2023	13	100	All ND - Last	0.0005	0.004	MCL/HBL	No Exceedance
50	UA	A6	Cadmium, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around median	0.0012	0.005	MCL/HBL	No Exceedance
50	UA	A6R	Cadmium, total	mg/L	09/17/2019 - 05/31/2023	14	7.1	CI around median	0.0011	0.005	MCL/HBL	No Exceedance
50	UA	A6	Chromium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.0015	0.1	MCL/HBL	No Exceedance
50	UA	A6R	Chromium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.005	0.1	MCL/HBL	No Exceedance
50	UA	A6	Cobalt, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.00434	0.006	MCL/HBL	No Exceedance
50	UA	A6R	Cobalt, total	mg/L	09/17/2019 - 05/31/2023	14	0	CI around mean	0.00441	0.006	MCL/HBL	No Exceedance
50	UA	A6	Fluoride, total	mg/L	09/17/2019 - 02/28/2023	13	15	CB around linear reg	0.123	4.0	MCL/HBL	No Exceedance
50	UA	A6R	Fluoride, total	mg/L	09/17/2019 - 05/31/2023	14	21	CI around mean	0.0987	4.0	MCL/HBL	No Exceedance
50	UA	A6	Lead, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.015	MCL/HBL	No Exceedance
50	UA	A6R	Lead, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.0075	0.015	MCL/HBL	No Exceedance
50	UA	A6	Lithium, total	mg/L	09/17/2019 - 02/28/2023	13	0	CI around mean	0.0207	0.04	MCL/HBL	No Exceedance
50	UA	A6R	Lithium, total	mg/L	09/17/2019 - 05/31/2023	14	0	CI around median	0.0197	0.04	MCL/HBL	No Exceedance
50	UA	A6	Mercury, total	mg/L	12/11/2019 - 02/28/2023	12	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
50	UA	A6R	Mercury, total	mg/L	12/11/2019 - 05/31/2023	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
50	UA	A6	Molybdenum, total	mg/L	09/17/2019 - 02/28/2023	13	0	CB around linear reg	0.0356	0.1	MCL/HBL	No Exceedance
50	UA	A6R	Molybdenum, total	mg/L	09/17/2019 - 05/31/2023	14	0	CB around T-S line	0.0301	0.1	MCL/HBL	No Exceedance
50	UA	A6	Radium 226 + Radium 228, total	pCi/L	09/17/2019 - 02/28/2023	9	0	CI around mean	0.487	5	MCL/HBL	No Exceedance
50	UA	A6R	Radium 226 + Radium 228, total	pCi/L	09/17/2019 - 05/31/2023	10	0	CI around mean	0.498	5	MCL/HBL	No Exceedance
50	UA	A6	Selenium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
50	UA	A6R	Selenium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.001	0.05	MCL/HBL	No Exceedance
50	UA	A6	Thallium, total	mg/L	09/17/2019 - 02/28/2023	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	HSU	Event ID	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
50	UA	A6R	Thallium, total	mg/L	09/17/2019 - 05/31/2023	14	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance

Notes:
Only SSLs determined in 2023 (see Table A) for 40 C.F.R. § 257 are included
Statistically Significant Level (SSL) Type:

No Exceedance: No exceedance of the GWPS and no resample was collected.

Exceedance Not Confirmed: An exceedance was determined in the parent event, a resample was collected, and the resample did not confirm the exceedance

Confirmed: An exceedance was determined with comparison to a resample. If a determined exceedance is confirmed by resample, both the sample and resample are noted as confirmed.

GWPS = Groundwater Protection Standard
GWPS Source:

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

HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

ID = identification
mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
R = resample
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 T-S line = Confidence band around Thiel-Sen line

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

Most recent sample = Result for the most recently collected sample used due to insufficient data

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

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FIGURES

BACKGROUND WELL
COMPLIANCE WELL
MONITORING WELL
REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
SITE FEATURE
PROPERTY BOUNDARY

0 200 400 Feet

MONITORING WELL LOCATION MAP

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\2021_Annual\GWM_CAR\Hennepin\OWAP_804\Figure 1 HEN OWAP MW Location Map.mxd

PROJECT: 169000XXXX | DATED: 1/5/2022 | DESIGNER: galarmnc

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP FEBRUARY 28 AND MARCH 1, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\22851\MXD\GW_Contours\Round_2023\Hennepin\OWAP_804\HEN 804 OWAP Pot Surface 20230228.mxd

PROJECT: 169000XXXX | DATED: 9/15/2023 | DESIGNER: GALARNMC

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP
MAY 30, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

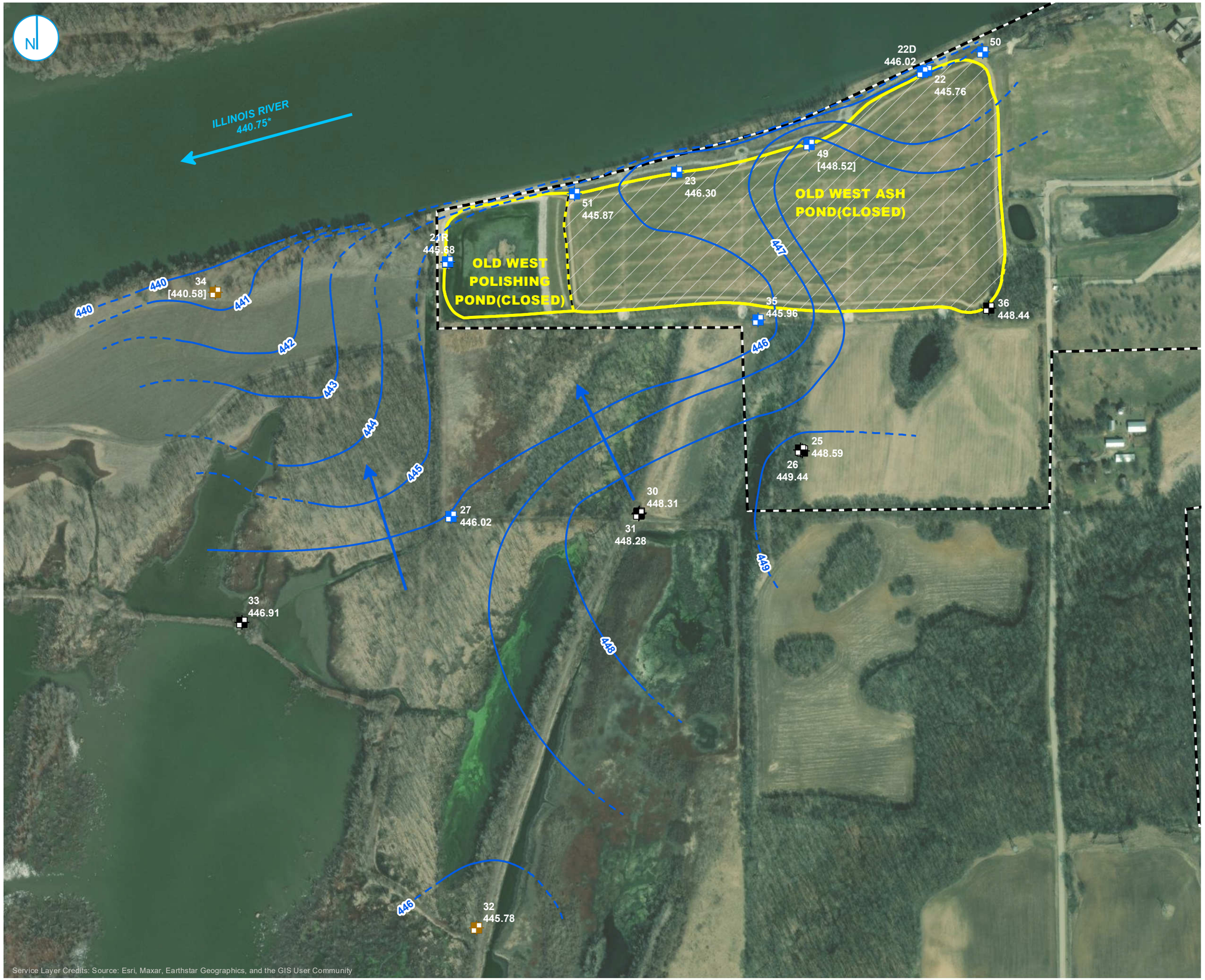
FIGURE 3

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2023\Hennepin\OWAP_804\HEN 804 OWAP Pot Surface 20230530.mxd

PROJECT: 169000XXXX | DATED: 7/6/2023 | DESIGNER: GALARNMC



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP AUGUST 21 AND 22, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

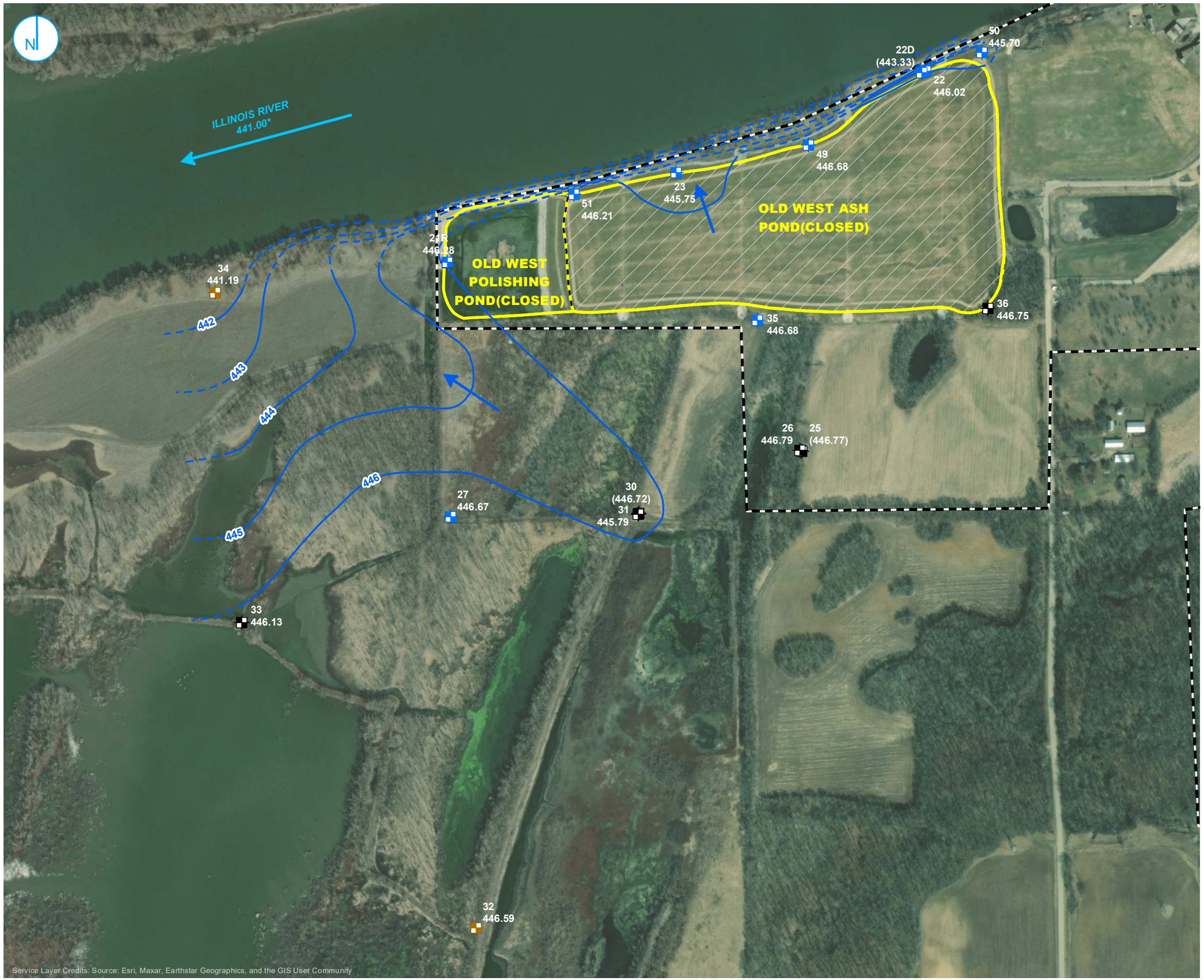
FIGURE 4

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2023\Hennepin\OWAP_804\HEN 804 OWAP Pot Surface 20230821.mxd

PROJECT: 169000XXXX | DATED: 12/18/2023 | DESIGNER: GALARNMC



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP NOVEMBER 13, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 5

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\22851\MXD\GW_Contours\Round_2023\Hennepin\OWAP_804\HEN 804 OWAP Pot Surface 20231113.mxd

PROJECT: 169000XXXX | DATED: 12/18/2023 | DESIGNER: GALARNMC

APPENDICES

APPENDIX A
LABORATORY REPORTS AND FIELD DATA SHEETS

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

April 14, 2023

Eric Bauer
Ramboll
234 W. Florida St.
Milwaukee, WI 53204
TEL: (414) 837-3614
FAX: (414) 837-3608

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: HEN-23Q1 **WorkOrder:** 23020845

Dear Eric Bauer:

TEKLAB, INC received 51 samples on 3/2/2023 8:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley

Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Report Contents

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23

This reporting package includes the following:

Definitions

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: Ramboll

Work Order: 23020845

Client Project: HEN-23Q1

Report Date: 14-Apr-23

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit	E -	Value above quantitation range
H -	Holding times exceeded	I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

Case Narrative

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Cooler Receipt Temp: 3.2 °C

An employee of Teklab, Inc. collected the sample(s).

55 was measured on 3/1/23 at 1008 per field file. 05DR was collected at 1237 rather than 1257 per field file. EAH 3/21/23

HEN_257_804 data is included in this report. EAH 4/14/23

Locations

Collinsville

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Springfield

Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Kansas City

Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Collinsville Air

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Chicago

Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-009
Client Sample ID: 22
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**17.30**	ft	1	02/28/2023 11:28	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.58**		1	02/28/2023 11:28	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	02/28/2023 11:28	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**51.9**	mV	1	02/28/2023 11:28	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1295**	µS/cm	1	02/28/2023 11:28	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**14.8**	°C	1	02/28/2023 11:28	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.30**	mg/L	1	02/28/2023 11:28	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**237**	mg/L	1	03/06/2023 10:05	R325659
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/06/2023 10:05	R325659
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**598**	mg/L	1	03/02/2023 11:25	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**145**	mg/L	5	03/07/2023 16:45	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.16**	mg/L	1	03/02/2023 13:00	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**100**	mg/L	5	03/07/2023 16:45	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**102**	mg/L	1	03/03/2023 17:17	203466
Magnesium	NELAP	0.050		**34.0**	mg/L	1	03/03/2023 17:17	203466
Potassium	NELAP	0.500		**11.5**	mg/L	5	03/06/2023 15:04	203466
Sodium	NELAP	0.050		**57.4**	mg/L	1	03/03/2023 17:17	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0	J	**1.0**	µg/L	5	03/03/2023 14:48	203466
Arsenic	NELAP	1.0		**1.4**	µg/L	5	03/03/2023 14:48	203466
Barium	NELAP	1.0		**90.0**	µg/L	5	03/03/2023 14:48	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 11:44	203466
Boron	NELAP	25.0		**4510**	µg/L	5	03/16/2023 13:57	203466
Cadmium	NELAP	1.0		**9.6**	µg/L	5	03/03/2023 14:48	203466
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 11:44	203466
Cobalt	NELAP	1.0		**3.8**	µg/L	5	03/03/2023 14:48	203466
Lead	NELAP	1.0	J	**0.7**	µg/L	5	03/03/2023 14:48	203466
Lithium	*	3.0		**41.9**	µg/L	5	03/06/2023 11:44	203466
Molybdenum	NELAP	1.5		**156**	µg/L	5	03/03/2023 14:48	203466
Selenium	NELAP	1.0		**32.2**	µg/L	5	03/03/2023 14:48	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 14:48	203466

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-009
Client Sample ID: 22
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:37	203469

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-010
Client Sample ID: 23
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**16.70**	ft	1	02/28/2023 10:35	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.38**		1	02/28/2023 10:35	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	02/28/2023 10:35	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-124.9**	mV	1	02/28/2023 10:35	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1657**	µS/cm	1	02/28/2023 10:35	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**12.5**	°C	1	02/28/2023 10:35	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.30**	mg/L	1	02/28/2023 10:35	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**171**	mg/L	1	03/06/2023 10:12	R325659
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/06/2023 10:12	R325659
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**856**	mg/L	1	03/02/2023 11:26	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**433**	mg/L	10	03/07/2023 16:58	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	03/02/2023 13:05	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**66**	mg/L	5	03/07/2023 16:53	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**122**	mg/L	1	03/03/2023 17:21	203466
Magnesium	NELAP	0.050		**80.5**	mg/L	1	03/03/2023 17:21	203466
Potassium	NELAP	0.100		**2.99**	mg/L	1	03/06/2023 13:48	203466
Sodium	NELAP	0.050		**46.3**	mg/L	1	03/03/2023 17:21	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 14:54	203466
Arsenic	NELAP	1.0		**1.3**	µg/L	5	03/03/2023 14:54	203466
Barium	NELAP	1.0		**68.5**	µg/L	5	03/03/2023 14:54	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 11:50	203466
Boron	NELAP	25.0		**12800**	µg/L	5	03/22/2023 2:23	204109
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 14:54	203466
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 11:50	203466
Cobalt	NELAP	1.0	J	**0.4**	µg/L	5	03/03/2023 14:54	203466
Lead	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 14:54	203466
Lithium	*	3.0		**4.2**	µg/L	5	03/06/2023 11:50	203466
Molybdenum	NELAP	1.5		**21.3**	µg/L	5	03/03/2023 14:54	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 14:54	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 14:54	203466

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-010
Client Sample ID: 23
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:40	203469

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-011
Client Sample ID: 25
Matrix: GROUNDWATER
Collection Date: 02/28/2023 14:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**15.87**	ft	1	02/28/2023 14:35	R325999

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-012
Client Sample ID: 26
Matrix: GROUNDWATER
Collection Date: 02/28/2023 14:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**15.95**	ft	1	02/28/2023 14:36	R325999

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-013
Client Sample ID: 27
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:47

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**3.90**	ft	1	02/28/2023 13:47	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.05**		1	02/28/2023 13:47	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.96**	NTU	1	02/28/2023 13:47	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-49.1**	mV	1	02/28/2023 13:47	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1475**	µS/cm	1	02/28/2023 13:47	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**11.6**	°C	1	02/28/2023 13:47	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.22**	mg/L	1	02/28/2023 13:47	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**323**	mg/L	1	03/03/2023 15:28	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 15:28	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**636**	mg/L	1	03/02/2023 12:08	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**159**	mg/L	5	03/07/2023 17:01	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	03/02/2023 12:01	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**99**	mg/L	5	03/07/2023 17:00	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**141**	mg/L	1	03/03/2023 17:39	203466
Magnesium	NELAP	0.050		**39.6**	mg/L	1	03/03/2023 17:39	203466
Potassium	NELAP	0.100		**3.08**	mg/L	1	03/06/2023 13:52	203466
Sodium	NELAP	0.050		**51.1**	mg/L	1	03/03/2023 17:39	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:00	203466
Arsenic	NELAP	1.0		**1.3**	µg/L	5	03/03/2023 15:00	203466
Barium	NELAP	1.0		**97.1**	µg/L	5	03/03/2023 15:00	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 11:56	203466
Boron	NELAP	25.0		**2730**	µg/L	5	03/06/2023 11:56	203466
Cadmium	NELAP	1.0	J	**0.3**	µg/L	5	03/03/2023 15:00	203466
Chromium	NELAP	1.5		**1.6**	µg/L	5	03/06/2023 11:56	203466
Cobalt	NELAP	1.0		**2.1**	µg/L	5	03/03/2023 15:00	203466
Lead	NELAP	1.0	J	**1.0**	µg/L	5	03/06/2023 11:56	203466
Lithium	*	3.0		**17.4**	µg/L	5	03/06/2023 11:56	203466
Molybdenum	NELAP	1.5		**5.2**	µg/L	5	03/03/2023 15:00	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:00	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 15:00	203466

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-013
Client Sample ID: 27
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:47

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:42	203469

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-014
Client Sample ID: 30
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**6.48**	ft	1	02/28/2023 12:49	R325999

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-015
Client Sample ID: 31
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**6.42**	ft	1	02/28/2023 12:50	R325999

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-016
Client Sample ID: 32
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**4.62**	ft	1	02/28/2023 13:06	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.02**		1	02/28/2023 13:06	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.62**	NTU	1	02/28/2023 13:06	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**116.1**	mV	1	02/28/2023 13:06	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1317**	µS/cm	1	02/28/2023 13:06	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**10.2**	°C	1	02/28/2023 13:06	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.39**	mg/L	1	02/28/2023 13:06	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**341**	mg/L	1	03/03/2023 15:35	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 15:35	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**564**	mg/L	1	03/02/2023 12:08	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**82**	mg/L	5	03/07/2023 17:14	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	03/02/2023 13:13	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**83**	mg/L	5	03/07/2023 17:14	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**122**	mg/L	1	03/03/2023 17:43	203466
Magnesium	NELAP	0.050		**42.4**	mg/L	1	03/03/2023 17:43	203466
Potassium	NELAP	0.100		**1.95**	mg/L	1	03/06/2023 15:15	203466
Sodium	NELAP	0.050		**39.7**	mg/L	1	03/03/2023 17:43	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:50	203466
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:50	203466
Barium	NELAP	1.0		**59.0**	µg/L	5	03/03/2023 15:50	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:20	203466
Boron	NELAP	25.0		**199**	µg/L	5	03/22/2023 2:54	204109
Cadmium	NELAP	1.0	J	**0.2**	µg/L	5	03/03/2023 15:50	203466
Chromium	NELAP	1.5	J	**1.4**	µg/L	5	03/06/2023 13:20	203466
Cobalt	NELAP	1.0		**2.9**	µg/L	5	03/03/2023 15:50	203466
Lead	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:50	203466
Lithium	*	3.0		**3.1**	µg/L	5	03/06/2023 13:20	203466
Molybdenum	NELAP	1.5	J	**0.7**	µg/L	5	03/03/2023 15:50	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:50	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 15:50	203466

CCV recovered outside the upper control limits for Pb. Sample results are below the reporting limit. Data is reportable per the TNI standard.

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-016
Client Sample ID: 32
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:49	203469

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-017
Client Sample ID: 33
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**3.50**	ft	1	02/28/2023 13:15	R325999

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-018
Client Sample ID: 34
Matrix: GROUNDWATER
Collection Date: 02/28/2023 14:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**2.45**	ft	1	02/28/2023 14:21	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**6.92**		1	02/28/2023 14:21	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.83**	NTU	1	02/28/2023 14:21	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-84.5**	mV	1	02/28/2023 14:21	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1703**	µS/cm	1	02/28/2023 14:21	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**11.2**	°C	1	02/28/2023 14:21	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.43**	mg/L	1	02/28/2023 14:21	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**575**	mg/L	1	03/03/2023 15:43	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 15:43	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**685**	mg/L	2.5	03/02/2023 12:09	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**48**	mg/L	1	03/07/2023 17:17	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.16**	mg/L	1	03/02/2023 13:15	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**80**	mg/L	5	03/07/2023 17:35	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**184**	mg/L	1	03/03/2023 17:47	203466
Magnesium	NELAP	0.050		**47.7**	mg/L	1	03/03/2023 17:47	203466
Potassium	NELAP	0.100		**0.423**	mg/L	1	03/06/2023 15:18	203466
Sodium	NELAP	0.050		**54.7**	mg/L	1	03/03/2023 17:47	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:57	203466
Arsenic	NELAP	1.0	J	**0.7**	µg/L	5	03/03/2023 15:57	203466
Barium	NELAP	1.0		**139**	µg/L	5	03/03/2023 15:57	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:26	203466
Boron	NELAP	25.0		**206**	µg/L	5	03/22/2023 2:36	204109
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:57	203466
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 13:26	203466
Cobalt	NELAP	1.0	J	**0.3**	µg/L	5	03/03/2023 15:57	203466
Lead	NELAP	1.0	J	**0.6**	µg/L	5	03/03/2023 15:57	203466
Lithium	*	3.0		**11.1**	µg/L	5	03/06/2023 13:26	203466
Molybdenum	NELAP	1.5		**1.7**	µg/L	5	03/03/2023 15:57	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 15:57	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 15:57	203466

CCV recovered outside the upper control limits for Pb. Sample results are below the reporting limit. Data is reportable per the TNI standard.

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-018
Client Sample ID: 34
Matrix: GROUNDWATER
Collection Date: 02/28/2023 14:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:56	203469

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-019
Client Sample ID: 35
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**8.20**	ft	1	02/28/2023 12:33	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**6.98**		1	02/28/2023 12:33	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.83**	NTU	1	02/28/2023 12:33	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**108.2**	mV	1	02/28/2023 12:33	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1732**	µS/cm	1	02/28/2023 12:33	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**11.1**	°C	1	02/28/2023 12:33	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.95**	mg/L	1	02/28/2023 12:33	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**269**	mg/L	1	03/06/2023 10:18	R325659
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/06/2023 10:18	R325659
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**918**	mg/L	1	03/02/2023 12:09	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**476**	mg/L	20	03/07/2023 17:43	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.19**	mg/L	1	03/02/2023 13:17	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**26**	mg/L	1	03/07/2023 17:38	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**268**	mg/L	1	03/03/2023 17:50	203466
Magnesium	NELAP	0.050		**30.6**	mg/L	1	03/03/2023 17:50	203466
Potassium	NELAP	0.500		**10.2**	mg/L	5	03/06/2023 15:07	203466
Sodium	NELAP	0.050		**25.6**	mg/L	1	03/03/2023 17:50	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:03	203466
Arsenic	NELAP	1.0	J	**0.8**	µg/L	5	03/03/2023 16:03	203466
Barium	NELAP	1.0		**59.1**	µg/L	5	03/03/2023 16:03	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:33	203466
Boron	NELAP	25.0		**9580**	µg/L	5	03/22/2023 2:42	204109
Cadmium	NELAP	1.0	J	**0.5**	µg/L	5	03/03/2023 16:03	203466
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 13:33	203466
Cobalt	NELAP	1.0		**1.4**	µg/L	5	03/03/2023 16:03	203466
Lead	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:03	203466
Lithium	*	3.0		**12.8**	µg/L	5	03/06/2023 13:33	203466
Molybdenum	NELAP	1.5		**71.1**	µg/L	5	03/03/2023 16:03	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:03	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 16:03	203466

CCV recovered outside the upper control limits for Pb. Sample results are below the reporting limit. Data is reportable per the TNI standard.

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-019
Client Sample ID: 35
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 20:58	203469

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-020
Client Sample ID: 36
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**15.28**	ft	1	02/28/2023 12:20	R325999

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-024
Client Sample ID: 49
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**21.30**	ft	1	02/28/2023 11:01	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**6.98**		1	02/28/2023 11:01	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**42.02**	NTU	1	02/28/2023 11:01	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**33.4**	mV	1	02/28/2023 11:01	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1449**	µS/cm	1	02/28/2023 11:01	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**13.9**	°C	1	02/28/2023 11:01	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.35**	mg/L	1	02/28/2023 11:01	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**347**	mg/L	1	03/03/2023 15:58	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 15:58	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**618**	mg/L	1	03/02/2023 12:10	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**108**	mg/L	5	03/07/2023 18:12	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.15**	mg/L	1	03/02/2023 13:23	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**104**	mg/L	5	03/07/2023 18:12	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**127**	mg/L	1	03/03/2023 18:27	203466
Magnesium	NELAP	0.050		**36.3**	mg/L	1	03/03/2023 18:27	203466
Potassium	NELAP	0.500		**14.7**	mg/L	5	03/06/2023 15:11	203466
Sodium	NELAP	0.050		**62.8**	mg/L	1	03/03/2023 18:27	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:22	203466
Arsenic	NELAP	1.0	J	**0.6**	µg/L	5	03/03/2023 16:22	203466
Barium	NELAP	1.0		**82.7**	µg/L	5	03/03/2023 16:22	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:52	203466
Boron	NELAP	25.0		**703**	µg/L	5	03/22/2023 2:48	204109
Cadmium	NELAP	1.0		**2.5**	µg/L	5	03/03/2023 16:22	203466
Chromium	NELAP	1.5	J	**1.3**	µg/L	5	03/06/2023 13:52	203466
Cobalt	NELAP	1.0		**3.7**	µg/L	5	03/06/2023 13:52	203466
Lead	NELAP	1.0	J	**0.8**	µg/L	5	03/03/2023 16:22	203466
Lithium	*	3.0		**20.7**	µg/L	5	03/06/2023 13:52	203466
Molybdenum	NELAP	1.5		**35.5**	µg/L	5	03/03/2023 16:22	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:22	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 16:22	203466

CCV recovered outside the upper control limits for Pb. Sample results are below the reporting limit. Data is reportable per the TNI standard.

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-024
Client Sample ID: 49
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 21:09	203470

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-025
Client Sample ID: 50
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**16.74**	ft	1	02/28/2023 12:10	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.41**		1	02/28/2023 12:10	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.41**	NTU	1	02/28/2023 12:10	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**24.1**	mV	1	02/28/2023 12:10	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1287**	µS/cm	1	02/28/2023 12:10	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**14.7**	°C	1	02/28/2023 12:10	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.33**	mg/L	1	02/28/2023 12:10	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**251**	mg/L	1	03/03/2023 16:05	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 16:05	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**580**	mg/L	1	03/02/2023 12:54	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**136**	mg/L	5	03/07/2023 18:55	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	03/02/2023 13:25	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**101**	mg/L	5	03/07/2023 18:55	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**121**	mg/L	1	03/03/2023 18:31	203466
Magnesium	NELAP	0.050		**27.4**	mg/L	1	03/03/2023 18:31	203466
Potassium	NELAP	0.100		**9.20**	mg/L	1	03/06/2023 16:30	203466
Sodium	NELAP	0.050		**56.5**	mg/L	1	03/03/2023 18:31	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 16:28	203466
Arsenic	NELAP	1.0		**1.0**	µg/L	5	03/03/2023 16:28	203466
Barium	NELAP	1.0		**103**	µg/L	5	03/03/2023 16:28	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:58	203466
Boron	NELAP	25.0		**1430**	µg/L	5	03/06/2023 13:58	203466
Cadmium	NELAP	1.0		**3.7**	µg/L	5	03/03/2023 16:28	203466
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 13:58	203466
Cobalt	NELAP	1.0		**9.9**	µg/L	5	03/03/2023 16:28	203466
Lead	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 13:58	203466
Lithium	*	3.0		**24.2**	µg/L	5	03/06/2023 13:58	203466
Molybdenum	NELAP	1.5		**97.1**	µg/L	5	03/03/2023 16:28	203466
Selenium	NELAP	1.0	J	**0.7**	µg/L	5	03/03/2023 16:28	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 16:28	203466

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-025
Client Sample ID: 50
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 21:16	203470

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-026
Client Sample ID: 51
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**17.91**	ft	1	02/28/2023 10:03	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.23**		1	02/28/2023 10:03	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**21.13**	NTU	1	02/28/2023 10:03	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-119.3**	mV	1	02/28/2023 10:03	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1477**	µS/cm	1	02/28/2023 10:03	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**11.2**	°C	1	02/28/2023 10:03	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**1.08**	mg/L	1	02/28/2023 10:03	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**357**	mg/L	1	03/06/2023 10:39	R325659
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/06/2023 10:39	R325659
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**630**	mg/L	1	03/02/2023 12:55	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**105**	mg/L	5	03/07/2023 18:58	R325693
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	03/02/2023 13:37	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**110**	mg/L	5	03/07/2023 18:57	R325696
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**132**	mg/L	1	03/03/2023 18:35	203466
Magnesium	NELAP	0.050		**39.8**	mg/L	1	03/03/2023 18:35	203466
Potassium	NELAP	0.100		**6.55**	mg/L	1	03/06/2023 16:33	203466
Sodium	NELAP	0.050		**59.3**	mg/L	1	03/03/2023 18:35	203466
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 17:36	203466
Arsenic	NELAP	1.0		**30.8**	µg/L	5	03/03/2023 17:36	203466
Barium	NELAP	1.0		**134**	µg/L	5	03/03/2023 17:36	203466
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 14:04	203466
Boron	NELAP	25.0		**1540**	µg/L	5	03/06/2023 14:04	203466
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 17:36	203466
Chromium	NELAP	1.5	J	**0.7**	µg/L	5	03/06/2023 14:04	203466
Cobalt	NELAP	1.0	J	**0.9**	µg/L	5	03/03/2023 17:36	203466
Lead	NELAP	1.0	J	**0.9**	µg/L	5	03/06/2023 14:04	203466
Lithium	*	3.0		**21.0**	µg/L	5	03/06/2023 14:04	203466
Molybdenum	NELAP	1.5		**13.5**	µg/L	5	03/03/2023 17:36	203466
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 17:36	203466
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 17:36	203466

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-026
Client Sample ID: 51
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/07/2023 5:12	203470

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-036
Client Sample ID: 21R
Matrix: GROUNDWATER
Collection Date: 02/28/2023 9:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**5.25**	ft	1	02/28/2023 9:18	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.33**		1	02/28/2023 9:18	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**121.3**	NTU	1	02/28/2023 9:18	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-143.2**	mV	1	02/28/2023 9:18	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1517**	µS/cm	1	02/28/2023 9:18	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**10.9**	°C	1	02/28/2023 9:18	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**1.21**	mg/L	1	02/28/2023 9:18	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**378**	mg/L	1	03/03/2023 16:46	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 16:46	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**678**	mg/L	1	03/02/2023 13:36	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**105**	mg/L	5	03/08/2023 11:49	R325765
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.15**	mg/L	1	03/02/2023 14:03	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**108**	mg/L	5	03/08/2023 11:49	R325771
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**147**	mg/L	1	03/03/2023 19:42	203468
Magnesium	NELAP	0.050		**44.7**	mg/L	1	03/03/2023 19:42	203468
Potassium	NELAP	0.100		**2.91**	mg/L	1	03/06/2023 18:02	203468
Sodium	NELAP	0.050		**52.5**	mg/L	1	03/03/2023 19:42	203468
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:07	203468
Arsenic	NELAP	1.0		**34.5**	µg/L	5	03/03/2023 13:07	203468
Barium	NELAP	1.0		**398**	µg/L	5	03/03/2023 13:07	203468
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 16:25	203468
Boron	NELAP	25.0		**3280**	µg/L	5	03/22/2023 4:13	204109
Cadmium	NELAP	1.0	J	**0.2**	µg/L	5	03/03/2023 13:07	203468
Chromium	NELAP	1.5		**2.4**	µg/L	5	03/06/2023 16:25	203468
Cobalt	NELAP	1.0		**1.7**	µg/L	5	03/03/2023 13:07	203468
Lead	NELAP	1.0		**5.4**	µg/L	5	03/03/2023 13:07	203468
Lithium	*	3.0		**19.9**	µg/L	5	03/06/2023 16:25	203468
Molybdenum	NELAP	1.5		**10.9**	µg/L	5	03/03/2023 13:07	203468
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:07	203468
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 13:07	203468

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-036
Client Sample ID: 21R
Matrix: GROUNDWATER
Collection Date: 02/28/2023 9:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/07/2023 5:46	203470

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-037
Client Sample ID: 22D
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**18.45**	ft	1	02/28/2023 11:44	R325999
STANDARD METHOD 4500-H B 2001 FIELD								
pH	*	1.00		**7.19**		1	02/28/2023 11:44	R325999
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.36**	NTU	1	02/28/2023 11:44	R325999
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential	*	-300		**-107.2**	mV	1	02/28/2023 11:44	R325999
STANDARD METHODS 2510 B FIELD								
Spec. Conductance, Field	*	0		**1459**	µS/cm	1	02/28/2023 11:44	R325999
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**14.8**	°C	1	02/28/2023 11:44	R325999
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved	*	0		**0.40**	mg/L	1	02/28/2023 11:44	R325999
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**341**	mg/L	1	03/03/2023 16:54	R325591
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/03/2023 16:54	R325591
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**680**	mg/L	1	03/02/2023 13:36	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**112**	mg/L	5	03/08/2023 11:55	R325765
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.11**	mg/L	1	03/02/2023 14:05	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**113**	mg/L	5	03/08/2023 11:55	R325771
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**137**	mg/L	1	03/03/2023 19:45	203468
Magnesium	NELAP	0.050		**42.2**	mg/L	1	03/03/2023 19:45	203468
Potassium	NELAP	0.100		**3.30**	mg/L	1	03/06/2023 18:06	203468
Sodium	NELAP	0.050		**48.9**	mg/L	1	03/03/2023 19:45	203468
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:14	203468
Arsenic	NELAP	1.0		**1.6**	µg/L	5	03/03/2023 13:14	203468
Barium	NELAP	1.0		**78.3**	µg/L	5	03/03/2023 13:14	203468
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 16:32	203468
Boron	NELAP	25.0		**2400**	µg/L	5	03/22/2023 4:20	204109
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:14	203468
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 16:32	203468
Cobalt	NELAP	1.0	J	**0.5**	µg/L	5	03/03/2023 13:14	203468
Lead	NELAP	1.0	J	**0.6**	µg/L	5	03/03/2023 13:14	203468
Lithium	*	3.0		**12.9**	µg/L	5	03/06/2023 16:32	203468
Molybdenum	NELAP	1.5		**8.2**	µg/L	5	03/03/2023 13:14	203468
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:14	203468
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 13:14	203468

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-037
Client Sample ID: 22D
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/07/2023 5:53	203470

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-040
Client Sample ID: SG02
Matrix: GROUNDWATER
Collection Date: 03/02/2023 7:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to water from measuring point	*	0		**449.50**	ft	1	03/02/2023 7:30	R325999

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020845
Client Project: HEN-23Q1
Report Date: 14-Apr-23
Lab ID: 23020845-051
Client Sample ID: Field Blank
Matrix: AQUEOUS
Collection Date: 03/01/2023 17:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2320 B (TOTAL) 1997, 2011								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**1**	mg/L	1	03/07/2023 8:46	R325659
STANDARD METHODS 2320 B 1997, 2011								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	03/07/2023 8:46	R325659
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**< 20**	mg/L	1	03/02/2023 14:09	R325574
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	03/08/2023 13:33	R325765
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	03/02/2023 14:29	R325510
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**< 1**	mg/L	1	03/08/2023 13:33	R325771
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.100		**< 0.100**	mg/L	1	03/03/2023 20:34	203468
Magnesium	NELAP	0.050		**< 0.050**	mg/L	1	03/03/2023 20:34	203468
Potassium	NELAP	0.100		**< 0.100**	mg/L	1	03/06/2023 18:21	203468
Sodium	NELAP	0.050		**< 0.050**	mg/L	1	03/03/2023 20:34	203468
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Barium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	03/06/2023 18:08	203468
Boron	NELAP	25.0		**< 25.0**	µg/L	5	03/07/2023 9:57	203468
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Chromium	NELAP	1.5		**< 1.5**	µg/L	5	03/06/2023 18:08	203468
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Lead	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Lithium	*	3.0		**< 3.0**	µg/L	5	03/07/2023 9:57	203468
Molybdenum	NELAP	1.5		**< 1.5**	µg/L	5	03/03/2023 13:45	203468
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	03/03/2023 13:45	203468
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	03/03/2023 13:45	203468
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	03/06/2023 19:27	203471

Sample Summary

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
23020845-009	22	Groundwater	4	02/28/2023 11:28
23020845-010	23	Groundwater	4	02/28/2023 10:35
23020845-011	25	Groundwater	1	02/28/2023 14:35
23020845-012	26	Groundwater	1	02/28/2023 14:36
23020845-013	27	Groundwater	4	02/28/2023 13:47
23020845-014	30	Groundwater	1	02/28/2023 12:49
23020845-015	31	Groundwater	1	02/28/2023 12:50
23020845-016	32	Groundwater	4	02/28/2023 13:06
23020845-017	33	Groundwater	1	02/28/2023 13:15
23020845-018	34	Groundwater	4	02/28/2023 14:21
23020845-019	35	Groundwater	4	02/28/2023 12:33
23020845-020	36	Groundwater	1	02/28/2023 12:20
23020845-024	49	Groundwater	4	02/28/2023 11:01
23020845-025	50	Groundwater	4	02/28/2023 12:10
23020845-026	51	Groundwater	4	02/28/2023 10:03
23020845-036	21R	Groundwater	4	02/28/2023 9:18
23020845-037	22D	Groundwater	4	02/28/2023 11:44
23020845-040	SG02	Groundwater	1	03/02/2023 7:30
23020845-051	Field Blank	Aqueous	9	03/01/2023 17:01

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23020845-009A	22	02/28/2023 11:28	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 11:28
	Standard Method 4500-H B 2001 Field				02/28/2023 11:28
	Standard Methods 2130 B Field				02/28/2023 11:28
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 11:28
	Standard Methods 2320 B (Total) 1997, 2011				03/06/2023 10:05
	Standard Methods 2320 B 1997, 2011				03/06/2023 10:05
	Standard Methods 2510 B Field				02/28/2023 11:28
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 11:25
	Standard Methods 2550 B Field				02/28/2023 11:28
	Standard Methods 4500-O G Field				02/28/2023 11:28
	SW-846 9036 (Total)				03/07/2023 16:45
	SW-846 9214 (Total)				03/02/2023 13:00
	SW-846 9251 (Total)				03/07/2023 16:45
23020845-009B	22	02/28/2023 11:28	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 12:45
23020845-009C	22	02/28/2023 11:28	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:17
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 15:04
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 14:48
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 11:44
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/16/2023 13:57
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:37
23020845-009D	22	02/28/2023 11:28	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/02/2023 19:02
23020845-010A	23	02/28/2023 10:35	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 10:35
	Standard Method 4500-H B 2001 Field				02/28/2023 10:35
	Standard Methods 2130 B Field				02/28/2023 10:35
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 10:35
	Standard Methods 2320 B (Total) 1997, 2011				03/06/2023 10:12
	Standard Methods 2320 B 1997, 2011				03/06/2023 10:12
	Standard Methods 2510 B Field				02/28/2023 10:35
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 11:26
	Standard Methods 2550 B Field				02/28/2023 10:35
	Standard Methods 4500-O G Field				02/28/2023 10:35
	SW-846 9036 (Total)				03/07/2023 16:58

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9214 (Total)				03/02/2023 13:05
	SW-846 9251 (Total)				03/07/2023 16:53
23020845-010B	23	02/28/2023 10:35	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 12:47
23020845-010C	23	02/28/2023 10:35	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:21
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 13:48
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 14:54
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 11:50
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 2:23
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:40
23020845-010D	23	02/28/2023 10:35	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/02/2023 19:08
23020845-011A	25	02/28/2023 14:35	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 14:35
23020845-012A	26	02/28/2023 14:36	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 14:36
23020845-013A	27	02/28/2023 13:47	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 13:47
	Standard Method 4500-H B 2001 Field				02/28/2023 13:47
	Standard Methods 2130 B Field				02/28/2023 13:47
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 13:47
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 15:28
	Standard Methods 2320 B 1997, 2011				03/03/2023 15:28
	Standard Methods 2510 B Field				02/28/2023 13:47
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:08
	Standard Methods 2550 B Field				02/28/2023 13:47
	Standard Methods 4500-O G Field				02/28/2023 13:47
	SW-846 9036 (Total)				03/07/2023 17:01
	SW-846 9214 (Total)				03/02/2023 12:01
	SW-846 9251 (Total)				03/07/2023 17:00
23020845-013B	27	02/28/2023 13:47	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 13:11
23020845-013C	27	02/28/2023 13:47	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:39
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 13:52
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 15:00

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 11:56
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:42
23020845-013D	27	02/28/2023 13:47	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/20/2023 21:00	03/22/2023 5:39
23020845-014A	30	02/28/2023 12:49	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 12:49
23020845-015A	31	02/28/2023 12:50	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 12:50
23020845-016A	32	02/28/2023 13:06	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 13:06
	Standard Method 4500-H B 2001 Field				02/28/2023 13:06
	Standard Methods 2130 B Field				02/28/2023 13:06
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 13:06
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 15:35
	Standard Methods 2320 B 1997, 2011				03/03/2023 15:35
	Standard Methods 2510 B Field				02/28/2023 13:06
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:08
	Standard Methods 2550 B Field				02/28/2023 13:06
	Standard Methods 4500-O G Field				02/28/2023 13:06
	SW-846 9036 (Total)				03/07/2023 17:14
	SW-846 9214 (Total)				03/02/2023 13:13
	SW-846 9251 (Total)				03/07/2023 17:14
23020845-016B	32	02/28/2023 13:06	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 13:38
23020845-016C	32	02/28/2023 13:06	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:43
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 15:15
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 15:50
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 13:20
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 2:54
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:49
23020845-016D	32	02/28/2023 13:06	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/02/2023 19:21
23020845-017A	33	02/28/2023 13:15	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 13:15
23020845-018A	34	02/28/2023 14:21	03/02/2023 8:00		

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Field Elevation Measurements				02/28/2023 14:21
	Standard Method 4500-H B 2001 Field				02/28/2023 14:21
	Standard Methods 2130 B Field				02/28/2023 14:21
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 14:21
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 15:43
	Standard Methods 2320 B 1997, 2011				03/03/2023 15:43
	Standard Methods 2510 B Field				02/28/2023 14:21
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:09
	Standard Methods 2550 B Field				02/28/2023 14:21
	Standard Methods 4500-O G Field				02/28/2023 14:21
	SW-846 9036 (Total)				03/07/2023 17:17
	SW-846 9214 (Total)				03/02/2023 13:15
	SW-846 9251 (Total)				03/07/2023 17:35
23020845-018B	34	02/28/2023 14:21	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 13:59
23020845-018C	34	02/28/2023 14:21	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:47
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 15:18
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 15:57
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 13:26
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 2:36
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:56
23020845-018D	34	02/28/2023 14:21	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/02/2023 19:27
23020845-019A	35	02/28/2023 12:33	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 12:33
	Standard Method 4500-H B 2001 Field				02/28/2023 12:33
	Standard Methods 2130 B Field				02/28/2023 12:33
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 12:33
	Standard Methods 2320 B (Total) 1997, 2011				03/06/2023 10:18
	Standard Methods 2320 B 1997, 2011				03/06/2023 10:18
	Standard Methods 2510 B Field				02/28/2023 12:33
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:09
	Standard Methods 2550 B Field				02/28/2023 12:33
	Standard Methods 4500-O G Field				02/28/2023 12:33
	SW-846 9036 (Total)				03/07/2023 17:43
	SW-846 9214 (Total)				03/02/2023 13:17

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9251 (Total)				03/07/2023 17:38
23020845-019B	35	02/28/2023 12:33	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:02
23020845-019C	35	02/28/2023 12:33	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 17:50
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 15:07
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 16:03
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 13:33
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 2:42
	SW-846 7470A (Total)			03/02/2023 9:08	03/06/2023 20:58
23020845-019D	35	02/28/2023 12:33	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/20/2023 21:00	03/22/2023 6:04
23020845-020A	36	02/28/2023 12:20	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 12:20
23020845-024A	49	02/28/2023 11:01	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 11:01
	Standard Method 4500-H B 2001 Field				02/28/2023 11:01
	Standard Methods 2130 B Field				02/28/2023 11:01
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 11:01
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 15:58
	Standard Methods 2320 B 1997, 2011				03/03/2023 15:58
	Standard Methods 2510 B Field				02/28/2023 11:01
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:10
	Standard Methods 2550 B Field				02/28/2023 11:01
	Standard Methods 4500-O G Field				02/28/2023 11:01
	SW-846 9036 (Total)				03/07/2023 18:12
	SW-846 9214 (Total)				03/02/2023 13:23
	SW-846 9251 (Total)				03/07/2023 18:12
23020845-024B	49	02/28/2023 11:01	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:10
23020845-024C	49	02/28/2023 11:01	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 18:27
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 15:11
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 16:22
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 13:52
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 2:48
	SW-846 7470A (Total)			03/02/2023 9:11	03/06/2023 21:09

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23020845-024D	49	02/28/2023 11:01	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/20/2023 21:00	03/22/2023 5:57
23020845-025A	50	02/28/2023 12:10	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 12:10
	Standard Method 4500-H B 2001 Field				02/28/2023 12:10
	Standard Methods 2130 B Field				02/28/2023 12:10
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 12:10
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 16:05
	Standard Methods 2320 B 1997, 2011				03/03/2023 16:05
	Standard Methods 2510 B Field				02/28/2023 12:10
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:54
	Standard Methods 2550 B Field				02/28/2023 12:10
	Standard Methods 4500-O G Field				02/28/2023 12:10
	SW-846 9036 (Total)				03/07/2023 18:55
	SW-846 9214 (Total)				03/02/2023 13:25
	SW-846 9251 (Total)				03/07/2023 18:55
23020845-025B	50	02/28/2023 12:10	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:18
23020845-025C	50	02/28/2023 12:10	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 18:31
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 16:30
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 16:28
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 13:58
	SW-846 7470A (Total)			03/02/2023 9:11	03/06/2023 21:16
23020845-025D	50	02/28/2023 12:10	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/07/2023 13:15
23020845-026A	51	02/28/2023 10:03	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 10:03
	Standard Method 4500-H B 2001 Field				02/28/2023 10:03
	Standard Methods 2130 B Field				02/28/2023 10:03
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 10:03
	Standard Methods 2320 B (Total) 1997, 2011				03/06/2023 10:39
	Standard Methods 2320 B 1997, 2011				03/06/2023 10:39
	Standard Methods 2510 B Field				02/28/2023 10:03
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 12:55
	Standard Methods 2550 B Field				02/28/2023 10:03
	Standard Methods 4500-O G Field				02/28/2023 10:03

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9036 (Total)				03/07/2023 18:58
	SW-846 9214 (Total)				03/02/2023 13:37
	SW-846 9251 (Total)				03/07/2023 18:57
23020845-026B	51	02/28/2023 10:03	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:26
23020845-026C	51	02/28/2023 10:03	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/03/2023 18:35
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:03	03/06/2023 16:33
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/03/2023 17:36
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:03	03/06/2023 14:04
	SW-846 7470A (Total)			03/02/2023 9:11	03/07/2023 5:12
23020845-026D	51	02/28/2023 10:03	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:16	03/02/2023 20:12
23020845-036A	21R	02/28/2023 9:18	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 9:18
	Standard Method 4500-H B 2001 Field				02/28/2023 9:18
	Standard Methods 2130 B Field				02/28/2023 9:18
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 9:18
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 16:46
	Standard Methods 2320 B 1997, 2011				03/03/2023 16:46
	Standard Methods 2510 B Field				02/28/2023 9:18
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 13:36
	Standard Methods 2550 B Field				02/28/2023 9:18
	Standard Methods 4500-O G Field				02/28/2023 9:18
	SW-846 9036 (Total)				03/08/2023 11:49
	SW-846 9214 (Total)				03/02/2023 14:03
	SW-846 9251 (Total)				03/08/2023 11:49
23020845-036B	21R	02/28/2023 9:18	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:53
23020845-036C	21R	02/28/2023 9:18	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/03/2023 19:42
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/06/2023 18:02
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/03/2023 13:07
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/06/2023 16:25
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 4:13
	SW-846 7470A (Total)			03/02/2023 9:11	03/07/2023 5:46
23020845-036D	21R	02/28/2023 9:18	03/02/2023 8:00		

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/20/2023 21:00	03/22/2023 7:17
23020845-037A	22D	02/28/2023 11:44	03/02/2023 8:00		
	Field Elevation Measurements				02/28/2023 11:44
	Standard Method 4500-H B 2001 Field				02/28/2023 11:44
	Standard Methods 2130 B Field				02/28/2023 11:44
	Standard Methods 18th Ed. 2580 B Field				02/28/2023 11:44
	Standard Methods 2320 B (Total) 1997, 2011				03/03/2023 16:54
	Standard Methods 2320 B 1997, 2011				03/03/2023 16:54
	Standard Methods 2510 B Field				02/28/2023 11:44
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 13:36
	Standard Methods 2550 B Field				02/28/2023 11:44
	Standard Methods 4500-O G Field				02/28/2023 11:44
	SW-846 9036 (Total)				03/08/2023 11:55
	SW-846 9214 (Total)				03/02/2023 14:05
	SW-846 9251 (Total)				03/08/2023 11:55
23020845-037B	22D	02/28/2023 11:44	03/02/2023 8:00		
	SW-846 9251 (Dissolved)				03/07/2023 14:55
23020845-037C	22D	02/28/2023 11:44	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/03/2023 19:45
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/06/2023 18:06
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/03/2023 13:14
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/06/2023 16:32
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/20/2023 19:16	03/22/2023 4:20
	SW-846 7470A (Total)			03/02/2023 9:11	03/07/2023 5:53
23020845-037D	22D	02/28/2023 11:44	03/02/2023 8:00		
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/20/2023 21:00	03/22/2023 7:23
23020845-040A	SG02	03/02/2023 7:30	03/02/2023 8:00		
	Field Elevation Measurements				03/02/2023 7:30
23020845-051A	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	Standard Methods 2320 B 1997, 2011				03/07/2023 8:46
	Standard Methods 2320 B (Total) 1997, 2011				03/07/2023 8:46
	Standard Methods 2320 B 1997, 2011				03/07/2023 8:46
	Standard Methods 2540 C (Total) 1997, 2011				03/02/2023 14:09
	Standard Methods 4500-NO2 B (Total) 2000, 2011				03/02/2023 15:28
	Standard Methods 4500-NO3 F (Total) 2000, 2011				03/02/2023 15:23
	Standard Methods 4500-NO3 F (Total) 2000, 2011				03/02/2023 15:23
	SW-846 9036 (Total)				03/08/2023 13:33

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9214 (Total)				03/02/2023 14:29
	SW-846 9251 (Total)				03/08/2023 13:33
23020845-051B	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	EPA 314.0				03/09/2023 0:00
23020845-051C	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 9036 (Dissolved)				03/06/2023 13:56
	SW-846 9214 (Dissolved)				03/02/2023 11:58
	SW-846 9251 (Dissolved)				03/06/2023 13:55
23020845-051D	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/03/2023 20:34
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/02/2023 9:06	03/06/2023 18:21
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/03/2023 13:45
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/06/2023 18:08
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			03/02/2023 9:06	03/07/2023 9:57
	SW-846 7470A (Total)			03/02/2023 9:14	03/06/2023 19:27
23020845-051E	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			03/02/2023 9:19	03/03/2023 15:23
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:19	03/02/2023 23:24
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			03/02/2023 9:19	03/03/2023 20:14
	SW-846 7470A (Dissolved)			03/02/2023 9:14	03/06/2023 19:38
23020845-051F	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 9012A (Total)			03/03/2023 16:10	03/06/2023 14:50
23020845-051G	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 9066 (Total)				03/06/2023 12:09
23020845-051H	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	Standard Methods 4500-NH3 G (Total) 1997, 2011				03/03/2023 12:57
23020845-051I	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				03/02/2023 15:05

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

STANDARD METHOD 4500-H B 2001 FIELD

Batch R325999 **SampType:** LCS Units

SampID: LCS-R325999

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		**7.02**	7.000	0	100.3	98.57	101.4	02/28/2023
pH	*	1.00		**7.09**	7.000	0	101.3	98.57	101.4	03/01/2023

STANDARD METHODS 2510 B FIELD

Batch R325999 **SampType:** LCS Units **µS/cm**

SampID: LCS-R325999

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		**1460**	1409	0	103.6	90	110	03/01/2023
Spec. Conductance, Field	*	0		**1481**	1409	0	105.1	90	110	02/28/2023

STANDARD METHODS 2320 B 1997, 2011

Batch R325591 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**0**						03/03/2023

Batch R325591 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**243**	236.0	0	103.0	90	110	03/03/2023

Batch R325591 **SampType:** LCSD Units **mg/L** RPD Limit:

SampID: LCSDUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**235**	236.0	0	99.6	90	110	03/03/2023

Batch R325659 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**0**						03/06/2023

Batch R325659 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**237**	236.0	0	100.4	90	110	03/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

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Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

STANDARD METHODS 2320 B 1997, 2011

Batch R325659 **SampType:** LCSD Units **mg/L** RPD Limit:
SampID: LCSDUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**236**	236.0	0	100.0	90	110	03/06/2023
Alkalinity, Total (as CaCO3)		0		**240**	236.0	0	101.7	90	110	03/06/2023

Batch R325659 **SampType:** DUP Units **mg/L** RPD Limit: **10**
SampID: 23020845-005ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**249**				243.0	2.44	03/06/2023

Batch R325659 **SampType:** DUP Units **mg/L** RPD Limit: **10**
SampID: 23020845-051ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**1**				1.000	0.00	03/07/2023

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R325574 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	03/02/2023
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	03/02/2023
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	03/02/2023

Batch R325574 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**920**	1000	0	92.0	90	110	03/02/2023
Total Dissolved Solids		20		**908**	1000	0	90.8	90	110	03/02/2023
Total Dissolved Solids		20		**910**	1000	0	91.0	90	110	03/02/2023

Batch R325574 **SampType:** DUP Units **mg/L** RPD Limit: **5**
SampID: 23020845-005ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**488**				488.0	0.00	03/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R325574 **SampType:** DUP Units **mg/L** RPD Limit: **5**
SampID: 23020845-021ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**492**				496.0	0.81	03/02/2023

Batch R325574 **SampType:** DUP Units **mg/L** RPD Limit: **5**
SampID: 23020845-030ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**540**				534.0	1.12	03/02/2023

Batch R325574 **SampType:** DUP Units **mg/L** RPD Limit: **5**
SampID: 23020845-041ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**544**				558.0	2.54	03/02/2023

Batch R325574 **SampType:** DUP Units **mg/L** RPD Limit: **5**
SampID: 23020845-050ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**1090**				1080	0.74	03/02/2023

STANDARD METHODS 4500-NH3 G (TOTAL) 1997, 2011

Batch R325556 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**< 0.10**	0.0270	0	0	-100	100	03/03/2023

Batch R325556 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**1.01**	1.000	0	101.3	90	110	03/03/2023

Batch R325556 **SampType:** MS Units **mg/L**
SampID: 23020845-005GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10	S	**1.70**	2.000	0	85.2	90	110	03/03/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

STANDARD METHODS 4500-NH3 G (TOTAL) 1997, 2011

Batch R325556 **SampType:** MSD Units **mg/L** RPD Limit: **10**

SampID: 23020845-005GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Ammonia (as N)		0.10	S	**1.72**	2.000	0	85.8	1.705	0.58	03/03/2023

STANDARD METHODS 4500-NO2 B (TOTAL) 2000, 2011

Batch R325452 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**< 0.05**	0.0250	0	0	-100	100	03/01/2023

Batch R325452 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.25		**0.65**	0.6510	0	99.8	90	110	03/01/2023

Batch R325452 **SampType:** MS Units **mg/L**

SampID: 23020845-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.49**	0.5000	0	97.6	85	115	03/02/2023

Batch R325452 **SampType:** MSD Units **mg/L** RPD Limit: **10**

SampID: 23020845-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.50**	0.5000	0	99.0	0.4880	1.42	03/02/2023

Batch R325452 **SampType:** MS Units **mg/L**

SampID: 23020845-003AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.49**	0.5000	0.006000	96.8	85	115	03/02/2023

Batch R325452 **SampType:** MSD Units **mg/L** RPD Limit: **10**

SampID: 23020845-003AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.49**	0.5000	0.006000	97.6	0.4900	0.81	03/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

STANDARD METHODS 4500-NO2 B (TOTAL) 2000, 2011

Batch R325452 **SampType:** MS Units **mg/L**
SampID: 23020845-005AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.49**	0.5000	0	98.8	85	115	03/02/2023

Batch R325452 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-005AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.50**	0.5000	0	99.8	0.4940	1.01	03/02/2023

STANDARD METHODS 4500-NO3 F (TOTAL) 2000, 2011

Batch R325529 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate (as N)		0.050		**< 0.050**						03/02/2023
Nitrogen, Nitrate-Nitrite (as N)		0.050		**< 0.050**	0.0090	0	0	-100	100	03/02/2023

Batch R325529 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.050		**0.522**	0.5000	0	104.4	90	110	03/02/2023

Batch R325529 **SampType:** MS Units **mg/L**
SampID: 23020845-039AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250		**4.38**	1.250	3.190	95.0	85	115	03/02/2023

Batch R325529 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-039AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250		**4.41**	1.250	3.190	97.9	4.378	0.82	03/02/2023

Batch R325529 **SampType:** MS Units **mg/L**
SampID: 23020845-049AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250		**3.01**	1.250	1.734	102.2	85	115	03/02/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

STANDARD METHODS 4500-NO3 F (TOTAL) 2000, 2011

Batch R325529 **SampType:** MSD Units **mg/L** RPD Limit: **10**

SampID: 23020845-049AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250		**3.02**	1.250	1.734	103.0	3.011	0.36	03/02/2023

SW-846 9012A (TOTAL)

Batch 203485 **SampType:** MBLK Units **mg/L**

SampID: MBLK 230302 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**< 0.005**	0.0015	0	0	-100	100	03/03/2023

Batch 203485 **SampType:** LCS Units **mg/L**

SampID: LCS 230302 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.024**	0.0250	0	97.5	90	110	03/03/2023

Batch 203485 **SampType:** MS Units **mg/L**

SampID: 23020845-007EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.025**	0.0250	0	99.5	75	125	03/03/2023

Batch 203485 **SampType:** MSD Units **mg/L** RPD Limit: **15**

SampID: 23020845-007EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide		0.005	R	**0.020**	0.0250	0	81.8	0.02488	19.53	03/03/2023

Batch 203538 **SampType:** MBLK Units **mg/L**

SampID: MBLK 230303 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**< 0.005**	0.0015	0	0	-100	100	03/06/2023

Batch 203538 **SampType:** LCS Units **mg/L**

SampID: LCS 230303 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.023**	0.0250	0	92.9	90	110	03/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9012A (TOTAL)

Batch 203538 **SampType:** MS Units **mg/L**
SampID: 23020845-035FMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.025**	0.0250	0	98.2	75	125	03/06/2023

Batch 203538 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-035FMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide		0.005		**0.022**	0.0250	0	89.5	0.02454	9.21	03/06/2023

Batch 203538 **SampType:** MS Units **mg/L**
SampID: 23020845-049DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005	S	**0.016**	0.0250	0	62.8	75	125	03/06/2023

Batch 203538 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-049DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide		0.005	R	**0.023**	0.0250	0	93.6	0.01570	39.42	03/06/2023

SW-846 9036 (DISSOLVED)

Batch R325628 **SampType:** MS Units **mg/L**
SampID: 23020845-002CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**168**	100.0	75.21	93.1	85	115	03/06/2023

Batch R325628 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-002CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**172**	100.0	75.21	97.2	168.4	2.36	03/06/2023

Batch R325628 **SampType:** MS Units **mg/L**
SampID: 23020845-030CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**180**	100.0	88.46	91.8	85	115	03/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 9036 (DISSOLVED)

Batch R325628 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-030CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**185**	100.0	88.46	96.3	180.3	2.47	03/06/2023

Batch R325628 **SampType:** MS Units **mg/L**
SampID: 23020845-034CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**205**	100.0	108.2	96.7	85	115	03/06/2023

Batch R325628 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-034CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**207**	100.0	108.2	98.4	204.9	0.83	03/06/2023

SW-846 9036 (TOTAL)

Batch R325628 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	03/06/2023

Batch R325628 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**21**	20.00	0	104.6	90	110	03/06/2023

Batch R325693 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	03/07/2023

Batch R325693 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**20**	20.00	0	100.5	90	110	03/07/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9036 (TOTAL)

Batch R325693 **SampType:** MS Units **mg/L**
SampID: 23020845-003AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**215**	100.0	129.4	85.6	85	115	03/07/2023

Batch R325693 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-003AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**220**	100.0	129.4	90.6	215.0	2.29	03/07/2023

Batch R325693 **SampType:** MS Units **mg/L**
SampID: 23020845-024AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**208**	100.0	108.0	100.4	85	115	03/07/2023

Batch R325693 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-024AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**209**	100.0	108.0	101.3	208.4	0.45	03/07/2023

Batch R325693 **SampType:** MS Units **mg/L**
SampID: 23020845-030AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**179**	100.0	82.42	96.2	85	115	03/07/2023

Batch R325693 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-030AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**182**	100.0	82.42	99.3	178.7	1.71	03/07/2023

Batch R325765 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	03/08/2023

Batch R325765 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**20**	20.00	0	101.2	90	110	03/08/2023

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Quality Control Results

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Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9036 (TOTAL)

Batch R325765 **SampType:** MS Units **mg/L**
SampID: 23020845-037AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**212**	100.0	111.8	99.9	85	115	03/08/2023

Batch R325765 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23020845-037AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**209**	100.0	111.8	97.3	211.7	1.21	03/08/2023

SW-846 9066 (TOTAL)

Batch R325651 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		0.005		**< 0.005**	0.0028	0	0	-100	100	03/06/2023

Batch R325651 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		0.005		**0.055**	0.0500	0	109.8	90	110	03/06/2023

Batch R325651 **SampType:** MS Units **µg/L**
SampID: 23020845-051GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		5		**55**	50.00	3.190	104.0	85	115	03/06/2023

Batch R325651 **SampType:** MSD Units **µg/L** RPD Limit: **15**
SampID: 23020845-051GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phenols		5		**56**	50.00	3.190	104.7	55.20	0.65	03/06/2023

SW-846 9214 (DISSOLVED)

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-008BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.24**	2.000	0.1350	105.4	75	125	03/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 9214 (DISSOLVED)

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-008BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.24**	2.000	0.1350	105.5	2.242	0.13	03/02/2023

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-039CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.37**	2.000	0.2680	105.0	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-039CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.43**	2.000	0.2680	108.0	2.368	2.50	03/02/2023

SW-846 9214 (TOTAL)

Batch R325510 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**< 0.10**	0.0370	0	0	-100	100	03/02/2023

Batch R325510 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.05**	1.000	0	105.3	90	110	03/02/2023

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-009AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.22**	2.000	0.1560	103.4	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-009AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.13**	2.000	0.1560	98.8	2.224	4.18	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9214 (TOTAL)

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-013AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.17**	2.000	0.1270	102.0	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-013AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.24**	2.000	0.1270	105.4	2.168	3.04	03/02/2023

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-025AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.15**	2.000	0.1410	100.2	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-025AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.14**	2.000	0.1410	100.0	2.146	0.23	03/02/2023

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-034AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.28**	2.000	0.1490	106.8	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-034AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.24**	2.000	0.1490	104.6	2.284	1.95	03/02/2023

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-043AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.97**	2.000	0.1400	91.6	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-043AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.05**	2.000	0.1400	95.5	1.971	3.93	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9214 (TOTAL)

Batch R325510 **SampType:** MS Units **mg/L**
SampID: 23020845-051AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.00**	2.000	0	100.0	75	125	03/02/2023

Batch R325510 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-051AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.05**	2.000	0	102.7	2.000	2.66	03/02/2023

SW-846 9251 (DISSOLVED)

Batch R325629 **SampType:** MS Units **mg/L**
SampID: 23020845-002CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**179**	100.0	88.87	89.7	85	115	03/06/2023

Batch R325629 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-002CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**178**	100.0	88.87	89.5	178.5	0.10	03/06/2023

Batch R325629 **SampType:** MS Units **mg/L**
SampID: 23020845-030CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**195**	100.0	102.4	92.6	85	115	03/06/2023

Batch R325629 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-030CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**192**	100.0	102.4	89.2	195.1	1.78	03/06/2023

Batch R325629 **SampType:** MS Units **mg/L**
SampID: 23020845-034CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**181**	100.0	86.13	94.7	85	115	03/06/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 9251 (DISSOLVED)

Batch R325629 **SampType:** MSD Units **mg/L** RPD Limit: **15**

SampID: 23020845-034CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**179**	100.0	86.13	92.9	180.8	0.97	03/06/2023

Batch R325696 **SampType:** MS Units **mg/L**

SampID: 23020845-013BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		5		**190**	100.0	98.15	91.5	85	115	03/07/2023

Batch R325696 **SampType:** MSD Units **mg/L** RPD Limit: **15**

SampID: 23020845-013BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5		**190**	100.0	98.15	92.0	189.6	0.26	03/07/2023

SW-846 9251 (TOTAL)

Batch R325629 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	03/06/2023

Batch R325629 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**21**	20.00	0	103.1	90	110	03/06/2023

Batch R325696 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		**< 1**	0.5000	0	0	-100	100	03/07/2023

Batch R325696 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		**20**	20.00	0	99.8	90	110	03/07/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 9251 (TOTAL)

Batch R325696 **SampType:** MS Units **mg/L**
SampID: 23020845-024AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		5		**195**	100.0	104.4	90.6	85	115	03/07/2023

Batch R325696 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-024AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5		**195**	100.0	104.4	90.6	195.0	0.03	03/07/2023

Batch R325696 **SampType:** MS Units **mg/L**
SampID: 23020845-030AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		5		**219**	100.0	130.4	89.0	85	115	03/07/2023

Batch R325696 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-030AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5		**218**	100.0	130.4	87.2	219.4	0.82	03/07/2023

Batch R325771 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		**< 1**	0.5000	0	0	-100	100	03/08/2023

Batch R325771 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		**20**	20.00	0	99.0	90	110	03/08/2023

Batch R325771 **SampType:** MS Units **mg/L**
SampID: 23020845-003AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**590**	400.0	226.8	90.7	85	115	03/08/2023

Batch R325771 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-003AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**593**	400.0	226.8	91.5	589.7	0.54	03/08/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 9251 (TOTAL)

Batch R325771 **SampType:** MS Units **mg/L**
SampID: 23020845-037AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		5		**204**	100.0	113.2	90.4	85	115	03/08/2023

Batch R325771 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23020845-037AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5		**200**	100.0	113.2	87.0	203.5	1.68	03/08/2023

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 203472 **SampType:** MBLK Units **mg/L**
SampID: MBLK-203472

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	03/09/2023
Magnesium		0.050		**< 0.050**	0.0055	0	0	-100	100	03/09/2023

Batch 203472 **SampType:** LCS Units **mg/L**
SampID: LCS-203472

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.54**	2.500	0	101.5	85	115	03/09/2023
Magnesium		0.050		**2.31**	2.500	0	92.2	85	115	03/09/2023

Batch 203472 **SampType:** MS Units **mg/L**
SampID: 23020845-005DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**74.3**	2.500	73.42	35.6	75	125	03/09/2023
Magnesium		0.050	S	**29.1**	2.500	27.39	69.3	75	125	03/09/2023

Batch 203472 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-005DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100		**75.4**	2.500	73.42	80.4	74.31	1.50	03/09/2023
Magnesium		0.050		**29.7**	2.500	27.39	92.5	29.12	1.97	03/09/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 203473 **SampType:** MBLK Units **mg/L**
SampID: MBLK-203473

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	03/03/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	03/03/2023

Batch 203473 **SampType:** LCS Units **mg/L**
SampID: LCS-203473

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.45**	2.500	0	97.9	85	115	03/03/2023
Magnesium		0.0500		**2.41**	2.500	0	96.6	85	115	03/03/2023

Batch 203473 **SampType:** MS Units **mg/L**
SampID: 23020845-051EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.44**	2.500	0	97.6	75	125	03/03/2023
Magnesium		0.050		**2.40**	2.500	0	96.1	75	125	03/03/2023

Batch 203473 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-051EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100		**2.45**	2.500	0	97.8	2.439	0.29	03/03/2023
Magnesium		0.050		**2.43**	2.500	0	97.1	2.403	1.03	03/03/2023

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 203466 **SampType:** MBLK Units **mg/L**
SampID: MBLK-203466

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	03/03/2023
Magnesium		0.050		**< 0.050**	0.0055	0	0	-100	100	03/03/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	03/03/2023
Sodium		0.050		**< 0.050**	0.0180	0	0	-100	100	03/03/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 203466 **SampType:** LCS Units **mg/L**
SampID: LCS-203466

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.65**	2.500	0	106.1	85	115	03/03/2023
Magnesium		0.050		**2.63**	2.500	0	105.2	85	115	03/03/2023
Potassium		0.100		**2.52**	2.500	0	101.0	85	115	03/03/2023
Sodium		0.050		**2.50**	2.500	0	100.1	85	115	03/03/2023

Batch 203466 **SampType:** MS Units **mg/L**
SampID: 23020845-007CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**102**	2.500	99.38	120.8	75	125	03/03/2023
Magnesium		0.050		**36.2**	2.500	33.39	114.4	75	125	03/03/2023
Potassium		0.100		**7.73**	2.500	4.797	117.4	75	125	03/06/2023
Sodium		0.050		**60.0**	2.500	57.31	107.2	75	125	03/03/2023

Batch 203466 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-007CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	**103**	2.500	99.38	136.8	102.4	0.39	03/03/2023
Magnesium		0.050		**36.2**	2.500	33.39	114.4	36.25	0.00	03/03/2023
Potassium		0.100		**7.42**	2.500	4.797	105.1	7.731	4.05	03/06/2023
Sodium		0.050		**60.2**	2.500	57.31	116.0	59.99	0.37	03/03/2023

Batch 203466 **SampType:** MS Units **mg/L**
SampID: 23020845-023BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**90.9**	2.500	87.61	130.8	75	125	03/03/2023
Magnesium		0.050		**32.2**	2.500	29.43	110.0	75	125	03/03/2023
Potassium		0.100		**8.52**	2.500	5.864	106.4	75	125	03/06/2023
Sodium		0.050		**54.1**	2.500	51.50	104.8	75	125	03/03/2023

Batch 203466 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-023BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100		**90.2**	2.500	87.61	101.6	90.88	0.81	03/03/2023
Magnesium		0.050		**31.9**	2.500	29.43	98.4	32.18	0.91	03/03/2023
Potassium		0.100		**8.42**	2.500	5.864	102.4	8.523	1.16	03/06/2023
Sodium		0.050		**53.5**	2.500	51.50	79.6	54.12	1.17	03/03/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

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Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 203468 **SampType:** MBLK Units **mg/L**
SampID: MBLK-203468

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	03/03/2023
Magnesium		0.050		**< 0.050**	0.0055	0	0	-100	100	03/03/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	03/06/2023
Sodium		0.050		**< 0.050**	0.0180	0	0	-100	100	03/03/2023

Batch 203468 **SampType:** LCS Units **mg/L**
SampID: LCS-203468

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.66**	2.500	0	106.5	85	115	03/03/2023
Magnesium		0.050		**2.62**	2.500	0	104.6	85	115	03/03/2023
Potassium		0.100		**2.56**	2.500	0	102.4	85	115	03/06/2023
Sodium		0.050		**2.50**	2.500	0	100.1	85	115	03/03/2023

Batch 203468 **SampType:** MS Units **mg/L**
SampID: 23020845-032CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**96.7**	2.500	89.90	270.4	75	125	03/03/2023
Magnesium		0.050	S	**35.0**	2.500	31.33	146.4	75	125	03/03/2023
Potassium		0.500		**11.4**	2.500	8.785	105.6	75	125	03/06/2023
Sodium		0.050	S	**50.2**	2.500	45.92	173.2	75	125	03/03/2023

Batch 203468 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-032CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	**97.7**	2.500	89.90	312.4	96.66	1.08	03/03/2023
Magnesium		0.050	S	**35.4**	2.500	31.33	164.0	34.99	1.25	03/03/2023
Potassium		0.500		**11.1**	2.500	8.785	91.6	11.42	3.11	03/06/2023
Sodium		0.050	S	**51.0**	2.500	45.92	204.4	50.25	1.54	03/03/2023

Batch 203468 **SampType:** MS Units **mg/L**
SampID: 23020845-043BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**110**	2.500	105.8	168.0	75	125	03/03/2023
Magnesium		0.050		**2.90**	2.500	0.2942	104.3	75	125	03/03/2023
Potassium		1.00		**28.0**	2.500	25.07	117.6	75	125	03/06/2023
Sodium		0.050	S	**123**	2.500	118.6	188.0	75	125	03/03/2023

Quality Control Results

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Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 203468 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-043BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	**110**	2.500	105.8	180.0	110.0	0.27	03/03/2023
Magnesium		0.050		**2.88**	2.500	0.2942	103.4	2.901	0.80	03/03/2023
Potassium		1.00		**27.0**	2.500	25.07	79.2	28.01	3.49	03/06/2023
Sodium		0.050	S	**124**	2.500	118.6	208.0	123.3	0.40	03/03/2023

Batch 203617 **SampType:** MBLK Units **mg/L**
SampID: MBLK-203617

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	03/08/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	03/08/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	03/08/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	03/08/2023

Batch 203617 **SampType:** LCS Units **mg/L**
SampID: LCS-203617

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.59**	2.500	0	103.6	85	115	03/08/2023
Magnesium		0.0500		**2.59**	2.500	0	103.7	85	115	03/08/2023
Potassium		0.100		**2.55**	2.500	0	102.0	85	115	03/08/2023
Sodium		0.0500		**2.42**	2.500	0	96.7	85	115	03/08/2023

Batch 203617 **SampType:** MS Units **mg/L**
SampID: 23020845-023BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**92.6**	2.500	87.27	215.2	75	125	03/08/2023
Magnesium		0.050	S	**35.0**	2.500	29.46	220.0	75	125	03/08/2023
Sodium		0.050	S	**55.6**	2.500	50.52	204.4	75	125	03/08/2023

Batch 203617 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23020845-023BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	**92.6**	2.500	87.27	215.2	92.65	0.00	03/08/2023
Magnesium		0.050	S	**34.9**	2.500	29.46	216.0	34.96	0.29	03/08/2023
Sodium		0.050	S	**55.9**	2.500	50.52	216.0	55.63	0.52	03/08/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203472** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-203472

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**< 25.0**	12.50	0	0	-100	100	03/02/2023
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	03/02/2023
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	03/02/2023
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	03/02/2023
Beryllium		1.0		**< 1.0**	0.2500	0	0	-100	100	03/02/2023
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/02/2023
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	03/02/2023
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	03/02/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/02/2023
Copper		1.0		**< 1.0**	0.3000	0	0	-100	100	03/02/2023
Iron		25.0		**< 25.0**	11.50	0	0	-100	100	03/02/2023
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	03/02/2023
Manganese		2.0		**< 2.0**	0.7500	0	0	-100	100	03/02/2023
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	03/02/2023
Nickel		1.0		**< 1.0**	0.4300	0	0	-100	100	03/02/2023
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	03/02/2023
Silver		1.0		**< 1.0**	0.1000	0	0	-100	100	03/02/2023
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	03/02/2023
Vanadium		5.0		**< 5.0**	5.000	0	0	-100	100	03/02/2023
Zinc		15.0		**< 15.0**	5.900	0	0	-100	100	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203472** **SampType:** **LCS** Units **µg/L**

SampID: LCS-203472

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**1750**	2000	0	87.7	80	120	03/03/2023
Antimony		1.0		**542**	500.0	0	108.4	80	120	03/02/2023
Arsenic		1.0		**555**	500.0	0	111.1	80	120	03/02/2023
Barium		1.0		**2270**	2000	0	113.3	80	120	03/02/2023
Beryllium		1.0		**53.8**	50.00	0	107.7	80	120	03/02/2023
Boron		25.0		**550**	500.0	0	109.9	80	120	03/02/2023
Cadmium		1.0		**54.4**	50.00	0	108.7	80	120	03/02/2023
Chromium		1.5		**223**	200.0	0	111.6	80	120	03/02/2023
Cobalt		1.0		**572**	500.0	0	114.3	80	120	03/02/2023
Copper		1.0		**292**	250.0	0	116.8	80	120	03/02/2023
Iron		25.0		**2260**	2000	0	113.0	80	120	03/02/2023
Lead		1.0		**559**	500.0	0	111.8	80	120	03/02/2023
Manganese		2.0		**559**	500.0	0	111.8	80	120	03/02/2023
Molybdenum		1.5		**538**	500.0	0	107.5	80	120	03/02/2023
Nickel		1.0		**572**	500.0	0	114.4	80	120	03/02/2023
Selenium		1.0		**515**	500.0	0	103.1	80	120	03/02/2023
Silver		1.0		**58.9**	50.00	0	117.9	80	120	03/02/2023
Thallium		2.0		**276**	250.0	0	110.6	80	120	03/02/2023
Vanadium		5.0		**544**	500.0	0	108.8	80	120	03/02/2023
Zinc		15.0		**531**	500.0	0	106.2	80	120	03/02/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203472** **SampType:** **MS** Units **µg/L**
SampID: 23020845-005DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**1710**	2000	0	85.7	75	125	03/03/2023
Antimony		1.0		**590**	500.0	0.5607	117.9	75	125	03/02/2023
Arsenic		1.0		**600**	500.0	0	119.9	75	125	03/02/2023
Barium		1.0		**1840**	2000	49.50	89.5	75	125	03/03/2023
Beryllium		1.0		**45.4**	50.00	0	90.8	75	125	03/03/2023
Boron		25.0		**646**	500.0	175.6	94.0	75	125	03/06/2023
Cadmium		1.0		**58.9**	50.00	0	117.7	75	125	03/02/2023
Chromium		1.5		**177**	200.0	0	88.5	75	125	03/03/2023
Cobalt		1.0		**572**	500.0	0	114.4	75	125	03/02/2023
Copper		1.0		**286**	250.0	0.7983	114.1	75	125	03/02/2023
Iron		25.0		**1790**	2000	0	89.7	75	125	03/03/2023
Lead		1.0		**592**	500.0	0	118.4	75	125	03/02/2023
Manganese		2.0		**579**	500.0	0	115.9	75	125	03/02/2023
Molybdenum		1.5		**611**	500.0	19.68	118.3	75	125	03/02/2023
Nickel		1.0		**573**	500.0	0.7214	114.4	75	125	03/02/2023
Selenium		1.0		**560**	500.0	0.7404	111.9	75	125	03/02/2023
Silver		1.0		**59.8**	50.00	0	119.5	75	125	03/02/2023
Thallium		2.0		**224**	250.0	0	89.5	75	125	03/03/2023
Zinc		15.0		**561**	500.0	0	112.1	75	125	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 203472 **SampType:** MSD Units **µg/L** RPD Limit: **20**

SampID: 23020845-005DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		25.0		**1830**	2000	0	91.6	1714	6.73	03/03/2023
Antimony		1.0		**490**	500.0	0.5607	97.8	590.1	18.57	03/02/2023
Arsenic		1.0		**505**	500.0	0	101.0	599.6	17.11	03/02/2023
Barium		1.0		**1920**	2000	49.50	93.8	1839	4.59	03/03/2023
Beryllium		1.0		**48.5**	50.00	0	97.0	45.41	6.61	03/03/2023
Boron		25.0		**698**	500.0	175.6	104.4	645.7	7.76	03/06/2023
Cadmium		1.0		**48.4**	50.00	0	96.7	58.87	19.62	03/02/2023
Chromium		1.5		**189**	200.0	0	94.6	177.0	6.60	03/03/2023
Cobalt		1.0		**478**	500.0	0	95.6	571.9	17.89	03/02/2023
Copper		1.0		**240**	250.0	0.7983	95.6	286.1	17.60	03/02/2023
Iron		25.0		**1900**	2000	0	94.9	1794	5.66	03/03/2023
Lead		1.0		**490**	500.0	0	98.0	592.1	18.87	03/02/2023
Manganese		2.0		**481**	500.0	0	96.1	579.4	18.64	03/02/2023
Molybdenum		1.5		**505**	500.0	19.68	97.1	611.1	18.95	03/02/2023
Nickel		1.0		**473**	500.0	0.7214	94.5	572.8	19.08	03/02/2023
Selenium		1.0		**466**	500.0	0.7404	93.1	560.2	18.29	03/02/2023
Silver		1.0		**50.4**	50.00	0	100.8	59.77	17.03	03/02/2023
Thallium		2.0		**243**	250.0	0	97.0	223.7	8.08	03/03/2023
Zinc		15.0		**466**	500.0	0	93.1	560.6	18.50	03/02/2023

Batch 203472 **SampType:** MS Units **µg/L**

SampID: 23020845-025DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**1930**	500.0	1517	82.5	75	125	03/07/2023

Batch 203472 **SampType:** MSD Units **µg/L** RPD Limit: **20**

SampID: 23020845-025DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		25.0		**1900**	500.0	1517	76.1	1929	1.67	03/07/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

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Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203473** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-203473

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**< 25.0**	12.50	0	0	-100	100	03/02/2023
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	03/02/2023
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	03/02/2023
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	03/02/2023
Beryllium		1.0		**< 1.0**	0.2500	0	0	-100	100	03/02/2023
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/02/2023
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	03/02/2023
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	03/02/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/02/2023
Copper		1.0		**< 1.0**	0.3000	0	0	-100	100	03/02/2023
Iron		25.0		**< 25.0**	11.50	0	0	-100	100	03/02/2023
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	03/02/2023
Manganese		2.0		**< 2.0**	0.7500	0	0	-100	100	03/02/2023
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	03/02/2023
Nickel		1.0		**< 1.0**	0.4300	0	0	-100	100	03/02/2023
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	03/02/2023
Silver		1.0		**< 1.0**	0.1000	0	0	-100	100	03/02/2023
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	03/02/2023
Vanadium		5.0		**< 5.0**	5.000	0	0	-100	100	03/02/2023
Zinc		15.0		**< 15.0**	5.900	0	0	-100	100	03/02/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203473** **SampType:** **LCS** Units **µg/L**
SampID: LCS-203473

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**2060**	2000	0	103.0	80	120	03/03/2023
Antimony		1.0		**502**	500.0	0	100.5	80	120	03/03/2023
Arsenic		1.0		**488**	500.0	0	97.6	80	120	03/03/2023
Barium		1.0		**2130**	2000	0	106.4	80	120	03/03/2023
Beryllium		1.0		**52.1**	50.00	0	104.2	80	120	03/03/2023
Boron		25.0		**501**	500.0	0	100.3	80	120	03/03/2023
Cadmium		1.0		**52.0**	50.00	0	104.0	80	120	03/03/2023
Chromium		1.5		**214**	200.0	0	107.0	80	120	03/03/2023
Cobalt		1.0		**543**	500.0	0	108.6	80	120	03/03/2023
Copper		1.0		**275**	250.0	0	110.0	80	120	03/03/2023
Iron		25.0		**2160**	2000	0	108.0	80	120	03/03/2023
Lead		1.0		**529**	500.0	0	105.7	80	120	03/03/2023
Manganese		2.0		**533**	500.0	0	106.7	80	120	03/03/2023
Molybdenum		1.5		**517**	500.0	0	103.4	80	120	03/03/2023
Nickel		1.0		**538**	500.0	0	107.7	80	120	03/03/2023
Selenium		1.0		**473**	500.0	0	94.6	80	120	03/03/2023
Silver		1.0		**52.3**	50.00	0	104.5	80	120	03/03/2023
Thallium		2.0		**244**	250.0	0	97.4	80	120	03/03/2023
Vanadium		5.0		**523**	500.0	0	104.7	80	120	03/03/2023
Zinc		15.0		**462**	500.0	0	92.3	80	120	03/03/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203473** **SampType:** **MS** Units **µg/L**

SampID: 23020845-035EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**407**	500.0	0	81.3	75	125	03/03/2023
Arsenic		1.0		**442**	500.0	0.5053	88.2	75	125	03/03/2023
Barium		1.0		**1740**	2000	46.25	84.8	75	125	03/03/2023
Beryllium		1.0		**42.5**	50.00	0	85.0	75	125	03/03/2023
Boron		25.0		**3200**	500.0	2627	114.2	75	125	03/02/2023
Cadmium		1.0		**41.9**	50.00	0	83.8	75	125	03/03/2023
Chromium		1.5		**168**	200.0	0.8898	83.5	75	125	03/03/2023
Cobalt		1.0		**423**	500.0	0.1224	84.5	75	125	03/03/2023
Copper		1.0		**211**	250.0	0.8759	84.1	75	125	03/03/2023
Iron		25.0		**1720**	2000	0	86.0	75	125	03/03/2023
Lead		1.0		**439**	500.0	0	87.7	75	125	03/03/2023
Manganese		2.0		**427**	500.0	2.474	85.0	75	125	03/03/2023
Nickel		1.0		**415**	500.0	0.9686	82.7	75	125	03/03/2023
Selenium		1.0		**635**	500.0	18.35	123.4	75	125	03/02/2023
Silver		1.0		**42.8**	50.00	0	85.7	75	125	03/03/2023
Thallium		2.0		**219**	250.0	0	87.4	75	125	03/03/2023
Vanadium		5.0		**428**	500.0	6.704	84.2	75	125	03/03/2023
Zinc		15.0		**619**	500.0	0	123.8	75	125	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203473** **SampType:** **MSD** Units **µg/L** RPD Limit: **20**

SampID: 23020845-035EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		1.0		**421**	500.0	0	84.1	406.6	3.38	03/03/2023
Arsenic		1.0		**441**	500.0	0.5053	88.2	441.6	0.05	03/03/2023
Barium		1.0		**1770**	2000	46.25	86.1	1743	1.51	03/03/2023
Beryllium		1.0		**42.1**	50.00	0	84.1	42.49	1.00	03/03/2023
Boron		25.0		**3180**	500.0	2627	110.8	3198	0.53	03/02/2023
Cadmium		1.0		**42.1**	50.00	0	84.1	41.89	0.39	03/03/2023
Chromium		1.5		**169**	200.0	0.8898	83.9	167.8	0.54	03/03/2023
Cobalt		1.0		**419**	500.0	0.1224	83.9	422.8	0.81	03/03/2023
Copper		1.0		**210**	250.0	0.8759	83.8	211.0	0.32	03/03/2023
Iron		25.0		**1710**	2000	0	85.6	1720	0.49	03/03/2023
Lead		1.0		**437**	500.0	0	87.3	438.6	0.47	03/03/2023
Manganese		2.0		**425**	500.0	2.474	84.5	427.3	0.59	03/03/2023
Nickel		1.0		**413**	500.0	0.9686	82.3	414.7	0.49	03/03/2023
Selenium		1.0		**634**	500.0	18.35	123.2	635.4	0.17	03/02/2023
Silver		1.0		**43.2**	50.00	0	86.5	42.84	0.94	03/03/2023
Thallium		2.0		**215**	250.0	0	86.0	218.6	1.61	03/03/2023
Vanadium		5.0		**425**	500.0	6.704	83.7	427.7	0.56	03/03/2023
Zinc		15.0	S	**626**	500.0	0	125.1	618.9	1.08	03/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch **203473** **SampType:** **MS** Units **µg/L**

SampID: 23020845-051EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		25.0		**1820**	2000	0	90.9	75	125	03/03/2023
Antimony		1.0		**462**	500.0	0	92.4	75	125	03/03/2023
Arsenic		1.0		**490**	500.0	0	98.1	75	125	03/02/2023
Barium		1.0		**1930**	2000	0	96.3	75	125	03/03/2023
Beryllium		1.0		**48.6**	50.00	0	97.2	75	125	03/02/2023
Boron		25.0		**504**	500.0	0	100.9	75	125	03/02/2023
Cadmium		1.0		**46.6**	50.00	0	93.1	75	125	03/03/2023
Chromium		1.5		**202**	200.0	1.653	100.0	75	125	03/02/2023
Cobalt		1.0		**478**	500.0	0	95.6	75	125	03/03/2023
Copper		1.0		**255**	250.0	1.672	101.4	75	125	03/02/2023
Iron		25.0		**1930**	2000	17.63	95.5	75	125	03/03/2023
Lead		1.0		**500**	500.0	0	100.1	75	125	03/02/2023
Manganese		2.0		**496**	500.0	0	99.2	75	125	03/02/2023
Molybdenum		1.5		**464**	500.0	0	92.8	75	125	03/03/2023
Nickel		1.0		**494**	500.0	0	98.8	75	125	03/02/2023
Selenium		1.0		**464**	500.0	0	92.7	75	125	03/02/2023
Silver		1.0		**48.1**	50.00	0	96.2	75	125	03/03/2023
Thallium		2.0		**246**	250.0	0	98.3	75	125	03/02/2023
Vanadium		5.0		**477**	500.0	0	95.3	75	125	03/02/2023
Zinc		15.0		**484**	500.0	0	96.9	75	125	03/02/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

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Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 203473 **SampType:** MSD Units **µg/L** RPD Limit: **20**

SampID: 23020845-051EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		25.0		**1760**	2000	0	88.1	1818	3.10	03/03/2023
Antimony		1.0		**456**	500.0	0	91.2	462.1	1.29	03/03/2023
Arsenic		1.0		**589**	500.0	0	117.8	490.3	18.30	03/02/2023
Barium		1.0		**1910**	2000	0	95.4	1926	0.99	03/03/2023
Beryllium		1.0		**59.3**	50.00	0	118.7	48.59	19.92	03/02/2023
Boron		25.0		**594**	500.0	0	118.8	504.4	16.28	03/02/2023
Cadmium		1.0		**46.0**	50.00	0	92.1	46.56	1.13	03/03/2023
Chromium		1.5		**239**	200.0	1.653	118.6	201.7	16.83	03/02/2023
Cobalt		1.0		**464**	500.0	0	92.9	478.1	2.92	03/03/2023
Copper		1.0		**308**	250.0	1.672	122.6	255.2	18.83	03/02/2023
Iron		25.0		**1880**	2000	17.63	93.3	1928	2.33	03/03/2023
Lead		1.0		**604**	500.0	0	120.8	500.4	18.76	03/02/2023
Manganese		2.0		**599**	500.0	0	119.9	496.2	18.82	03/02/2023
Molybdenum		1.5		**458**	500.0	0	91.6	463.8	1.22	03/03/2023
Nickel		1.0		**598**	500.0	0	119.6	494.0	19.06	03/02/2023
Selenium		1.0		**551**	500.0	0	110.2	463.7	17.20	03/02/2023
Silver		1.0		**48.2**	50.00	0	96.4	48.12	0.20	03/03/2023
Thallium		2.0		**292**	250.0	0	116.6	245.7	17.06	03/02/2023
Vanadium		5.0		**578**	500.0	0	115.5	476.7	19.16	03/02/2023
Zinc		15.0		**584**	500.0	0	116.8	484.3	18.67	03/02/2023

Batch 204110 **SampType:** MBLK Units **µg/L**

SampID: MBLK-204110

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/22/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/22/2023

Batch 204110 **SampType:** LCS Units **µg/L**

SampID: LCS-204110

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**481**	500.0	0	96.2	80	120	03/22/2023
Cobalt		1.0		**485**	500.0	0	97.1	80	120	03/22/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 204110 **SampType:** MS Units **µg/L**
SampID: 23020845-019DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0	S	**8520**	500.0	8393	25.9	75	125	03/22/2023

Batch 204110 **SampType:** MSD Units **µg/L** RPD Limit: **20**
SampID: 23020845-019DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		25.0	S	**8570**	500.0	8393	35.3	8522	0.55	03/22/2023

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 203466 **SampType:** MBLK Units **µg/L**
SampID: MBLK-203466

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	03/03/2023
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	03/03/2023
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	03/03/2023
Beryllium		1.0		**< 1.0**	0.2500	0	0	-100	100	03/06/2023
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/06/2023
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	03/03/2023
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	03/06/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/03/2023
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	03/03/2023
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	03/06/2023
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	03/03/2023
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	03/03/2023
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	03/03/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 203466 **SampType:** LCS Units µg/L
SampID: LCS-203466

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**494**	500.0	0	98.9	80	120	03/03/2023
Arsenic		1.0		**480**	500.0	0	96.0	80	120	03/03/2023
Barium		1.0		**2100**	2000	0	104.8	80	120	03/03/2023
Beryllium		1.0		**51.2**	50.00	0	102.3	80	120	03/06/2023
Boron		25.0		**518**	500.0	0	103.6	80	120	03/06/2023
Cadmium		1.0		**56.3**	50.00	0	112.5	80	120	03/03/2023
Chromium		1.5		**206**	200.0	0	103.2	80	120	03/06/2023
Cobalt		1.0		**494**	500.0	0	98.8	80	120	03/03/2023
Lead		1.0		**489**	500.0	0	97.7	80	120	03/03/2023
Lithium	*	3.0		**574**	500.0	0	114.7	80	120	03/06/2023
Molybdenum		1.5		**505**	500.0	0	101.1	80	120	03/03/2023
Selenium		1.0		**448**	500.0	0	89.5	80	120	03/03/2023
Thallium		2.0		**243**	250.0	0	97.0	80	120	03/03/2023

Batch 203466 **SampType:** MS Units µg/L
SampID: 23020845-007CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**505**	500.0	0	101.1	75	125	03/03/2023
Arsenic		1.0		**498**	500.0	0	99.7	75	125	03/03/2023
Barium		1.0		**2240**	2000	116.6	106.3	75	125	03/03/2023
Beryllium		1.0		**52.7**	50.00	0	105.5	75	125	03/06/2023
Boron		25.0		**738**	500.0	207.3	106.2	75	125	03/06/2023
Cadmium		1.0		**55.5**	50.00	0	111.0	75	125	03/03/2023
Chromium		1.5		**203**	200.0	0	101.4	75	125	03/06/2023
Cobalt		1.0		**487**	500.0	0.1439	97.3	75	125	03/03/2023
Lead		1.0		**505**	500.0	0	101.0	75	125	03/03/2023
Lithium	*	3.0		**607**	500.0	7.654	119.8	75	125	03/06/2023
Molybdenum		1.5		**505**	500.0	9.996	99.1	75	125	03/03/2023
Selenium		1.0		**461**	500.0	0	92.2	75	125	03/03/2023
Thallium		2.0		**248**	250.0	0	99.2	75	125	03/03/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 203466 **SampType:** MSD Units **µg/L** RPD Limit: **20**
SampID: 23020845-007CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		1.0		**508**	500.0	0	101.7	505.4	0.60	03/03/2023
Arsenic		1.0		**503**	500.0	0	100.6	498.4	0.93	03/03/2023
Barium		1.0		**2250**	2000	116.6	106.7	2242	0.40	03/03/2023
Beryllium		1.0		**53.0**	50.00	0	105.9	52.73	0.46	03/06/2023
Boron		25.0		**752**	500.0	207.3	108.8	738.3	1.78	03/06/2023
Cadmium		1.0		**56.6**	50.00	0	113.2	55.51	1.96	03/03/2023
Chromium		1.5		**202**	200.0	0	100.9	202.8	0.51	03/06/2023
Cobalt		1.0		**505**	500.0	0.1439	101.0	486.7	3.76	03/03/2023
Lead		1.0		**514**	500.0	0	102.7	504.9	1.72	03/03/2023
Lithium	*	3.0		**605**	500.0	7.654	119.5	606.8	0.30	03/06/2023
Molybdenum		1.5		**528**	500.0	9.996	103.7	505.5	4.42	03/03/2023
Selenium		1.0		**466**	500.0	0	93.1	461.0	0.98	03/03/2023
Thallium		2.0		**250**	250.0	0	99.9	247.9	0.72	03/03/2023

Batch 203468 **SampType:** MBLK Units **µg/L**
SampID: MBLK-203468

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	03/03/2023
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	03/03/2023
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	03/03/2023
Beryllium		1.0		**< 1.0**	0.2500	0	0	-100	100	03/06/2023
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/06/2023
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	03/03/2023
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	03/06/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/03/2023
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	03/03/2023
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	03/06/2023
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	03/03/2023
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	03/03/2023
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	03/03/2023

Quality Control Results

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 203468 **SampType:** LCS Units **µg/L**
SampID: LCS-203468

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**498**	500.0	0	99.6	80	120	03/03/2023
Arsenic		1.0		**497**	500.0	0	99.4	80	120	03/03/2023
Barium		1.0		**2160**	2000	0	108.0	80	120	03/03/2023
Beryllium		1.0		**55.0**	50.00	0	109.9	80	120	03/06/2023
Boron		25.0		**561**	500.0	0	112.2	80	120	03/06/2023
Cadmium		1.0		**56.0**	50.00	0	111.9	80	120	03/03/2023
Chromium		1.5		**218**	200.0	0	109.2	80	120	03/06/2023
Cobalt		1.0		**516**	500.0	0	103.2	80	120	03/03/2023
Lead		1.0		**491**	500.0	0	98.2	80	120	03/03/2023
Lithium	*	3.0		**496**	500.0	0	99.2	80	120	03/07/2023
Molybdenum		1.5		**508**	500.0	0	101.7	80	120	03/03/2023
Selenium		1.0		**460**	500.0	0	91.9	80	120	03/03/2023
Thallium		2.0		**235**	250.0	0	93.8	80	120	03/03/2023

Batch 203617 **SampType:** MBLK Units **µg/L**
SampID: MBLK-203617

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/08/2023

Batch 203617 **SampType:** LCS Units **µg/L**
SampID: LCS-203617

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**516**	500.0	0	103.1	80	120	03/08/2023

Batch 203617 **SampType:** MS Units **µg/L**
SampID: 23020845-023BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**2450**	1000	1407	104.3	75	125	03/08/2023

Batch 203617 **SampType:** MSD Units **µg/L** RPD Limit: **20**
SampID: 23020845-023BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		25.0		**2370**	1000	1407	96.3	2450	3.29	03/08/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 204109 **SampType:** MBLK Units µg/L
SampID: MBLK-204109

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**< 25.0**	9.250	0	0	-100	100	03/22/2023
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	03/22/2023

Batch 204109 **SampType:** LCS Units µg/L
SampID: LCS-204109

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**503**	500.0	0	100.5	80	120	03/22/2023
Cobalt		1.0		**528**	500.0	0	105.7	80	120	03/22/2023

Batch 204109 **SampType:** MS Units µg/L
SampID: 23020845-016CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		25.0		**671**	500.0	198.9	94.4	75	125	03/22/2023

Batch 204109 **SampType:** MSD Units µg/L RPD Limit: **20**
SampID: 23020845-016CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		25.0		**661**	500.0	198.9	92.4	671.0	1.50	03/22/2023

SW-846 7470A (DISSOLVED)

Batch 203471 **SampType:** MBLK Units µg/L
SampID: MBLK-203471

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**< 0.20**	0.0550	0	0	-100	100	03/03/2023

Batch 203471 **SampType:** LCS Units µg/L
SampID: LCS-203471

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**4.84**	5.000	0	96.9	85	115	03/03/2023

Batch 203471 **SampType:** MS Units µg/L
SampID: 23020845-039EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.04**	5.000	0	100.7	75	125	03/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23020845

Client Project: HEN-23Q1 **Report Date:** 14-Apr-23

SW-846 7470A (DISSOLVED)

Batch 203471 **SampType:** MSD Units µg/L RPD Limit: 15

SampID: 23020845-039EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**5.08**	5.000	0	101.6	5.036	0.84	03/06/2023

SW-846 7470A (TOTAL)

Batch 203469 **SampType:** MBLK Units µg/L

SampID: MBLK-203469

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**< 0.20**	0.0550	0	0	-100	100	03/06/2023

Batch 203469 **SampType:** LCS Units µg/L

SampID: LCS-203469

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**4.85**	5.000	0	97.0	85	115	03/06/2023

Batch 203469 **SampType:** MS Units µg/L

SampID: 23020845-002DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.24**	5.000	0	104.8	75	125	03/06/2023

Batch 203469 **SampType:** MSD Units µg/L RPD Limit: 15

SampID: 23020845-002DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**4.90**	5.000	0	98.1	5.239	6.62	03/06/2023

Batch 203469 **SampType:** MS Units µg/L

SampID: 23020845-013CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.35**	5.000	0	106.9	75	125	03/06/2023

Batch 203469 **SampType:** MSD Units µg/L RPD Limit: 15

SampID: 23020845-013CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**5.42**	5.000	0	108.3	5.346	1.30	03/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

SW-846 7470A (TOTAL)

Batch 203470 **SampType:** MBLK Units µg/L
SampID: MBLK-203470

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**< 0.20**	0.0550	0	0	-100	100	03/06/2023

Batch 203470 **SampType:** LCS Units µg/L
SampID: LCS-203470

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.06**	5.000	0	101.2	85	115	03/06/2023

Batch 203470 **SampType:** MS Units µg/L
SampID: 23020845-024CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.46**	5.000	0	109.2	75	125	03/06/2023

Batch 203470 **SampType:** MSD Units µg/L RPD Limit: **15**
SampID: 23020845-024CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**5.46**	5.000	0	109.2	5.460	0.05	03/06/2023

Batch 203470 **SampType:** MS Units µg/L
SampID: 23020845-036CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.30**	5.000	0	106.0	75	125	03/07/2023

Batch 203470 **SampType:** MSD Units µg/L RPD Limit: **15**
SampID: 23020845-036CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**5.30**	5.000	0	106.0	5.300	0.05	03/07/2023

Batch 203471 **SampType:** MS Units µg/L
SampID: 23020845-051DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**5.02**	5.000	0	100.4	75	125	03/06/2023

Batch 203471 **SampType:** MSD Units µg/L RPD Limit: **15**
SampID: 23020845-051DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**4.90**	5.000	0	98.0	5.022	2.45	03/06/2023

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020845
Report Date: 14-Apr-23

Carrier: Joe Riley
Received By: ANC

Completed by: Lindsey Maddox
On: 02-Mar-23

Reviewed by: Elizabeth A. Hurley
On: 02-Mar-23

Pages to follow: Chain of custody 4 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.2
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #87147/79929. - TSM/lmaddox - 3/2/2023 8:53:12 AM

Additional Sodium Hydroxide (81662) was needed in 02, 07, 08, 10, 12, 13, 16, 17, 05R, 08D, 18D, 06, 15, and 08 Duplicate upon arrival at the laboratory. - lmaddox - 3/2/2023 10:13:57 AM

Additional Nitric Acid (87873) was needed in 08D and 08 Duplicate upon arrival at the laboratory. - lmaddox - 3/2/2023 10:15:51 AM

Additional Sulfuric Acid (86787) was needed in 08 upon arrival at the laboratory. - lmaddox - 3/2/2023 10:22:00 AM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 4

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West	East Group 1	East Group 2	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	* — 02			03/01/23	1423																		✓	✓				23020845-001
2	* 07			03/01/23	1616											✓	✓	✓			✓		✓		✓			002
3	* X — 08			03/01/23	1501											✓	✓	✓		✓	✓		✓			✓		003
4	* *TE — 10			03/01/23	0417															✓			✓			✓		004
5	* *TE — 12			03/01/23	1046													✓		✓						✓		005
6	* *TE — 13			03/01/23	1028													✓		✓						✓		006
7	* — 16			02/28/23	1557											✓		✓							✓			007
8	* — 17			02/28/23	1614											✓		✓							✓			008
9	— 22 1128			02/28/23	~~1142~~														✓			✓		✓				009
10	— 23			02/28/23	1035														✓			✓		✓				010
11	— 25			02/28/23	1435														✓			✓						011
12	— 26			02/28/23	1436														✓			✓						012
13	— 27			02/28/23	1347														✓			✓		✓				013
14	— 30			02/28/23	1249														✓			✓						014
15	— 31			02/28/23	1250														✓			✓						015
16	— 32			02/28/23	1306														✓			✓		✓				016

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
HEN-23Q1 Rev 0	[signature] TEAH	03/01/23	1500	William Colin	3/2/23	800

SAMPLE CONDITIONS			
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3.2	Y	N	~~N~~ Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Ritz

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 03/02/23

TE
EAH
3/23/23

HS present in FB(2/3)

* Added HNO_3(87873)
* Added NaOH(81662)
x Added H_2SO_4(86757)

3.2 #5
PH: 87147/79929 LM
TSM 312

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 4

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West	East Group 1	East Group 2	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	33			02/28/23	1315															✓			✓						23020845-017
2	34			02/28/23	1421															✓			✓		✓				018
3	35			02/28/23	1233															✓			✓		✓				019
4	36			02/28/23	1220															✓			✓						020
5	46			02/28/23	1634														✓										021
6	47			03/01/23	0937														✓										022
7	48			03/01/23	1214												✓												023
8	49			02/28/23	1101															✓			✓		✓				024
9	50			02/28/23	1210															✓			✓		✓				025
10	51			02/28/23	1003															✓			✓		✓				026
11	52			02/28/23	1651														✓										027
12	54			03/01/23	0959														✓										028
13	55			02/28/23	1643														✓										029
14	03R			03/01/23	1326													✓				✓		✓		✓			030
15	05DR			03/01/23	1257												✓				✓						✓		031
16	05R			03/01/23	1226												✓				✓						✓		032

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q1 Rev 0	[signature] Tebbals	03/02/23	0805	Allison Coler	3/2/23	800	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 03/01/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 4

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Email To:	Brian.Voelker@VistraCorp.com
Phone:	(217) 753-8911
Fax:	
Requested Due Date/TAT:	10 day

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

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WASTE WATER	WW
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WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

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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)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West	East Group 1	East Group 2	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	08D			03/01/23	1442												✓	✓	✓		✓	✓		✓			✓		23020845-033
2	18D			03/01/23	1304													✓				✓		✓		✓			034
3	18S			03/01/23	1255													✓				✓		✓		✓			035
4	21R			02/28/23	0915															✓			✓		✓				036
5	22D			02/28/23	1144															✓			✓		✓				037
6	40S			03/01/23	1200												✓				✓						✓		038
7	45S			03/01/23	1350													✓				✓		✓					039
8	SG02			03/02/23	0730		0										✓	✓	✓	✓	✓	✓	✓	✓	✓				040
9	XPW01			02/28/23	1514														✓										041
10	XPW02 03/01/23			~~03/06/23~~	0813														✓										042
11	XPW03			03/01/23	1537														✓										043
12	XSG01			02/28/23	1630		0												✓										044
13	04R			03/01/23	1120																					✓			045
14	06			03/01/23	1408																					✓			046
15	15			03/01/23	1107																					✓			047
16	19D			03/01/23	1148																					✓			048

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q1 Rev 0	[signature] Tekla	03/02/23	0800	[signature] Allison Colin	3/2/23	8:00	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 03/02/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

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Phone:	(217) 753-8911
Fax:	
Requested Due Date/TAT:	10 day

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

Valid Matrix Codes

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WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West	East Group 1	East Group 2	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	19S			03/01/23	1134 JR																					✓			23020845-049
2	★★ 08 Duplicate			03/01/23	1501												✓	✓	✓		✓	✓		✓			✓		050
3	Field Blank			03/01/23	1701												✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		051
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q1 Rev 0	Tetlab	03/02/23	1800	Allison Colin	3/2/23	800	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 03/02/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

March 27, 2023

Eric Bauer
Ramboll
234 W. Florida St.
5th Floor
Milwaukee, WI 61704
TEL: (414) 837-3607
FAX:

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: HEN-23Q1 **WorkOrder:** 23020844

Dear Eric Bauer:

TEKLAB, INC received 28 samples on 3/2/2023 8:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley

Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Report Contents

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23

This reporting package includes the following:

Definitions

Client: Ramboll **Work Order:** 23020844

Client Project: HEN-23Q1 **Report Date:** 27-Mar-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

Client: Ramboll **Work Order:** 23020844

Client Project: HEN-23Q1 **Report Date:** 27-Mar-23

Qualifiers

- Unknown hydrocarbon
C - RL shown is a Client Requested Quantitation Limit
H - Holding times exceeded
J - Analyte detected below quantitation limits
ND - Not Detected at the Reporting Limit
S - Spike Recovery outside recovery limits
X - Value exceeds Maximum Contaminant Level
B - Analyte detected in associated Method Blank
E - Value above quantitation range
I - Associated internal standard was outside method criteria
M - Manual Integration used to determine area response
R - RPD outside accepted recovery limits
T - TIC(Tentatively identified compound)

Case Narrative

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020844
Report Date: 27-Mar-23

Cooler Receipt Temp: 3.2 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Pace Analytical Services, LLC. See attached report for results.

Locations

Collinsville

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Springfield

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Kansas City

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Phone	(913) 541-1998
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Collinsville Air

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Chicago

Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Accreditations

Client: Ramboll

Work Order: 23020844

Client Project: HEN-23Q1

Report Date: 27-Mar-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-001
Client Sample ID: 03R
Matrix: GROUNDWATER
Collection Date: 03/01/2023 13:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-002
Client Sample ID: 07
Matrix: GROUNDWATER
Collection Date: 03/01/2023 16:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-003
Client Sample ID: 08
Matrix: GROUNDWATER
Collection Date: 03/01/2023 15:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-004
Client Sample ID: 08D
Matrix: GROUNDWATER
Collection Date: 03/01/2023 14:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-005
Client Sample ID: 12
Matrix: GROUNDWATER
Collection Date: 03/01/2023 10:46

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-006
Client Sample ID: 13
Matrix: GROUNDWATER
Collection Date: 03/01/2023 10:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-007
Client Sample ID: 16
Matrix: GROUNDWATER
Collection Date: 02/28/2023 15:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-008
Client Sample ID: 17
Matrix: GROUNDWATER
Collection Date: 02/28/2023 16:14

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-009
Client Sample ID: 18S
Matrix: GROUNDWATER
Collection Date: 03/01/2023 12:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-010
Client Sample ID: 18D
Matrix: GROUNDWATER
Collection Date: 03/01/2023 13:08

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-011
Client Sample ID: 21R
Matrix: GROUNDWATER
Collection Date: 02/28/2023 9:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-012
Client Sample ID: 22
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-013
Client Sample ID: 22D
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-014
Client Sample ID: 23
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-015
Client Sample ID: 27
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:47

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-016
Client Sample ID: 32
Matrix: GROUNDWATER
Collection Date: 02/28/2023 13:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-017
Client Sample ID: 34
Matrix: GROUNDWATER
Collection Date: 02/28/2023 14:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-018
Client Sample ID: 35
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/14/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-019
Client Sample ID: 45S
Matrix: GROUNDWATER
Collection Date: 03/01/2023 13:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-020
Client Sample ID: 46
Matrix: GROUNDWATER
Collection Date: 02/28/2023 16:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-021
Client Sample ID: 47
Matrix: GROUNDWATER
Collection Date: 03/01/2023 9:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-022
Client Sample ID: 49
Matrix: GROUNDWATER
Collection Date: 02/28/2023 11:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-023
Client Sample ID: 50
Matrix: GROUNDWATER
Collection Date: 02/28/2023 12:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-024
Client Sample ID: 51
Matrix: GROUNDWATER
Collection Date: 02/28/2023 10:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-025
Client Sample ID: 52
Matrix: GROUNDWATER
Collection Date: 02/28/2023 16:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-026
Client Sample ID: 54
Matrix: GROUNDWATER
Collection Date: 03/01/2023 9:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-027
Client Sample ID: 08 Duplicate
Matrix: GROUNDWATER
Collection Date: 03/01/2023 15:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23020844
Client Project: HEN-23Q1
Report Date: 27-Mar-23
Lab ID: 23020844-028
Client Sample ID: Field Blank
Matrix: AQUEOUS
Collection Date: 03/01/2023 17:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520
Radium-228	*	0		**See Attached**	pci/L	1	03/16/2023 0:00	R326520

Sample Summary

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020844
Report Date: 27-Mar-23

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
23020844-001	03R	Groundwater	1	03/01/2023 13:26
23020844-002	07	Groundwater	1	03/01/2023 16:16
23020844-003	08	Groundwater	1	03/01/2023 15:01
23020844-004	08D	Groundwater	1	03/01/2023 14:42
23020844-005	12	Groundwater	1	03/01/2023 10:46
23020844-006	13	Groundwater	1	03/01/2023 10:28
23020844-007	16	Groundwater	1	02/28/2023 15:57
23020844-008	17	Groundwater	1	02/28/2023 16:14
23020844-009	18S	Groundwater	1	03/01/2023 12:53
23020844-010	18D	Groundwater	1	03/01/2023 13:08
23020844-011	21R	Groundwater	1	02/28/2023 9:18
23020844-012	22	Groundwater	1	02/28/2023 11:28
23020844-013	22D	Groundwater	1	02/28/2023 11:44
23020844-014	23	Groundwater	1	02/28/2023 10:35
23020844-015	27	Groundwater	1	02/28/2023 13:47
23020844-016	32	Groundwater	1	02/28/2023 13:06
23020844-017	34	Groundwater	1	02/28/2023 14:21
23020844-018	35	Groundwater	1	02/28/2023 12:33
23020844-019	45S	Groundwater	1	03/01/2023 13:50
23020844-020	46	Groundwater	1	02/28/2023 16:34
23020844-021	47	Groundwater	1	03/01/2023 9:37
23020844-022	49	Groundwater	1	02/28/2023 11:01
23020844-023	50	Groundwater	1	02/28/2023 12:10
23020844-024	51	Groundwater	1	02/28/2023 10:03
23020844-025	52	Groundwater	1	02/28/2023 16:57
23020844-026	54	Groundwater	1	03/01/2023 9:59
23020844-027	08 Duplicate	Groundwater	1	03/01/2023 15:01
23020844-028	Field Blank	Aqueous	1	03/01/2023 17:01

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020844
Report Date: 27-Mar-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23020844-001A	03R	03/01/2023 13:26	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-002A	07	03/01/2023 16:16	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-003A	08	03/01/2023 15:01	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-004A	08D	03/01/2023 14:42	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-005A	12	03/01/2023 10:46	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-006A	13	03/01/2023 10:28	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-007A	16	02/28/2023 15:57	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-008A	17	02/28/2023 16:14	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-009A	18S	03/01/2023 12:53	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-010A	18D	03/01/2023 13:08	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-011A	21R	02/28/2023 9:18	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-012A	22	02/28/2023 11:28	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-013A	22D	02/28/2023 11:44	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-014A	23	02/28/2023 10:35	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-015A	27	02/28/2023 13:47	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-016A	32	02/28/2023 13:06	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-017A	34	02/28/2023 14:21	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-018A	35	02/28/2023 12:33	03/02/2023 8:00		

Dates Report

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020844
Report Date: 27-Mar-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	EPA 903.0/904.0, Radium 226/228				03/14/2023 0:00
23020844-019A	45S	03/01/2023 13:50	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-020A	46	02/28/2023 16:34	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-021A	47	03/01/2023 9:37	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-022A	49	02/28/2023 11:01	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-023A	50	02/28/2023 12:10	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-024A	51	02/28/2023 10:03	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-025A	52	02/28/2023 16:57	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-026A	54	03/01/2023 9:59	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-027A	08 Duplicate	03/01/2023 15:01	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00
23020844-028A	Field Blank	03/01/2023 17:01	03/02/2023 8:00		
	EPA 903.0/904.0, Radium 226/228				03/16/2023 0:00

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q1
Work Order: 23020844
Report Date: 27-Mar-23

Carrier: Joe Riley
Received By: ANC

Completed by: Lindsey Maddox
On: 02-Mar-23

Reviewed by: Elizabeth A. Hurley
On: 02-Mar-23

Pages to follow: Chain of custody 2 Extra pages included 48

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.2
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Additional Nitric Acid (87873) was needed in 08, 08D, 12, 27, 34, 35, 47, 49, 50, and 51 upon arrival at the laboratory. - lmaddox - 3/2/2023 10:35:49 AM

pH strip #87147. - lmaddox - 3/2/2023 10:36:49 AM

23020844

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

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:	10 day

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	03R			03/01/23	1326		2			2							✓				✓					23020844-001
2	07			03/01/23	1616		2			2							✓	✓			✓					002
3	* 08			03/01/23	1501		2			2							✓	✓			✓					003
4	* 08D			03/01/23	1442		2			2							✓	✓			✓					004
5	* 12			03/01/23	1046		2			2								✓								005
6	13			03/01/23	1028		2			2								✓								006
7	16			02/28/23	1557		2			2								✓								007
8	17			02/28/23	1647		2			2								✓								008
9	18S			03/01/23	1253		2			2							✓				✓					009
10	18D			03/01/23	1309		2			2							✓				✓					010
11	21R			02/28/23	0918		2			2									✓			✓				011
12	22			02/28/23	1125		2			2									✓			✓				012
13	22D			02/28/23	1144		2			2									✓			✓				013
14	23			02/28/23	1035		2			2									✓			✓				014
15	* 27			02/28/23	1347		2			2									✓			✓				015
16	32			02/28/23	1306		2			2									✓			✓				016

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q1 Rev 0	Tekiles	03/02/23	0800	Allison Cole	3/2/23	800				Y
Ra226/228, only.							3.2	Y	N	~~N~~ TE EAH 3/23/23
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/02/23

* Additional HNO_3 needed 3.2° #5 3/2

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_WPCP_East	HEN_WPCP_West				Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	* 34			02/28/23	1421		2			2										✓			✓							23020844-017
2	* 35			02/28/23	1233		2			2										✓			✓							018
3	45S			03/01/23	1350		2			2								✓				✓								019
4	46			02/28/23	1634		2			2									✓											020
5	* 47			03/01/23	0934		2			2									✓											021
6	* 49			02/28/23	1101		2			2										✓			✓							022
7	* 50			02/28/23	1210		2			2										✓										023
8	* 51			02/28/23	1003		2			2										✓			✓							024
9	52			02/28/23	1657		2			2									✓											025
10	54			03/01/23	0954		2			2									✓											026
11	08 Duplicate			03/01/23	1501		2			2								✓	✓			✓								027
12	Field Blank			03/01/23	1701		2			2								✓	✓	✓		✓	✓							028
13																														
14																														
15																														
16																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q1 Rev 0	Teklab	03/02/23	0855	Allison Colin	3/2/23	800	
DUP and FB per history.							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 03/02/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical®

ANALYTICAL REPORT

March 22, 2023

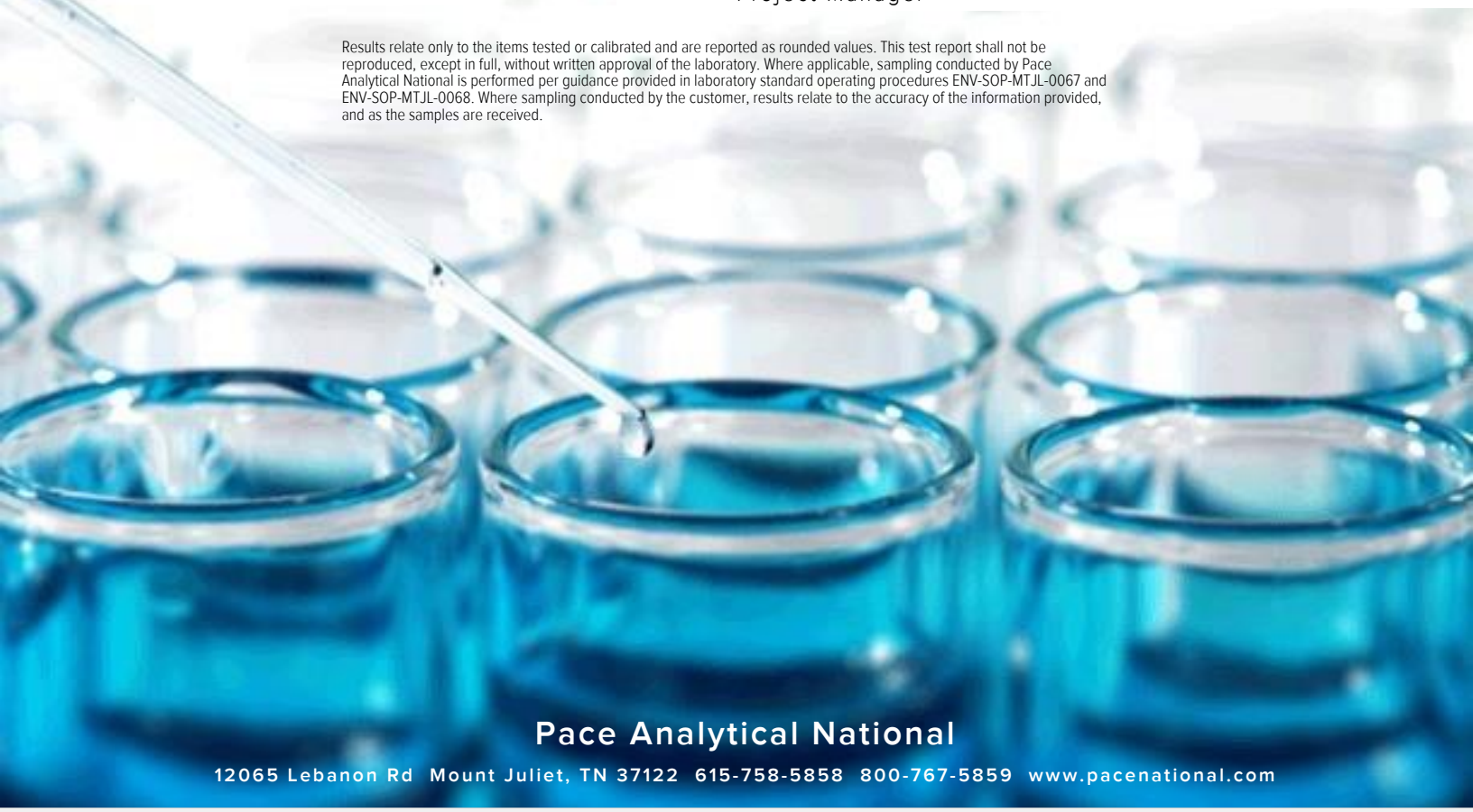
1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

TEKLAB, Inc.

Sample Delivery Group:	L1591962
Samples Received:	03/06/2023
Project Number:	23020844
Description:	
Report To:	Elizabeth Hurley 5445 Horseshoe Lake Road Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

23020844-001 L1591962-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 13:26	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-002 L1591962-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 16:16	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-003 L1591962-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 15:01	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-004 L1591962-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 14:42	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-005 L1591962-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 10:46	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-006 L1591962-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 10:28	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-007 L1591962-07 Non-Potable Water

Collected by | Collected date/time 02/28/23 15:57 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-008 L1591962-08 Non-Potable Water

Collected by | Collected date/time 02/28/23 16:14 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-009 L1591962-09 Non-Potable Water

Collected by | Collected date/time 03/01/23 12:53 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2023907	1	03/15/23 19:33	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 17:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:19	RGT	Mt. Juliet, TN

23020844-010 L1591962-10 Non-Potable Water

Collected by | Collected date/time 03/01/23 13:08 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-011 L1591962-11 Non-Potable Water

Collected by | Collected date/time 02/28/23 09:18 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-012 L1591962-12 Non-Potable Water

Collected by | Collected date/time 02/28/23 11:28 | Received date/time 03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-013 L1591962-13 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 11:44	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-014 L1591962-14 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 10:35	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-015 L1591962-15 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 13:47	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-016 L1591962-16 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 13:06	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-017 L1591962-17 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 14:21	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-018 L1591962-18 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 12:33	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019012	1	03/08/23 17:16	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019012	1	03/08/23 17:16	03/14/23 11:20	RGT	Mt. Juliet, TN

23020844-019 L1591962-19 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 13:50	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:33	RGT	Mt. Juliet, TN

23020844-020 L1591962-20 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 16:34	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-021 L1591962-21 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 09:37	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-022 L1591962-22 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 11:01	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-023 L1591962-23 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 12:10	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2024709	1	03/16/23 19:18	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/20/23 10:52	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-024 L1591962-24 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 10:03	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2025460	1	03/17/23 17:43	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-025 L1591962-25 Non-Potable Water

Collected by	Collected date/time	Received date/time
	02/28/23 16:57	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2025460	1	03/17/23 17:43	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-026 L1591962-26 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 09:59	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2025460	1	03/17/23 17:43	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-027 L1591962-27 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 15:01	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2025460	1	03/17/23 17:43	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

23020844-028 L1591962-28 Non-Potable Water

Collected by	Collected date/time	Received date/time
	03/01/23 17:01	03/06/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2025460	1	03/17/23 17:43	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2019014	1	03/13/23 16:35	03/22/23 10:40	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2019014	1	03/13/23 16:35	03/16/23 22:32	RGT	Mt. Juliet, TN

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.

Mark W. Beasley
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.64		0.391	0.655	03/20/2023 17:45	WG2023907
(T) Barium	*78.7*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*85.7*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.93		0.474	0.735	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.289	J	0.268	0.334	03/14/2023 11:19	WG2019012
(T) Barium-133	*91.4*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.62		0.307	0.502	03/20/2023 17:45	WG2023907
(T) Barium	*90.5*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*90.1*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.00		0.448	0.643	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.384	J	0.326	0.402	03/14/2023 11:19	WG2019012
(T) Barium-133	*80.6*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.688		0.282	0.487	03/20/2023 17:45	WG2023907
(T) Barium	*83.3*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*95.7*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.871		0.349	0.558	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.183	J	0.206	0.272	03/14/2023 11:19	WG2019012
(T) Barium-133	*83.5*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.21		0.275	0.456	03/20/2023 17:45	WG2023907
(T) Barium	*78.0*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*103*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.37		0.333	0.519	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.167	J	0.188	0.248	03/14/2023 11:19	WG2019012
(T) Barium-133	*78.8*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.143	U	0.315	0.581	03/20/2023 17:45	WG2023907
(T) Barium	*80.4*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*94.6*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.370	J	0.419	0.650	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.370		0.276	0.292	03/14/2023 11:19	WG2019012
(T) Barium-133	*82.5*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-1.02	U	0.298	0.576	03/20/2023 17:45	WG2023907
(T) Barium	*82.1*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*91.4*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.129	U	0.333	0.607	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.129	J	0.148	0.190	03/14/2023 11:19	WG2019012
(T) Barium-133	*85.3*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.570	U	0.335	0.587	03/20/2023 17:45	WG2023907
(T) Barium	*78.4*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*101*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.956		0.425	0.640	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.385		0.262	0.254	03/14/2023 11:19	WG2019012
(T) Barium-133	*89.5*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0392	U	0.354	0.644	03/20/2023 17:45	WG2023907
(T) Barium	*76.6*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*82.7*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0457	U	0.396	0.722	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.00652	U	0.178	0.327	03/14/2023 11:19	WG2019012
(T) Barium-133	*88.1*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.183	U	0.306	0.561	03/20/2023 17:45	WG2023907
(T) Barium	*79.3*			*30.0-143*	*03/20/2023 17:45*	WG2023907
(T) Yttrium	*99.5*			*30.0-136*	*03/20/2023 17:45*	WG2023907

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0783	U	0.349	0.627	03/20/2023 17:45	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0783	U	0.168	0.279	03/14/2023 11:19	WG2019012
(T) Barium-133	*89.1*			*30.0-143*	*03/14/2023 11:19*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.04		0.366	0.658	03/20/2023 10:52	WG2024709
(T) Barium	*84.1*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*91.1*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.28		0.438	0.729	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.240	J	0.241	0.313	03/14/2023 11:20	WG2019012
(T) Barium-133	*89.9*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.950		0.245	0.430	03/20/2023 10:52	WG2024709
(T) Barium	*80.3*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*104*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.75		0.472	0.552	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.803		0.404	0.346	03/14/2023 11:20	WG2019012
(T) Barium-133	*84.6*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.247	J	0.277	0.515	03/20/2023 10:52	WG2024709
(T) Barium	*90.0*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*107*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.324	J	0.326	0.595	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0769	U	0.172	0.297	03/14/2023 11:20	WG2019012
(T) Barium-133	*86.5*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.263	J	0.245	0.456	03/20/2023 10:52	WG2024709
(T) Barium	*94.8*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*93.3*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.25		0.495	0.555	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.984		0.430	0.316	03/14/2023 11:20	WG2019012
(T) Barium-133	*86.0*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.635	J	0.357	0.655	03/20/2023 10:52	WG2024709
(T) Barium	*77.7*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*78.8*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.727		0.392	0.705	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0929	U	0.163	0.260	03/14/2023 11:20	WG2019012
(T) Barium-133	*93.8*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.473	J	0.264	0.484	03/20/2023 10:52	WG2024709
(T) Barium	*90.4*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*111*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.671		0.328	0.539	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.198	J	0.194	0.237	03/14/2023 11:20	WG2019012
(T) Barium-133	*94.7*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.781		0.248	0.443	03/20/2023 10:52	WG2024709
(T) Barium	*91.6*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*103*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.886		0.314	0.534	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.106	U	0.192	0.298	03/14/2023 11:20	WG2019012
(T) Barium-133	*95.3*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.00		0.272	0.480	03/20/2023 10:52	WG2024709
(T) Barium	*87.1*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*93.0*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.55		0.383	0.519	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.544		0.269	0.197	03/14/2023 11:20	WG2019012
(T) Barium-133	*89.9*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.551		0.254	0.464	03/20/2023 10:52	WG2024709
(T) Barium	*78.2*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*98.0*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.99		0.536	0.560	03/20/2023 10:52	WG2019012

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.44		0.472	0.314	03/14/2023 11:20	WG2019012
(T) Barium-133	*88.6*			*30.0-143*	*03/14/2023 11:20*	WG2019012

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.598		0.318	0.584	03/20/2023 10:52	WG2024709
(T) Barium	*75.6*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*103*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.748		0.373	0.647	03/20/2023 10:52	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.149	J	0.194	0.278	03/16/2023 22:33	WG2019014
(T) Barium-133	*89.3*			*30.0-143*	*03/16/2023 22:33*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.612	U	0.252	0.501	03/20/2023 10:52	WG2024709
(T) Barium	*85.9*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*104*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.187	U	0.351	0.611	03/20/2023 10:52	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.187	J	0.244	0.349	03/16/2023 22:32	WG2019014
(T) Barium-133	*80.6*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.556		0.291	0.532	03/20/2023 10:52	WG2024709
(T) Barium	*94.8*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*91.3*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.671		0.381	0.670	03/20/2023 10:52	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.115	U	0.246	0.408	03/16/2023 22:32	WG2019014
(T) Barium-133	*71.7*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.208	U	0.216	0.421	03/20/2023 10:52	WG2024709
(T) Barium	*95.7*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*100*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.231	J	0.310	0.503	03/20/2023 10:52	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.231	J	0.223	0.276	03/16/2023 22:32	WG2019014
(T) Barium-133	*93.0*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.201	U	0.258	0.483	03/20/2023 10:52	WG2024709
(T) Barium	*91.5*			*30.0-143*	*03/20/2023 10:52*	WG2024709
(T) Yttrium	*101*			*30.0-136*	*03/20/2023 10:52*	WG2024709

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.608		0.390	0.573	03/20/2023 10:52	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.408		0.293	0.309	03/16/2023 22:32	WG2019014
(T) Barium-133	*88.2*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.387	J	0.306	0.564	03/22/2023 10:40	WG2025460
(T) Barium	*81.0*			*30.0-143*	*03/22/2023 10:40*	WG2025460
(T) Yttrium	*110*			*30.0-136*	*03/22/2023 10:40*	WG2025460

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.35		0.493	0.623	03/22/2023 10:40	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.966		0.386	0.264	03/16/2023 22:32	WG2019014
(T) Barium-133	*92.4*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-1.69	U	0.254	0.529	03/22/2023 10:40	WG2025460
(T) Barium	*93.9*			*30.0-143*	*03/22/2023 10:40*	WG2025460
(T) Yttrium	*114*			*30.0-136*	*03/22/2023 10:40*	WG2025460

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.259	J	0.359	0.613	03/22/2023 10:40	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.259	J	0.254	0.310	03/16/2023 22:32	WG2019014
(T) Barium-133	*72.3*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.626	U	0.278	0.539	03/22/2023 10:40	WG2025460
(T) Barium	*94.3*			*30.0-143*	*03/22/2023 10:40*	WG2025460
(T) Yttrium	*108*			*30.0-136*	*03/22/2023 10:40*	WG2025460

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.00730	U	0.327	0.631	03/22/2023 10:40	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.00730	U	0.172	0.329	03/16/2023 22:32	WG2019014
(T) Barium-133	*86.1*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.104	U	0.265	0.506	03/22/2023 10:40	WG2025460
(T) Barium	*78.7*			*30.0-143*	*03/22/2023 10:40*	WG2025460
(T) Yttrium	*117*			*30.0-136*	*03/22/2023 10:40*	WG2025460

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.277	J	0.336	0.548	03/22/2023 10:40	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.277		0.207	0.210	03/16/2023 22:32	WG2019014
(T) Barium-133	*84.2*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.000	U	0.272	0.512	03/22/2023 10:40	WG2025460
(T) Barium	*95.0*			*30.0-143*	*03/22/2023 10:40*	WG2025460
(T) Yttrium	*94.6*			*30.0-136*	*03/22/2023 10:40*	WG2025460

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0150	U	0.323	0.610	03/22/2023 10:40	WG2019014

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0150	U	0.174	0.331	03/16/2023 22:32	WG2019014
(T) Barium-133	*84.2*			*30.0-143*	*03/16/2023 22:32*	WG2019014

Method Blank (MB)

(MB) R3903513-1 03/20/23 17:45

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	-0.137	U	0.165	0.302
(T) Barium	*92.2*		*92.2*	
(T) Yttrium	*100*		*100*	

L1587256-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1587256-01 03/20/23 17:45 • (DUP) R3903513-5 03/20/23 17:45

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	1.61	0.441	0.748	1.75	0.370	0.748	1	7.98	0.233		20	3
(T) Barium	*94.4*			*89.5*	*89.5*							
(T) Yttrium	*94.9*			*100*	*100*							

Laboratory Control Sample (LCS)

(LCS) R3903513-2 03/20/23 17:45

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.92	118	80.0-120	
(T) Barium			*94.6*		
(T) Yttrium			*92.9*		

L1585977-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1585977-06 03/20/23 17:45 • (MS) R3903513-3 03/20/23 17:45 • (MSD) R3903513-4 03/20/23 17:45

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	1.90	11.5	11.5	96.2	96.3	1	70.0-130			0.0868		20
(T) Barium		*80.7*			*90.2*	*83.9*							
(T) Yttrium		*77.7*			*95.6*	*94.8*							

Method Blank (MB)

(MB) R3903198-1 03/20/23 10:52

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	-0.570	U	0.143	0.289
(T) Barium	*96.3*		*96.3*	
(T) Yttrium	*105*		*105*	

L1591962-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1591962-10 03/20/23 10:52 • (DUP) R3903198-5 03/20/23 10:52

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	1.04	0.366	0.658	1.59	0.338	0.658	1	42.4	1.12		20	3
(T) Barium	*84.1*			*98.6*	*98.6*							
(T) Yttrium	*91.1*			*108*	*108*							

Laboratory Control Sample (LCS)

(LCS) R3903198-2 03/20/23 10:52

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.67	113	80.0-120	
(T) Barium			*94.5*		
(T) Yttrium			*94.9*		

L1587304-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587304-03 03/20/23 10:52 • (MS) R3903198-3 03/20/23 10:52 • (MSD) R3903198-4 03/20/23 10:52

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	1.19	13.6	12.7	124	115	1	70.0-130			6.71		20
(T) Barium		*91.4*			*97.2*	*98.6*							
(T) Yttrium		*96.2*			*93.8*	*114*							

Method Blank (MB)

(MB) R3904214-1 03/22/23 10:40

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.393		0.146	0.261
(T) Barium	*84.2*		*84.2*	
(T) Yttrium	*102*		*102*	

L1591962-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1591962-24 03/22/23 10:40 • (DUP) R3904214-5 03/22/23 10:40

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	0.387	0.306	0.564	0.850	0.431	0.564	1	74.9	0.876		20	3
(T) Barium	*81.0*			*77.8*	*77.8*							
(T) Yttrium	*110*			*98.3*	*98.3*							

Laboratory Control Sample (LCS)

(LCS) R3904214-2 03/22/23 10:40

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.66	113	80.0-120	
(T) Barium			*82.6*		
(T) Yttrium			*114*		

L1587251-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1587251-03 03/22/23 10:40 • (MS) R3904214-3 03/22/23 10:40 • (MSD) R3904214-4 03/22/23 10:40

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	1.41	13.4	11.0	119	95.4	1	70.0-130			19.8		20
(T) Barium		*78.8*			*84.4*	*87.3*							
(T) Yttrium		*98.3*			*107*	*111*							

Method Blank (MB)

(MB) R3901562-1 03/14/23 11:19

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	-0.00764	U	0.0488	0.0958
(T) Barium-133	*87.7*		*87.7*	

L1591962-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1591962-01 03/14/23 11:19 • (DUP) R3901562-5 03/14/23 11:19

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	0.289	0.268	0.334	0.626	0.347	0.334	1	73.6	0.768		20	3
(T) Barium-133	*91.4*			*94.5*	*94.5*							

Laboratory Control Sample (LCS)

(LCS) R3901562-2 03/14/23 11:19

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.19	104	80.0-120	
(T) Barium-133			*84.9*		

L1591962-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1591962-14 03/14/23 11:20 • (MS) R3901562-3 03/14/23 11:19 • (MSD) R3901562-4 03/14/23 11:19

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	0.0929	19.6	22.5	97.7	112	1	75.0-125			13.5		20
(T) Barium-133		*93.8*			*93.5*	*86.4*							

Method Blank (MB)

(MB) R3902467-1 03/15/23 10:22

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	-0.0100	U	0.0639	0.125
(T) Barium-133	*67.0*		*67.0*	

L1590063-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1590063-07 03/16/23 22:32 • (DUP) R3902467-5 03/15/23 10:22

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	0.226	0.234	0.298	-0.0426	0.277	0.298	1	200	0.740	U	20	3
(T) Barium-133	*76.4*			*69.4*	*69.4*							

Laboratory Control Sample (LCS)

(LCS) R3902467-2 03/15/23 10:22

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.94	98.6	80.0-120	
(T) Barium-133			*77.4*		

L1591962-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1591962-28 03/16/23 22:32 • (MS) R3902467-3 03/15/23 10:22 • (MSD) R3902467-4 03/15/23 10:22

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	0.0150	19.8	22.1	99.1	111	1	75.0-125			11.0		20
(T) Barium-133		*84.2*			*87.8*	*82.4*							

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.

ACCREDITATIONS & LOCATIONS

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	LAO00356
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.

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Joseph Riley/Adam Bridges QC Level: 3

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23020844

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 34061 Phone: (618) 344-1004

L591962

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-01	23020844-001	3/1/23 1326	HNO3	Groundwater	✔											
-02	23020844-002	3/1/23 1616	HNO3	Groundwater	✔											
-03	23020844-003	3/1/23 1501	HNO3	Groundwater	✔											
-04	23020844-004	3/1/23 1442	HNO3	Groundwater	✔											
-05	23020844-005	3/1/23 1046	HNO3	Groundwater	✔											
-06	23020844-006	3/1/23 1028	HNO3	Groundwater	✔											
-07	23020844-007	3/1/23 1557	HNO3	Groundwater	✔											
-08	23020844-008	3/1/23 1614	HNO3	Groundwater	✔											
-09	23020844-009	3/1/23 1253	HNO3	Groundwater	✔											
-10	23020844-010	3/1/23 1308	HNO3	Groundwater	✔											
-11	23020844-011	2/28/23 0918	HNO3	Groundwater	✔											

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	3/2/23	[illegible]	3/6/23

631936159223

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 AmB+O=AmB
RAD Screen <0.5 mR/hr: ✓Y __N

Teklab maintains a strict policy of client confidentiality and as such does not provide client/samp
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3/2/2016

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TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Joseph Riley/Adam Bridges QC Level: 3

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Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
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Project# 23020844

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 34061 Phone: (618) 344-1004

L1591962

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Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-01	23020844-001	3/1/23 1326	HNO3	Groundwater	✔											
-02	23020844-002	3/1/23 1616	HNO3	Groundwater	✔											
-03	23020844-003	3/1/23 1501	HNO3	Groundwater	✔											
-04	23020844-004	3/1/23 1442	HNO3	Groundwater	✔											
-05	23020844-005	3/1/23 1046	HNO3	Groundwater	✔											
-06	23020844-006	3/1/23 1028	HNO3	Groundwater	✔											
-07	23020844-007	3/1/23 1557	HNO3	Groundwater	✔											
-08	23020844-008	3/1/23 1614	HNO3	Groundwater	✔											
-09	23020844-009	3/1/23 1253	HNO3	Groundwater	✔											
-10	23020844-010	3/1/23 1308	HNO3	Groundwater	✔											
-11	23020844-011	2/28/23 0918	HNO3	Groundwater	✔											

*Relinquished By	Date/Time	Received By	Date/Time
SMW	3/2/23	[illegible]	3/6/23

6319361592 23

Sample Receipt Checklist
COC Seal Present/Intact: ✓Y __N
COC Signed/Accurate: ✓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
If Applicable
VOA Zero Headspace: __Y ✓N
Pres.Correct/Check: ✓Y __N

AmB+O=AmB

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Teklab, Inc. protects clients' confidential information as directed by local, state or federal

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3/2/2016

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TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Joseph Riley/Adam Bridges QC Level: 3

Comments: **Please Issue reports and invoices via email only**
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Project# 23020844

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Requested Due Date: Standard TAT Billing/PO: 34061 Phone: (618) 344-1004

L1591962

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Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-12	23020844-012	2/28/23 1128	HNO3	Groundwater	✔											
-13	23020844-013	2/28/23 1144	HNO3	Groundwater	✔											
-14	23020844-014	2/28/23 1035	HNO3	Groundwater	✔											
-15	23020844-015	2/28/23 1347	HNO3	Groundwater	✔											
-16	23020844-016	2/28/23 1306	HNO3	Groundwater	✔											
-17	23020844-017	2/28/23 1421	HNO3	Groundwater	✔											
-18	23020844-018	2/28/23 1233	HNO3	Groundwater	✔											
-19	23020844-019	3/1/23 1350	HNO3	Groundwater	✔											
-20	23020844-020	2/28/23 1634	HNO3	Groundwater	✔											
-21	23020844-021	3/1/23 0937	HNO3	Groundwater	✔											
-22	23020844-022	2/28/23 1101	HNO3	Groundwater	✔											

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	3/2/23	[illegible]	3/6/23

631936159212

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

Amb+0=Amb

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TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Joseph Riley/Adam Bridges QC Level: 3

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Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23020844

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Requested Due Date: Standard TAT Billing/PO: 34061 Phone: (618) 344-1004

L1591962

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Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-23	23020844-023	2/28/23 23 1210	HNO3	Groundwater	✓											
-24	23020844-024	2/28/23 1003	HNO3	Groundwater	✓											
-25	23020844-025	2/28/23 1057	HNO3	Groundwater	✓											
-26	23020844-026	3/1/23 0959	HNO3	Groundwater	✓											
-27	23020844-027	3/1/23 1501	HNO3	Groundwater	✓											
-28	23020844-028	3/1/23 1701	HNO3	Groundwater	✓											
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	3/2/23	[illegible]	3/6/23

631936159201

Sample Receipt Checklist
COC Seal Present/Intact: ✓Y N
COC Signed/Accurate: ✓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
If Applicable
VOA Zero Headspace: Y N
Pres.Correct/Check: ✓Y N

AMB+0=AMB

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Tracking Numbers		Temperature
631936159223		Amb+0=Amb
631936159212		Amb+0=Amb
631936159201		Amb+0=Amb

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00
Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1306

WELL INFORMATION

Well ID: 32
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	12:54		4.62								
	12:57	0.13	4.62	0	10.1	7.2	1321	0.76	32.07	122.2	
	13:00	0.26	4.62	0	10	7.1	1321	0.56	26.93	120.4	
	13:03	0.39	4.62	0	10.1	7.04	1318	0.44	16.64	118	
	13:06	0.52	4.62	0	10.2	7.02	1317	0.39	9.62	116.1	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1421

WELL INFORMATION

Well ID: 34
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	14:12		2.45								
	14:15	0.13	2.45	0	11.2	6.98	1691	0.6	64.24	-71.4	
	14:18	0.26	2.45	0	11.2	6.93	1698	0.5	27.88	-80.3	
	14:21	0.39	2.45	0	11.2	6.92	1703	0.43	8.83	-84.5	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / Slight odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00
Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 0918

WELL INFORMATION

Well ID: 21R
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	8:42		5.25								
	9:09	1.17	5.25	0	10.8	7.38	1522	1.84	125.37	-141.5	
	9:12	1.3	5.25	0	10.8	7.34	1519	1.41	116.76	-143.4	
	9:15	1.43	5.25	0	10.9	7.33	1518	1.29	120.4	-143	Clear
	9:18	1.56	5.25	0	10.9	7.33	1517	1.21	121.3	-143.2	

NOTES (continued)

Bladder Pump / Cloudy /Lt Brown / Slight odor

ABBREVIATIONS

Cond. - Actual Conductivity
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
FT BTOC - Feet Below Top of Casing
na - SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1128

WELL INFORMATION

Well ID: 22
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	11:19		17.3								
	11:22	0.13	17.3	0	14.6	7.57	1296	0.55	0	69.1	
	11:25	0.26	17.3	0	14.7	7.58	1295	0.35	0.74	58.7	
	11:28	0.39	17.3	0	14.8	7.58	1295	0.3	0	51.9	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1144

WELL INFORMATION

Well ID: 22D
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	11:35		18.45								
	11:38	0.13	18.45	0	14.7	7.19	1460	0.93	12.25	-88.7	
	11:41	0.26	18.45	0	14.5	7.19	1464	0.44	15.08	-103.7	
	11:44	0.39	18.45	0	14.8	7.19	1459	0.4	9.36	-107.2	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1035

WELL INFORMATION

Well ID: 23
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	10:23		16.7								
	10:29	0.26	16.7	0	12.4	7.42	1664	0.44	0.18	-108.7	
	10:32	0.39	16.7	0	12.5	7.39	1662	0.35	0	-121.3	
	10:35	0.52	16.7	0	12.5	7.38	1657	0.3	0	-124.9	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
FT BTOC - Feet Below Top of Casing
na - SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1347

WELL INFORMATION

Well ID: 27
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	13:26		3.9								
	13:38	0.52	3.9	0	11.5	7.06	1475	0.25	28.45	-45.8	
	13:41	0.65	3.9	0	11.6	7.06	1476	0.23	21.95	-47.3	
	13:44	0.78	3.9	0	11.6	7.06	1475	0.22	17.86	-48.4	
	13:47	0.91	3.9	0	11.6	7.05	1475	0.22	8.96	-49.1	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / Slight odor

ABBREVIATIONS

Cond. - Actual Conductivity
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
FT BTOC - Feet Below Top of Casing
na - SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1233

WELL INFORMATION

Well ID: 35
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	12:24		8.2								
	12:27	0.13	8.2	0	11.2	7.07	1655	1.54	10.72	114.4	
	12:30	0.26	8.2	0	11.1	7.02	1708	1.07	3.6	110.6	
	12:33	0.39	8.2	0	11.1	6.98	1732	0.95	3.83	108.2	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
FT BTOC - Feet Below Top of Casing
na - SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1101

WELL INFORMATION

Well ID: 49
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	10:46		21.3								
	10:52	0.26	21.3	0	13.8	7.02	1451	0.63	44.46	25.8	
	10:55	0.39	21.3	0	13.9	7	1450	0.46	42.72	28.4	
	10:58	0.52	21.3	0	13.9	6.99	1450	0.39	47.8	30.5	
	11:01	0.65	21.3	0	13.9	6.98	1449	0.35	42.02	33.4	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1210

WELL INFORMATION

Well ID: 50
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	11:55		16.74								
	12:04	0.39	16.74	0	14.7	7.46	1250	0.4	34.38	21.5	
	12:07	0.52	16.74	0	14.7	7.43	1275	0.36	19.92	22.8	
	12:10	0.65	16.74	0	14.7	7.41	1287	0.33	9.41	24.1	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / No odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Client: Vistra
Project Number: 23010001 Task #: Start Date: 1/11/2023 Time: 11:00

Field Personnel: J. Riley / J. Colp Finish Date: 2/28/2023 Time: 1003

WELL INFORMATION

Well ID: 51
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify):Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	9:45		17.91								
	9:54	0.39	17.91	0	11.4	7.24	1465	2.19	36.33	-97.9	
	9:57	0.52	17.91	0	11.8	7.22	1471	1.38	26.29	-111.7	
	10:00	0.65	17.91	0	11.8	7.23	1476	1	20.87	-118.9	
	10:03	0.78	17.91	0	11.2	7.23	1477	1.08	21.13	-119.3	Clear

NOTES (continued)

Bladder Pump / Clear /No Color / Slight odor

ABBREVIATIONS

Cond. - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical
FT BTOC - Feet Below Top of Casing na - Conductance SU - Standard Units

http://www.teklabinc.com/

June 21, 2023

Eric Bauer
Ramboll
300 S. Wacker Drive
Suite 130
Chicago, IL 60606
TEL: (414) 837-3607
FAX: (414) 837-3608

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: HEN-23Q2 **WorkOrder:** 23051600

Dear Eric Bauer:

TEKLAB, INC received 45 samples on 6/1/2023 4:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Report Contents

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23

This reporting package includes the following:

Definitions

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: Ramboll

Work Order: 23051600

Client Project: HEN-23Q2

Report Date: 21-Jun-23

Qualifiers

- Unknown hydrocarbon
C - RL shown is a Client Requested Quantitation Limit
H - Holding times exceeded
J - Analyte detected below quantitation limits
ND - Not Detected at the Reporting Limit
S - Spike Recovery outside recovery limits
X - Value exceeds Maximum Contaminant Level
B - Analyte detected in associated Method Blank
E - Value above quantitation range
I - Associated internal standard was outside method criteria
M - Manual Integration used to determine area response
R - RPD outside accepted recovery limits
T - TIC(Tentatively identified compound)

Case Narrative

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051600
Report Date: 21-Jun-23

Cooler Receipt Temp: 5.4 °C

An employee of Teklab, Inc. collected the sample(s).

HEN_257_804 data is included in this report. EAH 6/21/23

Locations

Collinsville

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Springfield

Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Kansas City

Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Collinsville Air

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Chicago

Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-015
Client Sample ID: HEN-21R
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**5.92**	ft	1	05/31/2023 11:09	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**42**	NTU	1	05/31/2023 11:09	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-178**	mV	1	05/31/2023 11:09	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1150**	µS/cm	1	05/31/2023 11:09	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**13.2**	°C	1	05/31/2023 11:09	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.12**	mg/L	1	05/31/2023 11:09	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.37**		1	05/31/2023 11:09	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**388**	mg/L	1	06/05/2023 15:36	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 15:36	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		**695**	mg/L	2.5	06/05/2023 11:19	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**91**	mg/L	5	06/02/2023 19:29	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.12**	mg/L	1	06/05/2023 11:38	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**103**	mg/L	5	06/02/2023 19:30	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**0.0274**	mg/L	1	06/05/2023 17:46	206856
Barium	NELAP	0.0007	0.0025		**0.296**	mg/L	1	06/05/2023 17:46	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:46	206856
Boron	NELAP	0.0090	0.0200		**2.32**	mg/L	1	06/05/2023 17:46	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:46	206856
Calcium	NELAP	0.0350	0.100		**121**	mg/L	1	06/05/2023 17:46	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:46	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:46	206856
Lithium	NELAP	0.0019	0.0050		**0.0167**	mg/L	1	06/15/2023 10:59	206856
Magnesium	NELAP	0.0055	0.0500		**41.7**	mg/L	1	06/05/2023 17:46	206856
Molybdenum	NELAP	0.0037	0.010	J	**0.0080**	mg/L	1	06/05/2023 17:46	206856
Potassium	NELAP	0.0400	0.100		**3.01**	mg/L	1	06/05/2023 17:46	206856
Sodium	NELAP	0.0180	0.0500		**49.4**	mg/L	1	06/05/2023 17:46	206856
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.									
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:00	206856
Cobalt	NELAP	0.0001	0.0010		**0.0013**	mg/L	5	06/05/2023 19:00	206856
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:00	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 19:00	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-015
Client Sample ID: HEN-21R
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 10:52	206867

Laboratory Results

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-016
Client Sample ID: HEN-22
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:01

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**18.45**	ft	1	05/31/2023 14:01	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**< 1.0**	NTU	1	05/31/2023 14:01	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**49**	mV	1	05/31/2023 14:01	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**999**	µS/cm	1	05/31/2023 14:01	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**15.7**	°C	1	05/31/2023 14:01	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.43**	mg/L	1	05/31/2023 14:01	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.58**		1	05/31/2023 14:01	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**243**	mg/L	1	06/05/2023 15:42	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 15:42	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**586**	mg/L	1	06/05/2023 11:19	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**123**	mg/L	5	06/02/2023 19:36	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.13**	mg/L	1	06/05/2023 11:41	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**97**	mg/L	5	06/02/2023 19:38	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:47	206856
Barium	NELAP	0.0007	0.0025		**0.0585**	mg/L	1	06/05/2023 17:47	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:47	206856
Boron	NELAP	0.0090	0.0200		**3.44**	mg/L	1	06/05/2023 17:47	206856
Cadmium	NELAP	0.0005	0.0020		**0.0052**	mg/L	1	06/05/2023 17:47	206856
Calcium	NELAP	0.0350	0.100		**87.1**	mg/L	1	06/05/2023 17:47	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:47	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:47	206856
Lithium	NELAP	0.0019	0.0050		**0.0500**	mg/L	1	06/15/2023 11:02	206856
Magnesium	NELAP	0.0055	0.0500		**32.0**	mg/L	1	06/05/2023 17:47	206856
Molybdenum	NELAP	0.0037	0.0100		**0.0829**	mg/L	1	06/05/2023 17:47	206856
Potassium	NELAP	0.400	1.00		**11.4**	mg/L	10	06/08/2023 12:26	206856
Sodium	NELAP	0.0180	0.0500		**55.8**	mg/L	1	06/05/2023 17:47	206856
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.									
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	J	**0.0008**	mg/L	5	06/05/2023 19:05	206856
Cobalt	NELAP	0.0001	0.0010		**0.0024**	mg/L	5	06/05/2023 19:05	206856
Selenium	NELAP	0.0006	0.0010		**0.0157**	mg/L	5	06/05/2023 19:05	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 19:05	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-016
Client Sample ID: HEN-22
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:01

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 10:54	206867

Laboratory Results

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-017
Client Sample ID: HEN-22&D
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:19

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**19.10**	ft	1	05/31/2023 14:19	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**1.8**	NTU	1	05/31/2023 14:19	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-121**	mV	1	05/31/2023 14:19	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1120**	µS/cm	1	05/31/2023 14:19	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**15.9**	°C	1	05/31/2023 14:19	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.41**	mg/L	1	05/31/2023 14:19	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.24**		1	05/31/2023 14:19	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**345**	mg/L	1	06/05/2023 16:00	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:00	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		**640**	mg/L	2.5	06/05/2023 11:20	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**104**	mg/L	5	06/02/2023 19:45	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	**0.09**	mg/L	1	06/05/2023 11:42	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**110**	mg/L	5	06/02/2023 19:46	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:47	206856
Barium	NELAP	0.0007	0.0025		**0.0669**	mg/L	1	06/05/2023 17:47	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:47	206856
Boron	NELAP	0.0090	0.0200		**1.57**	mg/L	1	06/05/2023 17:47	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:47	206856
Calcium	NELAP	0.0350	0.100		**113**	mg/L	1	06/05/2023 17:47	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:47	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:47	206856
Lithium	NELAP	0.0019	0.0050		**0.0150**	mg/L	1	06/15/2023 11:06	206856
Magnesium	NELAP	0.0055	0.0500		**39.4**	mg/L	1	06/05/2023 17:47	206856
Molybdenum	NELAP	0.0037	0.010	J	**0.0054**	mg/L	1	06/05/2023 17:47	206856
Potassium	NELAP	0.0400	0.100		**3.32**	mg/L	1	06/05/2023 17:47	206856
Sodium	NELAP	0.0180	0.0500		**47.2**	mg/L	1	06/05/2023 17:47	206856
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.									
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:11	206856
Cobalt	NELAP	0.0001	0.0010	J	**0.0004**	mg/L	5	06/05/2023 19:11	206856
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:11	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 19:11	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-017
Client Sample ID: HEN-22&D
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:19

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:29	206869

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-018
Client Sample ID: HEN-23
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**16.72**	ft	1	05/31/2023 12:00	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**< 1.0**	NTU	1	05/31/2023 12:00	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-127**	mV	1	05/31/2023 12:00	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1280**	µS/cm	1	05/31/2023 12:00	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**13.0**	°C	1	05/31/2023 12:00	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.55**	mg/L	1	05/31/2023 12:00	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.41**		1	05/31/2023 12:00	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**169**	mg/L	1	06/05/2023 16:08	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:08	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**876**	mg/L	1	06/05/2023 11:20	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		**450**	mg/L	20	06/02/2023 20:15	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.14**	mg/L	1	06/05/2023 11:53	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	8		**55**	mg/L	2	06/02/2023 20:10	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:52	206856
Barium	NELAP	0.0007	0.0025		**0.0481**	mg/L	1	06/05/2023 17:52	206856
Beryllium	NELAP	0.0002	0.0005	J	**0.0003**	mg/L	1	06/05/2023 17:52	206856
Boron	NELAP	0.0090	0.0200		**8.79**	mg/L	1	06/05/2023 17:52	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:52	206856
Calcium	NELAP	0.0350	0.100		**105**	mg/L	1	06/05/2023 17:52	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:52	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:52	206856
Lithium	NELAP	0.0019	0.0050		**< 0.0050**	mg/L	1	06/14/2023 20:27	206856
Magnesium	NELAP	0.0055	0.0500		**77.5**	mg/L	1	06/05/2023 17:52	206856
Molybdenum	NELAP	0.0037	0.0100		**0.0146**	mg/L	1	06/05/2023 17:52	206856
Potassium	NELAP	0.0400	0.100		**3.16**	mg/L	1	06/05/2023 17:52	206856
Sodium	NELAP	0.0180	0.0500		**46.0**	mg/L	1	06/05/2023 17:52	206856

Contamination present in the CCB for Li. Sample results below the reporting limit are reportable per the TNI Standard.
CCV recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:53	206856
Cobalt	NELAP	0.0001	0.0010	J	**0.0004**	mg/L	5	06/05/2023 19:53	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-018
Client Sample ID: HEN-23
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 19:53	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 19:53	206856
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:31	206869

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-019
Client Sample ID: HEN-25
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:59

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**15.94**	ft	1	05/31/2023 12:59	R329806

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-020
Client Sample ID: HEN-26
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:41

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**16.00**	ft	1	05/31/2023 12:41	R329806

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-021
Client Sample ID: HEN-27
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**4.14**	ft	1	05/31/2023 9:15	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**8.2**	NTU	1	05/31/2023 9:15	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-16**	mV	1	05/31/2023 9:15	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1130**	µS/cm	1	05/31/2023 9:15	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**12.0**	°C	1	05/31/2023 9:15	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.05**	mg/L	1	05/31/2023 9:15	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**6.98**		1	05/31/2023 9:15	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**334**	mg/L	1	06/05/2023 17:17	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 17:17	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**658**	mg/L	1	06/05/2023 11:21	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**118**	mg/L	5	06/02/2023 20:36	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.10**	mg/L	1	06/05/2023 12:00	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**107**	mg/L	5	06/02/2023 20:36	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:54	206856
Barium	NELAP	0.0007	0.0025		**0.0837**	mg/L	1	06/05/2023 17:54	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:54	206856
Boron	NELAP	0.0090	0.0200		**2.27**	mg/L	1	06/05/2023 17:54	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:54	206856
Calcium	NELAP	0.0350	0.100		**117**	mg/L	1	06/05/2023 17:54	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:54	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:54	206856
Lithium	NELAP	0.0019	0.0050		**0.0225**	mg/L	1	06/15/2023 11:53	206856
Magnesium	NELAP	0.0055	0.0500		**35.4**	mg/L	1	06/05/2023 17:54	206856
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:54	206856
Potassium	NELAP	0.0400	0.100		**3.60**	mg/L	1	06/05/2023 17:54	206856
Sodium	NELAP	0.0180	0.0500		**54.8**	mg/L	1	06/05/2023 17:54	206856
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.									
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:09	206856
Cobalt	NELAP	0.0001	0.0010		**0.0033**	mg/L	5	06/05/2023 20:09	206856
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:09	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 20:09	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-021
Client Sample ID: HEN-27
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:43	206869

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-022
Client Sample ID: HEN-30
Matrix: GROUNDWATER
Collection Date: 05/30/2023 15:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**6.62**	ft	1	05/30/2023 15:09	R329806

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-023
Client Sample ID: HEN-31
Matrix: GROUNDWATER
Collection Date: 05/30/2023 15:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**6.56**	ft	1	05/30/2023 15:09	R329806

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-024
Client Sample ID: HEN-32
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:46

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**5.22**	ft	1	05/31/2023 9:46	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**6.2**	NTU	1	05/31/2023 9:46	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**86**	mV	1	05/31/2023 9:46	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**997**	µS/cm	1	05/31/2023 9:46	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**11.0**	°C	1	05/31/2023 9:46	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.24**	mg/L	1	05/31/2023 9:46	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**6.92**		1	05/31/2023 9:46	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**329**	mg/L	1	06/05/2023 17:24	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 17:24	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**550**	mg/L	1	06/05/2023 11:22	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		**63**	mg/L	2	06/02/2023 21:13	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.10**	mg/L	1	06/05/2023 12:02	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	8		**70**	mg/L	2	06/02/2023 21:14	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:55	206856
Barium	NELAP	0.0007	0.0025		**0.0410**	mg/L	1	06/05/2023 17:55	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:55	206856
Boron	NELAP	0.0090	0.0200		**0.143**	mg/L	1	06/05/2023 17:55	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:55	206856
Calcium	NELAP	0.0350	0.100	S	**102**	mg/L	1	06/05/2023 17:55	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:55	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:55	206856
Lithium	NELAP	0.0019	0.0050	JS	**0.0029**	mg/L	1	06/14/2023 20:41	206856
Magnesium	NELAP	0.0055	0.0500		**39.5**	mg/L	1	06/05/2023 17:55	206856
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:55	206856
Potassium	NELAP	0.0400	0.100		**2.22**	mg/L	1	06/05/2023 17:55	206856
Sodium	NELAP	0.0180	0.0500		**40.1**	mg/L	1	06/05/2023 17:55	206856

Matrix spike recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable.
Contamination present in the CCB for Li. Sample results below the reporting limit are reportable per the TNI Standard.
CCV recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.
Matrix spike control limits are not applicable due to high sample/spike ratio.

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-024
Client Sample ID: HEN-32
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:46

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:30	206856
Cobalt	NELAP	0.0001	0.0010		**0.0018**	mg/L	5	06/05/2023 20:30	206856
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:30	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 20:30	206856
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:45	206869

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-025
Client Sample ID: HEN-33
Matrix: GROUNDWATER
Collection Date: 05/30/2023 15:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**4.03**	ft	1	05/30/2023 15:15	R329806

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-026
Client Sample ID: HEN-34
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:39

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**8.66**	ft	1	05/31/2023 10:39	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**1.8**	NTU	1	05/31/2023 10:39	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-83**	mV	1	05/31/2023 10:39	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1250**	µS/cm	1	05/31/2023 10:39	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**12.3**	°C	1	05/31/2023 10:39	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.60**	mg/L	1	05/31/2023 10:39	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**6.92**		1	05/31/2023 10:39	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**521**	mg/L	1	06/05/2023 16:19	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:19	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		**845**	mg/L	2.5	06/05/2023 12:07	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		**49**	mg/L	2	06/02/2023 21:21	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.12**	mg/L	1	06/05/2023 12:04	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	8		**71**	mg/L	2	06/02/2023 21:22	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:57	206856
Barium	NELAP	0.0007	0.0025		**0.0995**	mg/L	1	06/05/2023 17:57	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:57	206856
Boron	NELAP	0.0090	0.0200		**0.125**	mg/L	1	06/05/2023 17:57	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:57	206856
Calcium	NELAP	0.0350	0.100		**149**	mg/L	1	06/05/2023 17:57	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:57	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:57	206856
Lithium	NELAP	0.0019	0.0050	J	**0.0032**	mg/L	1	06/14/2023 20:52	206856
Magnesium	NELAP	0.0055	0.0500		**41.8**	mg/L	1	06/05/2023 17:57	206856
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:57	206856
Potassium	NELAP	0.0400	0.100		**0.450**	mg/L	1	06/05/2023 17:57	206856
Sodium	NELAP	0.0180	0.0500		**53.5**	mg/L	1	06/05/2023 17:57	206856

Contamination present in the CCB for Li. Sample results below the reporting limit are reportable per the TNI Standard.
CCV recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:14	206856
Cobalt	NELAP	0.0001	0.0010	J	**0.0007**	mg/L	5	06/05/2023 20:14	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-026
Client Sample ID: HEN-34
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:39

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:14	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 20:14	206856
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:47	206869

Laboratory Results

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-027
Client Sample ID: HEN-35
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**8.30**	ft	1	05/31/2023 10:09	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**2.2**	NTU	1	05/31/2023 10:09	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**105**	mV	1	05/31/2023 10:09	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1650**	µS/cm	1	05/31/2023 10:09	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**12.9**	°C	1	05/31/2023 10:09	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.60**	mg/L	1	05/31/2023 10:09	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**6.88**		1	05/31/2023 10:09	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**249**	mg/L	1	06/05/2023 16:26	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:26	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**1300**	mg/L	1	06/05/2023 12:08	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		**670**	mg/L	20	06/02/2023 21:34	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.11**	mg/L	1	06/05/2023 12:06	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		**32**	mg/L	1	06/02/2023 21:30	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:58	206856
Barium	NELAP	0.0007	0.0025		**0.0381**	mg/L	1	06/05/2023 17:58	206856
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:58	206856
Boron	NELAP	0.0090	0.0200		**12.6**	mg/L	1	06/05/2023 17:58	206856
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:58	206856
Calcium	NELAP	0.0350	0.100		**291**	mg/L	1	06/05/2023 17:58	206856
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:58	206856
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:58	206856
Lithium	NELAP	0.0019	0.0050		**0.0210**	mg/L	1	06/15/2023 11:56	206856
Magnesium	NELAP	0.0055	0.0500		**31.7**	mg/L	1	06/05/2023 17:58	206856
Molybdenum	NELAP	0.0037	0.0100		**0.0798**	mg/L	1	06/05/2023 17:58	206856
Potassium	NELAP	0.400	1.00		**14.0**	mg/L	10	06/08/2023 12:26	206856
Sodium	NELAP	0.0180	0.0500		**30.8**	mg/L	1	06/05/2023 17:58	206856
Sample result exceeds 10 times the method blank contamination for Si. Data is reportable per the TNI Standard.									
Allowable Marginal Exceedance of Si in the laboratory control sample is verified per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:19	206856
Cobalt	NELAP	0.0001	0.0010		**0.0014**	mg/L	5	06/05/2023 20:19	206856
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 20:19	206856
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 20:19	206856

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-027
Client Sample ID: HEN-35
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 12:54	206869

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-028
Client Sample ID: HEN-36
Matrix: GROUNDWATER
Collection Date: 05/30/2023 15:28

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**15.32**	ft	1	05/30/2023 15:28	R329806

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-033
Client Sample ID: HEN-49
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:19

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**21.54**	ft	1	05/31/2023 12:19	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**21**	NTU	1	05/31/2023 12:19	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-19**	mV	1	05/31/2023 12:19	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1080**	µS/cm	1	05/31/2023 12:19	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**14.9**	°C	1	05/31/2023 12:19	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.36**	mg/L	1	05/31/2023 12:19	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.04**		1	05/31/2023 12:19	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**339**	mg/L	1	06/05/2023 16:44	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:44	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**602**	mg/L	1	06/05/2023 12:10	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**84**	mg/L	5	06/02/2023 22:09	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.12**	mg/L	1	06/05/2023 12:19	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**102**	mg/L	5	06/02/2023 22:10	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 16:58	206857
Barium	NELAP	0.0007	0.0025		**0.0711**	mg/L	1	06/05/2023 16:58	206857
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 16:58	206857
Boron	NELAP	0.0090	0.0200		**0.758**	mg/L	1	06/05/2023 16:58	206857
Cadmium	NELAP	0.0005	0.0020	J	**0.0011**	mg/L	1	06/05/2023 16:58	206857
Calcium	NELAP	0.0350	0.100		**115**	mg/L	1	06/05/2023 16:58	206857
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 16:58	206857
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 16:58	206857
Lithium	NELAP	0.0019	0.0050		**0.0202**	mg/L	1	06/15/2023 14:17	206857
Magnesium	NELAP	0.0055	0.0500		**35.9**	mg/L	1	06/05/2023 16:58	206857
Molybdenum	NELAP	0.0037	0.0100		**0.0243**	mg/L	1	06/05/2023 16:58	206857
Potassium	NELAP	0.400	1.00		**12.3**	mg/L	10	06/09/2023 11:08	206857
Sodium	NELAP	0.0180	0.0500		**57.9**	mg/L	1	06/05/2023 16:58	206857
Sample result(s) for Si exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 14:53	206857
Cobalt	NELAP	0.0001	0.0010		**0.0067**	mg/L	5	06/05/2023 14:53	206857
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 14:53	206857
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 14:53	206857

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-033
Client Sample ID: HEN-49
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:19

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 13:01	206869

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-034
Client Sample ID: HEN-50
Matrix: GROUNDWATER
Collection Date: 05/31/2023 13:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**18.25**	ft	1	05/31/2023 13:37	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**1.8**	NTU	1	05/31/2023 13:37	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**34**	mV	1	05/31/2023 13:37	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1050**	µS/cm	1	05/31/2023 13:37	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**15.5**	°C	1	05/31/2023 13:37	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.17**	mg/L	1	05/31/2023 13:37	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.35**		1	05/31/2023 13:37	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**324**	mg/L	1	06/05/2023 16:51	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:51	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		**632**	mg/L	1	06/05/2023 12:10	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**88**	mg/L	5	06/02/2023 22:20	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	**0.09**	mg/L	1	06/05/2023 12:22	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**90**	mg/L	5	06/02/2023 22:20	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 16:59	206857
Barium	NELAP	0.0007	0.0025		**0.0888**	mg/L	1	06/05/2023 16:59	206857
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 16:59	206857
Boron	NELAP	0.0090	0.0200		**0.784**	mg/L	1	06/05/2023 16:59	206857
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 16:59	206857
Calcium	NELAP	0.0350	0.100		**122**	mg/L	1	06/05/2023 16:59	206857
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 16:59	206857
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 16:59	206857
Lithium	NELAP	0.0019	0.0050		**0.0071**	mg/L	1	06/15/2023 14:21	206857
Magnesium	NELAP	0.0055	0.0500		**30.1**	mg/L	1	06/05/2023 16:59	206857
Molybdenum	NELAP	0.0037	0.0100		**0.0411**	mg/L	1	06/05/2023 16:59	206857
Potassium	NELAP	0.0400	0.100		**9.45**	mg/L	1	06/05/2023 16:59	206857
Sodium	NELAP	0.0180	0.0500		**59.7**	mg/L	1	06/05/2023 16:59	206857
Sample result(s) for Si exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 16:12	206857
Cobalt	NELAP	0.0001	0.0010		**0.0051**	mg/L	5	06/05/2023 16:12	206857
Selenium	NELAP	0.0006	0.0010	J	**0.0008**	mg/L	5	06/05/2023 16:12	206857
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 16:12	206857

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-034
Client Sample ID: HEN-50
Matrix: GROUNDWATER
Collection Date: 05/31/2023 13:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 13:03	206869

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-035
Client Sample ID: HEN-51
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**18.50**	ft	1	05/31/2023 11:37	R329806
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		**6.1**	NTU	1	05/31/2023 11:37	R329806
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		**-135**	mV	1	05/31/2023 11:37	R329806
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		**1130**	µS/cm	1	05/31/2023 11:37	R329806
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		**12.9**	°C	1	05/31/2023 11:37	R329806
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		**1.50**	mg/L	1	05/31/2023 11:37	R329806
SW-846 9040B FIELD									
pH	*	0	1.00		**7.24**		1	05/31/2023 11:37	R329806
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**356**	mg/L	1	06/05/2023 16:57	R329791
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/05/2023 16:57	R329791
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		**630**	mg/L	2.5	06/05/2023 12:11	R329833
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		**97**	mg/L	5	06/02/2023 22:55	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.11**	mg/L	1	06/05/2023 12:24	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	2	20		**109**	mg/L	5	06/02/2023 22:55	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**0.0182**	mg/L	1	06/05/2023 17:01	206857
Barium	NELAP	0.0007	0.0025		**0.109**	mg/L	1	06/05/2023 17:01	206857
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:01	206857
Boron	NELAP	0.0090	0.0200		**1.63**	mg/L	1	06/05/2023 17:01	206857
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:01	206857
Calcium	NELAP	0.0350	0.100		**127**	mg/L	1	06/05/2023 17:01	206857
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:01	206857
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:01	206857
Lithium	NELAP	0.0019	0.0050		**0.0714**	mg/L	1	06/15/2023 14:25	206857
Magnesium	NELAP	0.0055	0.0500		**40.2**	mg/L	1	06/05/2023 17:01	206857
Molybdenum	NELAP	0.0037	0.010	J	**0.0067**	mg/L	1	06/05/2023 17:01	206857
Potassium	NELAP	0.0400	0.100		**6.65**	mg/L	1	06/05/2023 17:01	206857
Sodium	NELAP	0.0180	0.0500		**58.9**	mg/L	1	06/05/2023 17:01	206857
Sample result(s) for Si exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 16:17	206857
Cobalt	NELAP	0.0001	0.0010	J	**0.0008**	mg/L	5	06/05/2023 16:17	206857
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 16:17	206857
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 16:17	206857

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-035
Client Sample ID: HEN-51
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 13:05	206869

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-043
Client Sample ID: HEN-YSG-ILRIVER
Matrix: GROUNDWATER
Collection Date: 05/30/2023 13:21

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		**440.50**	ft	1	05/30/2023 13:21	R329806

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051600
Client Project: HEN-23Q2
Report Date: 21-Jun-23
Lab ID: 23051600-044
Client Sample ID: Field Blank
Matrix: GROUNDWATER
Collection Date: 06/01/2023 8:22

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2320 B (TOTAL) 1997, 2011									
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0	0		**1**	mg/L	1	06/06/2023 10:50	R329835
STANDARD METHODS 2320 B 1997, 2011									
Alkalinity, Carbonate (as CaCO3)	NELAP	0	0		**0**	mg/L	1	06/06/2023 10:50	R329835
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	J	**18**	mg/L	1	06/06/2023 11:43	R329904
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		**< 10**	mg/L	1	06/02/2023 23:09	R329716
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**< 0.10**	mg/L	1	06/05/2023 11:01	R329756
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		**< 4**	mg/L	1	06/02/2023 23:11	R329717
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:02	206857
Barium	NELAP	0.0007	0.0025		**< 0.0025**	mg/L	1	06/05/2023 17:02	206857
Beryllium	NELAP	0.0002	0.0005		**< 0.0005**	mg/L	1	06/05/2023 17:02	206857
Boron	NELAP	0.0090	0.0200		**< 0.0200**	mg/L	1	06/05/2023 17:02	206857
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	06/05/2023 17:02	206857
Calcium	NELAP	0.035	0.10	J	**0.044**	mg/L	1	06/05/2023 17:02	206857
Chromium	NELAP	0.0028	0.0050		**< 0.0050**	mg/L	1	06/05/2023 17:02	206857
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	06/05/2023 17:02	206857
Lithium	NELAP	0.0019	0.0050		**< 0.0050**	mg/L	1	06/15/2023 15:05	206857
Magnesium	NELAP	0.0055	0.050	J	**0.025**	mg/L	1	06/05/2023 17:02	206857
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	06/05/2023 17:02	206857
Potassium	NELAP	0.0400	0.100		**< 0.100**	mg/L	1	06/05/2023 17:02	206857
Sodium	NELAP	0.018	0.050	J	**0.025**	mg/L	1	06/05/2023 17:02	206857
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**< 0.0010**	mg/L	5	06/05/2023 17:20	206857
Cobalt	NELAP	0.0001	0.0010		**< 0.0010**	mg/L	5	06/05/2023 17:20	206857
Selenium	NELAP	0.0006	0.0010		**< 0.0010**	mg/L	5	06/05/2023 17:20	206857
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	06/05/2023 17:20	206857
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	06/05/2023 13:10	206869

Sample Summary

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
23051600-015	HEN-21R	Groundwater	6	05/31/2023 11:09
23051600-016	HEN-22	Groundwater	6	05/31/2023 14:01
23051600-017	HEN-22&D	Groundwater	6	05/31/2023 14:19
23051600-018	HEN-23	Groundwater	6	05/31/2023 12:00
23051600-019	HEN-25	Groundwater	6	05/31/2023 12:59
23051600-020	HEN-26	Groundwater	6	05/31/2023 12:41
23051600-021	HEN-27	Groundwater	6	05/31/2023 9:15
23051600-022	HEN-30	Groundwater	1	05/30/2023 15:09
23051600-023	HEN-31	Groundwater	1	05/30/2023 15:09
23051600-024	HEN-32	Groundwater	6	05/31/2023 9:46
23051600-025	HEN-33	Groundwater	1	05/30/2023 15:15
23051600-026	HEN-34	Groundwater	6	05/31/2023 10:39
23051600-027	HEN-35	Groundwater	6	05/31/2023 10:09
23051600-028	HEN-36	Groundwater	1	05/30/2023 15:28
23051600-033	HEN-49	Groundwater	6	05/31/2023 12:19
23051600-034	HEN-50	Groundwater	6	05/31/2023 13:37
23051600-035	HEN-51	Groundwater	6	05/31/2023 11:37
23051600-043	HEN-YSG-ILRIVER	Groundwater	1	05/30/2023 13:21
23051600-044	Field Blank	Groundwater	10	06/01/2023 8:22

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23051600-015A	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 11:09
	Field Elevation Measurements				05/31/2023 11:09
	Standard Methods 2130 B Field				05/31/2023 11:09
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 11:09
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 15:36
	Standard Methods 2320 B 1997, 2011				06/05/2023 15:36
	Standard Methods 2510 B Field				05/31/2023 11:09
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:19
	Standard Methods 2550 B Field				05/31/2023 11:09
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 19:58
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:27
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:27
	Standard Methods 4500-O G Field				05/31/2023 11:09
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:55
	SW-846 9036 (Total)				06/02/2023 19:29
	SW-846 9040B Field				05/31/2023 11:09
	SW-846 9214 (Total)				06/05/2023 11:38
	SW-846 9251 (Total)				06/02/2023 19:30
23051600-015B	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:14
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:14
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:50
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 9:18
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 9:18
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 17:56
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 13:08
	SW-846 9251 (Dissolved)				06/02/2023 13:09
23051600-015C	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:46
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:21
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 10:59
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 19:00
	SW-846 7470A (Total)			06/02/2023 8:28	06/05/2023 10:52
23051600-015D	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:51
23051600-015E	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	SW-846 9060				06/08/2023 22:19
23051600-015F	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	SW-846 9060				06/08/2023 15:21
23051600-016A	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 14:01
	Field Elevation Measurements				05/31/2023 14:01
	Standard Methods 2130 B Field				05/31/2023 14:01
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 14:01
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 15:42
	Standard Methods 2320 B 1997, 2011				06/05/2023 15:42
	Standard Methods 2510 B Field				05/31/2023 14:01
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:19
	Standard Methods 2550 B Field				05/31/2023 14:01
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:41
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:18
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:18
	Standard Methods 4500-O G Field				05/31/2023 14:01
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:55
	SW-846 9036 (Total)				06/02/2023 19:36
	SW-846 9040B Field				05/31/2023 14:01
	SW-846 9214 (Total)				06/05/2023 11:41
	SW-846 9251 (Total)				06/02/2023 19:38
23051600-016B	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:20
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:20
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:42
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:15
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:15
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:45
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 13:15
	SW-846 9251 (Dissolved)				06/02/2023 13:17
23051600-016C	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:47

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:22
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/08/2023 12:26
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:02
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 19:05
	SW-846 7470A (Total)			06/02/2023 8:28	06/05/2023 10:54
23051600-016D	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:52
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/08/2023 12:27
23051600-016E	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	SW-846 9060				06/08/2023 22:26
23051600-016F	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	SW-846 9060				06/08/2023 15:27
23051600-017A	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 14:19
	Field Elevation Measurements				05/31/2023 14:19
	Standard Methods 2130 B Field				05/31/2023 14:19
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 14:19
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:00
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:00
	Standard Methods 2510 B Field				05/31/2023 14:19
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:20
	Standard Methods 2550 B Field				05/31/2023 14:19
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:43
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:33
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:33
	Standard Methods 4500-O G Field				05/31/2023 14:19
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:57
	SW-846 9036 (Total)				06/02/2023 19:45
	SW-846 9040B Field				05/31/2023 14:19
	SW-846 9214 (Total)				06/05/2023 11:42
	SW-846 9251 (Total)				06/02/2023 19:46
23051600-017B	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:38
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:38
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:43
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:17

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:17
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:45
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 13:40
	SW-846 9251 (Dissolved)				06/02/2023 13:41
23051600-017C	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:47
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:23
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:06
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 19:11
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:29
23051600-017D	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:53
23051600-017E	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	SW-846 9060				06/08/2023 22:32
23051600-017F	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	SW-846 9060				06/08/2023 15:34
23051600-018A	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 12:00
	Field Elevation Measurements				05/31/2023 12:00
	Standard Methods 2130 B Field				05/31/2023 12:00
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 12:00
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:08
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:08
	Standard Methods 2510 B Field				05/31/2023 12:00
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:20
	Standard Methods 2550 B Field				05/31/2023 12:00
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 19:58
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:56
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:56
	Standard Methods 4500-O G Field				05/31/2023 12:00
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:57
	SW-846 9036 (Total)				06/02/2023 20:15
	SW-846 9040B Field				05/31/2023 12:00
	SW-846 9214 (Total)				06/05/2023 11:53
	SW-846 9251 (Total)				06/02/2023 20:10

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23051600-018B	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:44
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:44
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:51
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:26
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:26
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:24
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 14:07
	SW-846 9251 (Dissolved)				06/02/2023 14:02
23051600-018C	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:52
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:23
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/14/2023 20:27
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 19:53
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:31
23051600-018D	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:53
23051600-018E	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	SW-846 9060				06/08/2023 22:38
23051600-018F	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:02
23051600-019A	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 12:59
	Field Elevation Measurements				05/31/2023 12:59
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:21
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:44
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 12:01
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 12:01
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:58
	SW-846 9036 (Total)				06/06/2023 23:22
	SW-846 9040B Field				05/31/2023 12:59
	SW-846 9214 (Total)				06/05/2023 11:56
	SW-846 9251 (Total)				06/02/2023 20:23
23051600-019B	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:49

Dates Report

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Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:49
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:45
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:19
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:19
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:46
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/04/2023 1:59
	SW-846 9251 (Dissolved)				06/02/2023 14:15
23051600-019C	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:52
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:24
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:45
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 19:58
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:34
23051600-019D	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:54
23051600-019E	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	SW-846 9060				06/08/2023 23:29
23051600-019F	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:09
23051600-020A	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 12:41
	Field Elevation Measurements				05/31/2023 12:41
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:21
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:47
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:38
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:38
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:58
	SW-846 9036 (Total)				06/02/2023 20:31
	SW-846 9040B Field				05/31/2023 12:41
	SW-846 9214 (Total)				06/05/2023 11:58
	SW-846 9251 (Total)				06/02/2023 20:31
23051600-020B	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:54
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:54
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:48

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Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:22
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:22
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:46
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 14:39
	SW-846 9251 (Dissolved)				06/02/2023 14:39
23051600-020C	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:53
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:35
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:49
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 20:03
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:40
23051600-020D	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:55
23051600-020E	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	SW-846 9060				06/08/2023 23:35
23051600-020F	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:15
23051600-021A	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 9:15
	Field Elevation Measurements				05/31/2023 9:15
	Standard Methods 2130 B Field				05/31/2023 9:15
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 9:15
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 17:17
	Standard Methods 2320 B 1997, 2011				06/05/2023 17:17
	Standard Methods 2510 B Field				05/31/2023 9:15
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:21
	Standard Methods 2550 B Field				05/31/2023 9:15
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 19:59
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:21
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:21
	Standard Methods 4500-O G Field				05/31/2023 9:15
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:59
	SW-846 9036 (Total)				06/02/2023 20:36
	SW-846 9040B Field				05/31/2023 9:15
	SW-846 9214 (Total)				06/05/2023 12:00

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9251 (Total)				06/02/2023 20:36
23051600-021B	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:00
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:00
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:52
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:06
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:06
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 17:58
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 14:41
	SW-846 9251 (Dissolved)				06/02/2023 14:42
23051600-021C	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:54
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:36
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:53
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 20:09
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:43
23051600-021D	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 11:55
23051600-021E	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	SW-846 9060				06/08/2023 23:41
23051600-021F	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:21
23051600-022A	HEN-30	05/30/2023 15:09	06/01/2023 12:08		
	Field Elevation Measurements				05/30/2023 15:09
23051600-023A	HEN-31	05/30/2023 15:09	06/01/2023 12:08		
	Field Elevation Measurements				05/30/2023 15:09
23051600-024A	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 9:46
	Field Elevation Measurements				05/31/2023 9:46
	Standard Methods 2130 B Field				05/31/2023 9:46
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 9:46
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 17:24
	Standard Methods 2320 B 1997, 2011				06/05/2023 17:24
	Standard Methods 2510 B Field				05/31/2023 9:46
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 11:22
	Standard Methods 2550 B Field				05/31/2023 9:46

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 19:59
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:24
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:24
	Standard Methods 4500-O G Field				05/31/2023 9:46
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 16:59
	SW-846 9036 (Total)				06/02/2023 21:13
	SW-846 9040B Field				05/31/2023 9:46
	SW-846 9214 (Total)				06/05/2023 12:02
	SW-846 9251 (Total)				06/02/2023 21:14
23051600-024B	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:27
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 11:27
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:52
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:08
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:08
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 17:58
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 14:50
	SW-846 9251 (Dissolved)				06/02/2023 14:50
23051600-024C	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:55
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:37
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/14/2023 20:41
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 20:30
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:45
23051600-024D	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 12:08
23051600-024E	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	SW-846 9060				06/08/2023 23:48
23051600-024F	HEN-32	05/31/2023 9:46	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:28
23051600-025A	HEN-33	05/30/2023 15:15	06/01/2023 12:08		
	Field Elevation Measurements				05/30/2023 15:15
23051600-026A	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 10:39
	Field Elevation Measurements				05/31/2023 10:39

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 2130 B Field				05/31/2023 10:39
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 10:39
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:19
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:19
	Standard Methods 2510 B Field				05/31/2023 10:39
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 12:07
	Standard Methods 2550 B Field				05/31/2023 10:39
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 19:59
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:48
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:48
	Standard Methods 4500-O G Field				05/31/2023 10:39
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:24
	SW-846 9036 (Total)				06/02/2023 21:21
	SW-846 9040B Field				05/31/2023 10:39
	SW-846 9214 (Total)				06/05/2023 12:04
	SW-846 9251 (Total)				06/02/2023 21:22
23051600-026B	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:06
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:06
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:53
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:41
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:41
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 17:59
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 14:58
	SW-846 9251 (Dissolved)				06/02/2023 14:58
23051600-026C	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:57
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:39
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/14/2023 20:52
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 20:14
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:47
23051600-026D	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 12:08
23051600-026E	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	SW-846 9060				06/09/2023 0:07

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23051600-026F	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:47
23051600-027A	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 10:09
	Field Elevation Measurements				05/31/2023 10:09
	Standard Methods 2130 B Field				05/31/2023 10:09
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 10:09
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:26
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:26
	Standard Methods 2510 B Field				05/31/2023 10:09
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 12:08
	Standard Methods 2550 B Field				05/31/2023 10:09
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 20:00
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:50
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 8:50
	Standard Methods 4500-O G Field				05/31/2023 10:09
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:25
	SW-846 9036 (Total)				06/02/2023 21:34
	SW-846 9040B Field				05/31/2023 10:09
	SW-846 9214 (Total)				06/05/2023 12:06
	SW-846 9251 (Total)				06/02/2023 21:30
23051600-027B	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:14
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:14
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:53
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:43
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 8:43
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:00
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/04/2023 2:01
	SW-846 9251 (Dissolved)				06/02/2023 15:06
23051600-027C	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/05/2023 17:58
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/07/2023 9:40
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/08/2023 12:26
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:35	06/15/2023 11:56

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:35	06/05/2023 20:19
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 12:54
23051600-027D	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/07/2023 12:09
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:34	06/08/2023 12:28
23051600-027E	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	SW-846 9060				06/12/2023 13:24
23051600-027F	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	SW-846 9060				06/08/2023 17:53
23051600-028A	HEN-36	05/30/2023 15:28	06/01/2023 12:08		
	Field Elevation Measurements				05/30/2023 15:28
23051600-033A	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 12:19
	Field Elevation Measurements				05/31/2023 12:19
	Standard Methods 2130 B Field				05/31/2023 12:19
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 12:19
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:44
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:44
	Standard Methods 2510 B Field				05/31/2023 12:19
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 12:10
	Standard Methods 2550 B Field				05/31/2023 12:19
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:49
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:40
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:40
	Standard Methods 4500-O G Field				05/31/2023 12:19
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:27
	SW-846 9036 (Total)				06/02/2023 22:09
	SW-846 9040B Field				05/31/2023 12:19
	SW-846 9214 (Total)				06/05/2023 12:19
	SW-846 9251 (Total)				06/02/2023 22:10
23051600-033B	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:31
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:31
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:54
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:28
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:28

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:24
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 15:46
	SW-846 9251 (Dissolved)				06/02/2023 15:46
23051600-033C	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/05/2023 16:58
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/09/2023 11:08
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/09/2023 11:50
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/15/2023 14:17
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:36	06/05/2023 14:53
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 13:01
23051600-033D	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/06/2023 16:14
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/07/2023 9:48
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/08/2023 11:52
23051600-033E	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	SW-846 9060				06/09/2023 1:23
23051600-033F	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	SW-846 9060				06/08/2023 18:50
23051600-034A	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 13:37
	Field Elevation Measurements				05/31/2023 13:37
	Standard Methods 2130 B Field				05/31/2023 13:37
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 13:37
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:51
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:51
	Standard Methods 2510 B Field				05/31/2023 13:37
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 12:10
	Standard Methods 2550 B Field				05/31/2023 13:37
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:50
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 12:03
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 12:03
	Standard Methods 4500-O G Field				05/31/2023 13:37
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:28
	SW-846 9036 (Total)				06/02/2023 22:20
	SW-846 9040B Field				05/31/2023 13:37

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	SW-846 9214 (Total)				06/05/2023 12:22
	SW-846 9251 (Total)				06/02/2023 22:20
23051600-034B	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:37
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:37
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:51
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:24
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 11:24
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:25
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 15:56
	SW-846 9251 (Dissolved)				06/02/2023 15:57
23051600-034C	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/05/2023 16:59
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/09/2023 11:51
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/15/2023 14:21
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:36	06/05/2023 16:12
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 13:03
23051600-034D	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/06/2023 16:15
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/07/2023 9:49
23051600-034E	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	SW-846 9060				06/09/2023 1:29
23051600-034F	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	SW-846 9060				06/08/2023 18:56
23051600-035A	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	Ferrous Iron by CHEMets Kit				05/31/2023 11:37
	Field Elevation Measurements				05/31/2023 11:37
	Standard Methods 2130 B Field				05/31/2023 11:37
	Standard Methods 18th Ed. 2580 B Field				05/31/2023 11:37
	Standard Methods 2320 B (Total) 1997, 2011				06/05/2023 16:57
	Standard Methods 2320 B 1997, 2011				06/05/2023 16:57
	Standard Methods 2510 B Field				05/31/2023 11:37
	Standard Methods 2540 C (Total) 1997, 2011				06/05/2023 12:11
	Standard Methods 2550 B Field				05/31/2023 11:37
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/01/2023 20:02
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:32

Dates Report

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 9:32
	Standard Methods 4500-O G Field				05/31/2023 11:37
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:29
	SW-846 9036 (Total)				06/02/2023 22:55
	SW-846 9040B Field				05/31/2023 11:37
	SW-846 9214 (Total)				06/05/2023 12:24
	SW-846 9251 (Total)				06/02/2023 22:55
23051600-035B	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:43
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/05/2023 12:43
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/01/2023 19:55
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 9:22
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 9:22
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:25
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 16:34
	SW-846 9251 (Dissolved)				06/02/2023 16:34
23051600-035C	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/05/2023 17:01
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/09/2023 11:53
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/15/2023 14:25
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:36	06/05/2023 16:17
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 13:05
23051600-035D	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/06/2023 16:16
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/07/2023 9:49
23051600-035E	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	SW-846 9060				06/09/2023 1:35
23051600-035F	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	SW-846 9060				06/08/2023 19:03
23051600-043A	HEN-YSG-ILRIVER	05/30/2023 13:21	06/01/2023 12:08		
	Field Elevation Measurements				05/30/2023 13:21
23051600-044A	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	Standard Methods 2320 B 1997, 2011				06/06/2023 10:50
	Standard Methods 2320 B (Total) 1997, 2011				06/06/2023 10:50
	Standard Methods 2320 B 1997, 2011				06/06/2023 10:50

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 2540 C (Total) 1997, 2011				06/06/2023 11:43
	Standard Methods 4500-NO2 B (Total) 2000, 2011				06/02/2023 11:52
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:44
	Standard Methods 4500-NO3 F (Total) 2000, 2011				06/02/2023 10:44
	Standard Methods 4500-P E 1999				06/01/2023 16:00
	Standard Methods 4500-P E 1999, 2011				06/01/2023 17:30
	SW-846 9036 (Total)				06/02/2023 23:09
	SW-846 9214 (Total)				06/05/2023 11:01
	SW-846 9251 (Total)				06/02/2023 23:11
23051600-044B	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	EPA 314.0				06/14/2023 17:15
23051600-044C	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/06/2023 10:53
	Standard Methods 2320 B (Dissolved) 1997, 2011				06/06/2023 10:53
	Standard Methods 4500-NO2 B (Dissolved) 2000, 2011				06/02/2023 11:52
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 10:46
	Standard Methods 4500-NO3 F (Dissolved) 2000, 2011				06/02/2023 10:46
	Standard Methods 4500-P E (Dissolved) 1999, 2011				06/01/2023 18:26
	Standard Methods 4500-P E (Dissolved) 1999				06/01/2023 16:00
	SW-846 9036 (Dissolved)				06/02/2023 16:49
	SW-846 9214 (Dissolved)				06/05/2023 11:04
	SW-846 9251 (Dissolved)				06/02/2023 16:50
23051600-044D	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/05/2023 17:02
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/12/2023 17:15	06/14/2023 17:41
	SW-846 3005A, 6010B, Metals by ICP (Total)			06/01/2023 18:36	06/15/2023 15:05
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			06/01/2023 18:36	06/05/2023 17:20
	SW-846 7470A (Total)			06/02/2023 8:31	06/05/2023 13:10
23051600-044E	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/06/2023 16:20
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			06/02/2023 8:42	06/07/2023 9:55
	SW-846 3005A, 6020A, Metals by ICPMS (Dissolved)			06/02/2023 8:42	06/05/2023 16:22
	SW-846 7470A (Dissolved)			06/02/2023 8:31	06/05/2023 13:12
23051600-044F	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 9012A (Total)			06/02/2023 17:45	06/05/2023 15:08
23051600-044G	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 9060				06/12/2023 13:31

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9066 (Total)				06/06/2023 10:52
23051600-044H	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 9060				06/08/2023 20:25
23051600-044I	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	Standard Methods 4500-NH3 G (Total) 1997, 2011				06/05/2023 10:33
23051600-044J	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				06/01/2023 20:52

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 2510 B FIELD

Batch R329806 **SampType:** LCS Units **µS/cm**

SampID: LCS-R329806

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		**1430**	1412	0	101.2	90	110	05/31/2023
Spec. Conductance, Field	*	0		**1410**	1412	0	100.1	90	110	05/31/2023
Spec. Conductance, Field	*	0		**1410**	1412	0	100.1	90	110	06/01/2023
Spec. Conductance, Field	*	0		**1410**	1412	0	100.1	90	110	06/01/2023

SW-846 9040B FIELD

Batch R329806 **SampType:** LCS Units

SampID: LCS-R329806

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		**7.09**	7.000	0	101.3	98.57	101.4	05/31/2023
pH	*	1.00		**7.08**	7.000	0	101.1	98.57	101.4	05/31/2023
pH	*	1.00		**7.10**	7.000	0	101.4	98.57	101.4	06/01/2023
pH	*	1.00		**7.07**	7.000	0	101.0	98.57	101.4	06/01/2023

STANDARD METHODS 2320 B 1997, 2011

Batch R329791 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**0**						06/05/2023

Batch R329791 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**232**	233.0	0	99.6	90	110	06/05/2023

Batch R329835 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**0**						06/06/2023

Batch R329835 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)		0		**235**	233.0	0	100.9	90	110	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R329833 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	06/05/2023
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	06/05/2023

Batch R329833 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**906**	1000	0	90.6	90	110	06/05/2023
Total Dissolved Solids		20		**926**	1000	0	92.6	90	110	06/05/2023

Batch R329833 **SampType:** DUP Units **mg/L** RPD Limit: **10**
SampID: 23051600-017ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50		**615**				640.0	3.98	06/05/2023

Batch R329833 **SampType:** DUP Units **mg/L** RPD Limit: **10**
SampID: 23051600-031ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**492**				464.0	5.86	06/05/2023

Batch R329904 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	06/06/2023

Batch R329904 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		**948**	1000	0	94.8	90	110	06/06/2023

Batch R329904 **SampType:** DUP Units **mg/L** RPD Limit: **10**
SampID: 23051600-039ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**588**				538.0	8.88	06/06/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

STANDARD METHODS 4500-NH3 G (TOTAL) 1997, 2011

Batch R329804 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**< 0.10**	0.0270	0	0	-100	100	06/05/2023

Batch R329804 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**1.05**	1.000	0	104.7	90	110	06/05/2023

Batch R329804 **SampType:** MS Units **mg/L**
SampID: 23051600-009HMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**1.83**	2.000	0	91.6	90	110	06/05/2023

Batch R329804 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-009HMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Ammonia (as N)		0.10		**1.83**	2.000	0	91.4	1.832	0.16	06/05/2023

STANDARD METHODS 4500-NO2 B (DISSOLVED) 2000, 2011

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-009BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.8	85	115	06/01/2023

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-009BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	106.0	0.5290	0.19	06/01/2023

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-010BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.6	85	115	06/01/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 4500-NO2 B (DISSOLVED) 2000, 2011

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-010BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.8	0.5280	0.19	06/01/2023

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-014CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.45**	0.5000	0	89.8	85	115	06/02/2023

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-014CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.46**	0.5000	0	92.2	0.4490	2.64	06/02/2023

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-015BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.2	85	115	06/01/2023

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-015BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.2	0.5260	0.00	06/01/2023

Batch R329713 **SampType:** MS Units **mg/L**
SampID: 23051600-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.52**	0.5000	0	104.4	85	115	06/02/2023

Batch R329713 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.53**	0.5000	0	105.8	0.5220	1.33	06/02/2023

Batch R329713 **SampType:** MS Units **mg/L**
SampID: 23051600-006CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.70**	0.5000	0.1790	103.8	85	115	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 4500-NO2 B (DISSOLVED) 2000, 2011

Batch R329713 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-006CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.70**	0.5000	0.1790	104.4	0.6980	0.43	06/02/2023

Batch R329713 **SampType:** MS Units **mg/L**
SampID: 23051600-011BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.52**	0.5000	0	105.0	85	115	06/02/2023

Batch R329713 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-011BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.52**	0.5000	0	105.0	0.5250	0.00	06/02/2023

STANDARD METHODS 4500-NO2 B (TOTAL) 2000, 2011

Batch R329648 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**< 0.05**	0.0250	0	0	-100	100	06/01/2023

Batch R329648 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.25		**0.66**	0.6510	0	102.2	90	110	06/01/2023

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-004AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.48**	0.5000	0	95.4	85	115	06/02/2023

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-004AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05	SR	**0.42**	0.5000	0	84.6	0.4770	12.00	06/02/2023

Quality Control Results

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Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

STANDARD METHODS 4500-NO2 B (TOTAL) 2000, 2011

Batch R329648 **SampType:** MS Units **mg/L**
SampID: 23051600-033AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.49**	0.5000	0	97.6	85	115	06/02/2023

Batch R329648 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-033AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**0.46**	0.5000	0	92.8	0.4880	5.04	06/02/2023

Batch R329713 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.05		**< 0.05**	0.0250	0	0	-100	100	06/02/2023

Batch R329713 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrite (as N)		0.25		**0.68**	0.6510	0	105.2	90	110	06/02/2023

STANDARD METHODS 4500-NO3 F (DISSOLVED) 2000, 2011

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-002CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**4.98**	2.500	2.705	90.9	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-002CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**5.03**	2.500	2.705	92.9	4.977	1.02	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-032BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**6.14**	2.500	3.849	91.6	85	115	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 4500-NO3 F (DISSOLVED) 2000, 2011

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-032BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**6.11**	2.500	3.849	90.5	6.140	0.46	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-036BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**6.15**	2.500	3.884	90.6	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-036BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.500		**6.08**	2.500	3.884	87.9	6.148	1.10	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-040BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.100		**0.763**	0.5000	0.2830	96.0	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-040BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.100		**0.744**	0.5000	0.2830	92.2	0.7630	2.52	06/02/2023

STANDARD METHODS 4500-NO3 F (TOTAL) 2000, 2011

Batch R329727 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate (as N)		0.050		**< 0.050**						06/02/2023
Nitrogen, Nitrate-Nitrite (as N)		0.050		**< 0.050**	0.0090	0	0	-100	100	06/02/2023

Batch R329727 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.050		**0.469**	0.5000	0	93.8	90	110	06/02/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

STANDARD METHODS 4500-NO3 F (TOTAL) 2000, 2011

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-007AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		1.00		**13.8**	5.000	9.093	94.9	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-007AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		1.00		**13.7**	5.000	9.093	92.4	13.84	0.94	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-011AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		1.00		**10.6**	5.000	6.001	91.2	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-011AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		1.00		**10.4**	5.000	6.001	88.0	10.56	1.52	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-027AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250		**4.14**	1.250	2.934	96.4	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-027AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.250	S	**3.99**	1.250	2.934	84.6	4.139	3.64	06/02/2023

Batch R329727 **SampType:** MS Units **mg/L**
SampID: 23051600-035AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.050		**0.245**	0.2500	0.01700	91.2	85	115	06/02/2023

Batch R329727 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-035AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Nitrogen, Nitrate-Nitrite (as N)		0.050		**0.250**	0.2500	0.01700	93.2	0.2450	2.02	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 4500-P E 1999, 2011

Batch R329742 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**< 0.010**	0.0020	0	0	-100	100	06/01/2023

Batch R329742 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.107**	0.1000	0	107.0	90	110	06/01/2023

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.061**	0.0500	0.009000	104.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.056**	0.0500	0.009000	94.0	0.06100	8.55	06/01/2023

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-007AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.080**	0.0500	0.03000	100.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-007AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.083**	0.0500	0.03000	106.0	0.08000	3.68	06/01/2023

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-009AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.062**	0.0500	0.01600	92.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-009AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.061**	0.0500	0.01600	90.0	0.06200	1.63	06/01/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

STANDARD METHODS 4500-P E 1999, 2011

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-010AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.049**	0.0500	0	98.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-010AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.054**	0.0500	0	108.0	0.04900	9.71	06/01/2023

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-013AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.067**	0.0500	0.01600	102.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-013AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.062**	0.0500	0.01600	92.0	0.06700	7.75	06/01/2023

Batch R329742 **SampType:** MS Units **mg/L**
SampID: 23051600-014AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.113**	0.0500	0.05900	108.0	85	115	06/01/2023

Batch R329742 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-014AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.116**	0.0500	0.05900	114.0	0.1130	2.62	06/01/2023

Batch R329746 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**< 0.010**	0.0020	0	0	-100	100	06/02/2023

Batch R329746 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.103**	0.1000	0	103.0	90	110	06/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

STANDARD METHODS 4500-P E 1999, 2011

Batch R329746 **SampType:** MS Units **mg/L**
SampID: 23051600-005AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010	S	**0.047**	0.0500	0.02000	54.0	85	115	06/02/2023

Batch R329746 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-005AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010	SR	**0.052**	0.0500	0.02000	64.0	0.04700	10.10	06/02/2023

Batch R329746 **SampType:** MS Units **mg/L**
SampID: 23051600-006AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.044**	0.0500	0	88.0	85	115	06/02/2023

Batch R329746 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-006AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phosphorus, Orthophosphate (as P)	*	0.010		**0.048**	0.0500	0	96.0	0.04400	8.70	06/02/2023

SW-846 9012A (TOTAL)

Batch 206887 **SampType:** MBLK Units **mg/L**
SampID: MBLK 230602 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**< 0.005**	0.0015	0	0	-100	100	06/05/2023

Batch 206887 **SampType:** LCS Units **mg/L**
SampID: LCS 230602 TCN1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.027**	0.0250	0	106.7	90	110	06/05/2023

Batch 206887 **SampType:** MS Units **mg/L**
SampID: 23051600-001EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.033**	0.0250	0.006700	104.9	75	125	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9012A (TOTAL)

Batch 206887 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-001EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide		0.005		**0.031**	0.0250	0.006700	97.2	0.03292	6.04	06/05/2023

Batch 206887 **SampType:** MS Units **mg/L**
SampID: 23051600-010EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cyanide		0.005		**0.027**	0.0250	0	107.9	75	125	06/05/2023

Batch 206887 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-010EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Cyanide		0.005		**0.027**	0.0250	0	108.6	0.02696	0.70	06/05/2023

SW-846 9036 (DISSOLVED)

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-004BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**164**	100.0	77.76	86.1	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-004BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**169**	100.0	77.76	91.4	163.9	3.16	06/02/2023

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-017BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**194**	100.0	101.8	92.1	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-017BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**198**	100.0	101.8	96.5	193.9	2.24	06/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9036 (DISSOLVED)

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-034BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50	S	**172**	100.0	89.14	83.0	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-034BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**182**	100.0	89.14	92.8	172.2	5.54	06/02/2023

Batch R329893 **SampType:** MS Units **mg/L**
SampID: 23051600-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20	E	**130**	40.00	94.54	88.4	85	115	06/06/2023

Batch R329893 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		20	E	**132**	40.00	94.54	94.5	129.9	1.85	06/06/2023

Batch R329893 **SampType:** MS Units **mg/L**
SampID: 23051600-030CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**186**	100.0	87.30	98.4	85	115	06/07/2023

Batch R329893 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-030CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**184**	100.0	87.30	96.4	185.7	1.07	06/07/2023

SW-846 9036 (TOTAL)

Batch R329716 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	06/02/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9036 (TOTAL)

Batch R329716 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**20**	20.00	0	100.8	90	110	06/02/2023

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-008AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**165**	100.0	79.56	85.2	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-008AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**165**	100.0	79.56	85.5	164.8	0.18	06/02/2023

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-013AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		100		**313**	200.0	142.9	85.1	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-013AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		100		**320**	200.0	142.9	88.5	313.2	2.15	06/02/2023

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-021AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**211**	100.0	117.8	93.3	85	115	06/02/2023

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-021AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**206**	100.0	117.8	87.9	211.1	2.61	06/02/2023

Batch R329716 **SampType:** MS Units **mg/L**
SampID: 23051600-034AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**180**	100.0	88.17	92.3	85	115	06/02/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9036 (TOTAL)

Batch R329716 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-034AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**184**	100.0	88.17	95.7	180.5	1.84	06/02/2023

Batch R329763 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	06/03/2023

Batch R329763 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**18**	20.00	0	91.2	90	110	06/03/2023

Batch R329780 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	06/05/2023

Batch R329780 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**19**	20.00	0	93.0	90	110	06/05/2023

Batch R329893 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	06/06/2023

Batch R329893 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**19**	20.00	0	93.8	90	110	06/06/2023

Batch R329893 **SampType:** MS Units **mg/L**
SampID: 23051600-030AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**180**	100.0	86.98	92.6	85	115	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9036 (TOTAL)

Batch R329893 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-030AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**183**	100.0	86.98	95.9	179.6	1.84	06/06/2023

Batch R329925 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	6.140	0	0	-100	100	06/07/2023

Batch R329925 **SampType:** MBLK Units **mg/L**
SampID: MBLK 230531

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**< 10**	7.620	0	0	-100	100	06/07/2023

Batch R329925 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		**18**	20.00	0	91.0	90	110	06/07/2023

Batch R329925 **SampType:** MS Units **mg/L**
SampID: 23051600-006AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		**224**	100.0	134.2	90.0	85	115	06/08/2023

Batch R329925 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-006AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		**233**	100.0	134.2	98.4	224.2	3.65	06/08/2023

SW-846 9060

Batch R329995 **SampType:** MBLK Units **mg/L**
SampID: Filter Blank

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**< 1.0**	0.4500	0	0	-100	100	06/08/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9060

Batch R329995 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**< 1.0**	0.4500	0	0	-100	100	06/08/2023

Batch R329995 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**5.1**	5.000	0	102.0	90	110	06/08/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-002GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**6.8**	5.000	2.020	95.8	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-002GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**6.8**	5.000	2.020	95.0	6.810	0.59	06/08/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-002HMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Dissolved Organic Carbon		1.0		**7.5**	5.000	2.750	95.4	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-002HMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Dissolved Organic Carbon		1.0		**7.5**	5.000	2.750	95.4	7.520	0.00	06/08/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-010GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Dissolved Organic Carbon		1.0		**9.2**	5.000	4.140	101.0	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-010GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Dissolved Organic Carbon		1.0		**9.0**	5.000	4.140	98.2	9.190	1.54	06/08/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9060

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-011EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**7.3**	5.000	2.370	98.2	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-011EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**7.3**	5.000	2.370	98.0	7.280	0.14	06/08/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-018EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**7.8**	5.000	3.200	92.0	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-018EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**8.1**	5.000	3.200	98.6	7.800	4.14	06/08/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-024EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**5.9**	5.000	0.9700	98.0	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-024EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**5.8**	5.000	0.9700	96.2	5.870	1.55	06/09/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-024FMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Dissolved Organic Carbon		1.0		**5.6**	5.000	0.9100	94.4	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-024FMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Dissolved Organic Carbon		1.0		**5.7**	5.000	0.9100	95.8	5.630	1.24	06/08/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9060

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-031EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**6.2**	5.000	1.240	99.8	85	115	06/09/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-031EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**6.1**	5.000	1.240	97.8	6.230	1.62	06/09/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-036FMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Dissolved Organic Carbon		1.0		**6.7**	5.000	1.670	101.4	85	115	06/09/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-036FMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Dissolved Organic Carbon		1.0		**6.7**	5.000	1.670	99.8	6.740	1.19	06/09/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-040EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**8.2**	5.000	2.990	104.4	85	115	06/09/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-040EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)		1.0		**8.1**	5.000	2.990	101.8	8.210	1.60	06/09/2023

Batch R329995 **SampType:** MS Units **mg/L**
SampID: 23051600-040FMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Dissolved Organic Carbon		1.0		**8.1**	5.000	2.700	107.2	85	115	06/08/2023

Batch R329995 **SampType:** MSD Units **mg/L** RPD Limit: **10**
SampID: 23051600-040FMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Dissolved Organic Carbon		1.0		**7.8**	5.000	2.700	103.0	8.060	2.64	06/08/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9060

Batch R330146 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**< 1.0**	0.4500	0	0	-100	100	06/12/2023

Batch R330146 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**4.8**	5.000	0	95.8	90	110	06/12/2023

Batch R330486 **SampType:** MBLK Units **mg/L**
SampID: Filter Blank

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**< 1.0**	0.4500	0	0	-100	100	06/20/2023

Batch R330486 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**< 1.0**	0.4500	0	0	-100	100	06/19/2023

Batch R330486 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)		1.0		**4.9**	5.000	0	97.6	90	110	06/19/2023

SW-846 9066 (TOTAL)

Batch R329815 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		0.005		**< 0.005**	0.0028	0	0	-100	100	06/06/2023

Batch R329815 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		0.005		**0.052**	0.0500	0	103.3	90	110	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9066 (TOTAL)

Batch R329815 **SampType:** MS Units **µg/L**
SampID: 23051600-007GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Phenols		5	S	**27**	50.00	8.780	37.3	85	115	06/06/2023

Batch R329815 **SampType:** MSD Units **µg/L** RPD Limit: **15**
SampID: 23051600-007GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Phenols		5	SR	**9**	50.00	8.780	0.7	27.45	100.33	06/06/2023

SW-846 9214 (DISSOLVED)

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-006CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.96**	2.000	0.08500	93.8	75	125	06/05/2023

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-006CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**1.85**	2.000	0.08500	88.2	1.961	5.93	06/05/2023

SW-846 9214 (TOTAL)

Batch R329756 **SampType:** MBLK Units **mg/L**
SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**< 0.10**	0.0500	0	0	-100	100	06/05/2023

Batch R329756 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**0.93**	1.000	0	92.8	90	110	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-007AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.81**	2.000	0.08200	86.4	75	125	06/05/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9214 (TOTAL)

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-007AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**1.83**	2.000	0.08200	87.4	1.809	1.15	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-011AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.08**	2.000	0.2260	92.6	75	125	06/05/2023

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-011AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.02**	2.000	0.2260	89.6	2.077	2.93	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-017AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.76**	2.000	0.09300	83.3	75	125	06/05/2023

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-017AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**1.86**	2.000	0.09300	88.4	1.759	5.69	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-031AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.89**	2.000	0.1720	85.9	75	125	06/05/2023

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-031AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**1.93**	2.000	0.1720	88.0	1.890	2.25	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-036AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.03**	2.000	0.2520	88.8	75	125	06/05/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9214 (TOTAL)

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-036AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.12**	2.000	0.2520	93.2	2.027	4.30	06/05/2023

Batch R329756 **SampType:** MS Units **mg/L**
SampID: 23051600-037AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**1.96**	2.000	0.2020	87.7	75	125	06/05/2023

Batch R329756 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-037AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**1.94**	2.000	0.2020	86.7	1.956	1.03	06/05/2023

SW-846 9251 (DISSOLVED)

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-004BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		40		**270**	200.0	87.26	91.3	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-004BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		40		**272**	200.0	87.26	92.4	269.9	0.77	06/02/2023

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-017BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**198**	100.0	104.2	94.2	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-017BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**201**	100.0	104.2	97.2	198.4	1.50	06/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9251 (DISSOLVED)

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-034BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**177**	100.0	90.22	86.4	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-034BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**184**	100.0	90.22	94.0	176.6	4.19	06/02/2023

Batch R329817 **SampType:** MS Units **mg/L**
SampID: 23051600-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8	E	**104**	40.00	64.10	98.9	85	115	06/06/2023

Batch R329817 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		8	E	**101**	40.00	64.10	91.6	103.7	2.87	06/06/2023

Batch R329848 **SampType:** MS Units **mg/L**
SampID: 23051600-030CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**225**	100.0	125.0	100.4	85	115	06/07/2023

Batch R329848 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-030CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**224**	100.0	125.0	98.9	225.5	0.67	06/07/2023

SW-846 9251 (TOTAL)

Batch R329717 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 9251 (TOTAL)

Batch R329717 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**21**	20.00	0	104.2	90	110	06/02/2023

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-008AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**184**	100.0	91.20	93.1	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-008AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**179**	100.0	91.20	88.2	184.3	2.70	06/02/2023

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-013AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**183**	100.0	88.78	94.4	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-013AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**180**	100.0	88.78	90.9	183.2	1.96	06/02/2023

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-021AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**198**	100.0	106.7	91.5	85	115	06/02/2023

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-021AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**193**	100.0	106.7	86.5	198.2	2.56	06/02/2023

Batch R329717 **SampType:** MS Units **mg/L**
SampID: 23051600-034AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**187**	100.0	90.31	96.3	85	115	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 9251 (TOTAL)

Batch R329717 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-034AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**185**	100.0	90.31	95.0	186.6	0.70	06/02/2023

Batch R329720 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	06/03/2023

Batch R329720 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**20**	20.00	0	101.7	90	110	06/03/2023

Batch R329817 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	06/05/2023

Batch R329817 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**20**	20.00	0	100.6	90	110	06/05/2023

Batch R329848 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	06/06/2023

Batch R329848 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**19**	20.00	0	94.4	90	110	06/06/2023

Batch R329848 **SampType:** MS Units **mg/L**
SampID: 23051600-006AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**249**	100.0	148.5	100.6	85	115	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 9251 (TOTAL)

Batch R329848 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-006AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20	E	**253**	100.0	148.5	104.0	249.1	1.38	06/06/2023

Batch R329848 **SampType:** MS Units **mg/L**
SampID: 23051600-030AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		**221**	100.0	123.3	97.9	85	115	06/06/2023

Batch R329848 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-030AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		**220**	100.0	123.3	96.7	221.2	0.57	06/06/2023

Batch R329955 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**< 4**	0.5000	0	0	-100	100	06/07/2023

Batch R329955 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		**19**	20.00	0	96.2	90	110	06/07/2023

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206871** **SampType:** **MBLK** Units **mg/L**
SampID: MBLK-206871

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/07/2023
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	06/07/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/07/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/07/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/07/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/07/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/07/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/07/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/07/2023
Cobalt		0.0050		**< 0.0050**	0.0020	0	0	-100	100	06/07/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/07/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/07/2023
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	06/07/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/07/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/07/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/07/2023
Nickel		0.0050		**< 0.0050**	0.0016	0	0	-100	100	06/08/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/07/2023
Selenium		0.0400		**< 0.0400**	0.0170	0	0	-100	100	06/07/2023
Silicon	*	0.0500		**< 0.0500**	0.0400	0	0	-100	100	06/07/2023
Silver		0.0070		**< 0.0070**	0.0027	0	0	-100	100	06/07/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/07/2023
Thallium		0.0500		**< 0.0500**	0.0111	0	0	-100	100	06/07/2023
Vanadium		0.0100		**< 0.0100**	0.0009	0	0	-100	100	06/07/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/07/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206871** **SampType:** **LCS** Units **mg/L**

SampID: LCS-206871

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.71**	2.000	0	85.4	85	115	06/07/2023
Antimony		0.0500		**0.433**	0.5000	0	86.5	85	115	06/07/2023
Arsenic		0.0250		**0.450**	0.5000	0	89.9	85	115	06/07/2023
Barium		0.0025		**1.80**	2.000	0	90.0	85	115	06/07/2023
Beryllium		0.0005		**0.0437**	0.0500	0	87.4	85	115	06/07/2023
Boron		0.0200		**0.439**	0.5000	0	87.8	85	115	06/07/2023
Cadmium		0.0020		**0.0455**	0.0500	0	91.0	85	115	06/07/2023
Calcium		0.100		**2.30**	2.500	0	91.9	85	115	06/07/2023
Chromium		0.0050		**0.181**	0.2000	0	90.7	85	115	06/07/2023
Cobalt		0.0050		**0.446**	0.5000	0	89.2	85	115	06/07/2023
Copper		0.0050		**0.224**	0.2500	0	89.5	85	115	06/07/2023
Iron		0.0400		**1.80**	2.000	0	90.1	85	115	06/07/2023
Lead		0.0150		**0.442**	0.5000	0	88.5	85	115	06/07/2023
Magnesium		0.0500		**2.13**	2.500	0	85.2	85	115	06/07/2023
Manganese		0.0070		**0.446**	0.5000	0	89.2	85	115	06/07/2023
Molybdenum		0.0100		**0.426**	0.5000	0	85.2	85	115	06/07/2023
Nickel		0.0050		**0.460**	0.5000	0	92.0	85	115	06/08/2023
Potassium		0.100		**2.39**	2.500	0	95.7	85	115	06/07/2023
Selenium		0.0400		**0.430**	0.5000	0	86.0	85	115	06/07/2023
Silicon	*	0.0500		**0.511**	0.5000	0	102.1	85	115	06/07/2023
Silver		0.0070		**0.0456**	0.0500	0	91.2	85	115	06/07/2023
Sodium		0.0500		**2.25**	2.500	0	90.1	85	115	06/07/2023
Thallium		0.0500		**0.218**	0.2500	0	87.0	85	115	06/07/2023
Vanadium		0.0100		**0.440**	0.5000	0	88.0	85	115	06/07/2023
Zinc		0.0100		**0.446**	0.5000	0	89.2	85	115	06/07/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 206871 **SampType:** MS Units **mg/L**

SampID: 23051600-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.72**	2.000	0	85.9	75	125	06/07/2023
Arsenic		0.0250		**0.470**	0.5000	0	94.0	75	125	06/07/2023
Barium		0.0025		**1.85**	2.000	0.04570	90.0	75	125	06/07/2023
Boron		0.0200		**1.02**	0.5000	0.5821	86.9	75	125	06/07/2023
Cadmium		0.0020		**0.0451**	0.0500	0	90.2	75	125	06/07/2023
Calcium		0.100	S	**76.3**	2.500	75.16	46.8	75	125	06/07/2023
Chromium		0.0050		**0.180**	0.2000	0	90.2	75	125	06/07/2023
Copper		0.0050		**0.227**	0.2500	0	91.0	75	125	06/07/2023
Iron		0.0400		**1.80**	2.000	0	89.9	75	125	06/07/2023
Lead		0.0150		**0.438**	0.5000	0	87.6	75	125	06/07/2023
Magnesium		0.0500	S	**29.5**	2.500	27.75	70.2	75	125	06/07/2023
Molybdenum		0.0100		**0.452**	0.5000	0.02060	86.3	75	125	06/07/2023
Potassium		1.00		**10.9**	2.500	8.544	93.0	75	125	06/08/2023
Sodium		0.0500	S	**43.2**	2.500	41.68	60.4	75	125	06/07/2023
Zinc		0.0100		**0.453**	0.5000	0	90.6	75	125	06/07/2023

Batch 206871 **SampType:** MSD Units **mg/L** RPD Limit: **20**

SampID: 23051600-003DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**1.74**	2.000	0	86.9	1.717	1.18	06/07/2023
Arsenic		0.0250		**0.467**	0.5000	0	93.4	0.4702	0.70	06/07/2023
Barium		0.0025		**1.85**	2.000	0.04570	90.4	1.847	0.42	06/07/2023
Boron		0.0200		**1.02**	0.5000	0.5821	87.1	1.017	0.09	06/07/2023
Cadmium		0.0020		**0.0452**	0.0500	0	90.4	0.04510	0.22	06/07/2023
Calcium		0.100	S	**76.6**	2.500	75.16	59.2	76.33	0.41	06/07/2023
Chromium		0.0050		**0.182**	0.2000	0	91.2	0.1804	1.10	06/07/2023
Copper		0.0050		**0.230**	0.2500	0	91.8	0.2274	0.92	06/07/2023
Iron		0.0400		**1.82**	2.000	0	90.8	1.797	0.99	06/07/2023
Lead		0.0150		**0.442**	0.5000	0	88.4	0.4378	1.00	06/07/2023
Magnesium		0.0500	S	**29.4**	2.500	27.75	67.5	29.50	0.23	06/07/2023
Molybdenum		0.0100		**0.454**	0.5000	0.02060	86.7	0.4520	0.49	06/07/2023
Potassium		1.00		**10.9**	2.500	8.544	92.9	10.87	0.04	06/08/2023
Sodium		0.0500	S	**43.1**	2.500	41.68	56.4	43.19	0.23	06/07/2023
Zinc		0.0100		**0.456**	0.5000	0	91.2	0.4529	0.64	06/07/2023

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206871** **SampType:** **MS** Units **mg/L**
SampID: 23051600-008EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.73**	2.000	0	86.3	75	125	06/07/2023
Arsenic		0.0250		**0.466**	0.5000	0	93.1	75	125	06/07/2023
Barium		0.0025		**1.88**	2.000	0.07000	90.4	75	125	06/07/2023
Beryllium		0.0005		**0.0446**	0.0500	0	89.2	75	125	06/07/2023
Boron		0.0200		**0.673**	0.5000	0.2354	87.5	75	125	06/07/2023
Cadmium		0.0020		**0.0451**	0.0500	0	90.2	75	125	06/07/2023
Calcium		0.100	S	**75.9**	2.500	75.15	31.2	75	125	06/07/2023
Chromium		0.0050		**0.182**	0.2000	0	91.1	75	125	06/07/2023
Copper		0.0050		**0.230**	0.2500	0.004900	90.0	75	125	06/07/2023
Iron		0.0400		**1.83**	2.000	0	91.5	75	125	06/07/2023
Lead		0.0150		**0.442**	0.5000	0	88.4	75	125	06/07/2023
Magnesium		0.0500	S	**25.3**	2.500	23.57	69.3	75	125	06/07/2023
Manganese		0.0070		**0.456**	0.5000	0	91.2	75	125	06/07/2023
Molybdenum		0.0100		**0.449**	0.5000	0.01250	87.4	75	125	06/07/2023
Nickel		0.0050		**0.452**	0.5000	0	90.3	75	125	06/08/2023
Potassium		0.100		**6.61**	2.500	4.328	91.2	75	125	06/07/2023
Silver		0.0070		**0.0471**	0.0500	0.001100	92.0	75	125	06/07/2023
Sodium		0.0500	S	**49.8**	2.500	48.46	52.4	75	125	06/07/2023
Zinc		0.0100		**0.457**	0.5000	0	91.4	75	125	06/07/2023

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206871** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-008EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**1.71**	2.000	0	85.6	1.726	0.80	06/07/2023
Arsenic		0.0250		**0.462**	0.5000	0	92.4	0.4655	0.71	06/07/2023
Barium		0.0025		**1.86**	2.000	0.07000	89.4	1.878	1.07	06/07/2023
Beryllium		0.0005		**0.0447**	0.0500	0	89.4	0.04460	0.22	06/07/2023
Boron		0.0200		**0.668**	0.5000	0.2354	86.5	0.6728	0.76	06/07/2023
Cadmium		0.0020		**0.0443**	0.0500	0	88.6	0.04510	1.79	06/07/2023
Calcium		0.100	S	**75.2**	2.500	75.15	3.2	75.93	0.93	06/07/2023
Chromium		0.0050		**0.181**	0.2000	0	90.7	0.1822	0.50	06/07/2023
Copper		0.0050		**0.238**	0.2500	0.004900	93.1	0.2299	3.34	06/07/2023
Iron		0.0400		**1.80**	2.000	0	90.0	1.829	1.59	06/07/2023
Lead		0.0150		**0.436**	0.5000	0	87.2	0.4419	1.32	06/07/2023
Magnesium		0.0500	S	**25.3**	2.500	23.57	67.1	25.30	0.21	06/07/2023
Manganese		0.0070		**0.448**	0.5000	0	89.7	0.4562	1.70	06/07/2023
Molybdenum		0.0100		**0.444**	0.5000	0.01250	86.2	0.4494	1.32	06/07/2023
Nickel		0.0050		**0.457**	0.5000	0	91.4	0.4516	1.21	06/08/2023
Potassium		0.100		**6.53**	2.500	4.328	88.0	6.608	1.21	06/07/2023
Silver		0.0070		**0.0471**	0.0500	0.001100	92.0	0.04710	0.00	06/07/2023
Sodium		0.0500	S	**49.4**	2.500	48.46	35.6	49.77	0.85	06/07/2023
Zinc		0.0100		**0.456**	0.5000	0	91.2	0.4568	0.22	06/07/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206873** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206873

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/06/2023
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	06/06/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/06/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/06/2023
Beryllium		0.0005	J	**0.0002**	0.0002	0	100.0	-100	100	06/06/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/06/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/06/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/06/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/06/2023
Cobalt		0.0050		**< 0.0050**	0.0020	0	0	-100	100	06/06/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/06/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/06/2023
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	06/06/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/06/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/06/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/06/2023
Nickel		0.0050		**< 0.0050**	0.0016	0	0	-100	100	06/06/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/06/2023
Selenium		0.0400		**< 0.0400**	0.0170	0	0	-100	100	06/06/2023
Silicon	*	0.0500		**< 0.0500**	0.0122	0	0	-100	100	06/07/2023
Silver		0.0070		**< 0.0070**	0.0027	0	0	-100	100	06/06/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/07/2023
Thallium		0.0500		**< 0.0500**	0.0111	0	0	-100	100	06/06/2023
Vanadium		0.0100		**< 0.0100**	0.0009	0	0	-100	100	06/06/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206873** **SampType:** **LCS** Units **mg/L**
SampID: LCS-206873

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.79**	2.000	0	89.3	85	115	06/06/2023
Antimony		0.0500		**0.439**	0.5000	0	87.8	85	115	06/06/2023
Arsenic		0.0250		**0.466**	0.5000	0	93.2	85	115	06/06/2023
Barium		0.0025		**1.81**	2.000	0	90.3	85	115	06/06/2023
Beryllium		0.0005		**0.0460**	0.0500	0	92.0	85	115	06/06/2023
Boron		0.0200		**0.454**	0.5000	0	90.7	85	115	06/06/2023
Cadmium		0.0020		**0.0445**	0.0500	0	89.0	85	115	06/06/2023
Calcium		0.100		**2.35**	2.500	0	94.2	85	115	06/06/2023
Chromium		0.0050		**0.189**	0.2000	0	94.7	85	115	06/06/2023
Cobalt		0.0050		**0.478**	0.5000	0	95.5	85	115	06/06/2023
Copper		0.0050		**0.232**	0.2500	0	93.0	85	115	06/06/2023
Iron		0.0400		**1.87**	2.000	0	93.3	85	115	06/06/2023
Lead		0.0150		**0.461**	0.5000	0	92.3	85	115	06/06/2023
Magnesium		0.0500		**2.23**	2.500	0	89.2	85	115	06/06/2023
Manganese		0.0070		**0.485**	0.5000	0	97.0	85	115	06/06/2023
Molybdenum		0.0100		**0.449**	0.5000	0	89.8	85	115	06/06/2023
Nickel		0.0050		**0.464**	0.5000	0	92.9	85	115	06/06/2023
Potassium		0.100		**2.32**	2.500	0	92.9	85	115	06/06/2023
Selenium		0.0400		**0.449**	0.5000	0	89.7	85	115	06/06/2023
Silicon	*	0.0500		**0.506**	0.5000	0	101.2	85	115	06/07/2023
Silver		0.0070		**0.0440**	0.0500	0	88.0	85	115	06/06/2023
Sodium		0.0500		**2.25**	2.500	0	89.8	85	115	06/07/2023
Thallium		0.0500		**0.233**	0.2500	0	93.1	85	115	06/06/2023
Vanadium		0.0100		**0.450**	0.5000	0	89.9	85	115	06/06/2023
Zinc		0.0100		**0.452**	0.5000	0	90.3	85	115	06/06/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206873** **SampType:** **MS** Units **mg/L**

SampID: 23051600-044EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**3.15**	4.000	0	78.8	75	125	06/06/2023
Arsenic		0.0250		**0.852**	1.000	0	85.2	75	125	06/06/2023
Barium		0.0025		**3.27**	4.000	0	81.8	75	125	06/06/2023
Beryllium		0.0005		**0.0838**	0.1000	0.0008000	83.0	75	125	06/06/2023
Boron		0.0200		**0.817**	1.000	0	81.7	75	125	06/06/2023
Cadmium		0.0020		**0.0805**	0.1000	0	80.5	75	125	06/06/2023
Calcium		0.100		**4.26**	5.000	0	85.2	75	125	06/06/2023
Chromium		0.0050		**0.344**	0.4000	0	86.1	75	125	06/06/2023
Copper		0.0050		**0.428**	0.5000	0	85.5	75	125	06/06/2023
Iron		0.0400		**3.55**	4.000	0	88.8	75	125	06/06/2023
Lead		0.0150		**0.830**	1.000	0	83.0	75	125	06/06/2023
Magnesium		0.0500		**4.03**	5.000	0	80.7	75	125	06/06/2023
Manganese		0.0070		**0.888**	1.000	0	88.8	75	125	06/06/2023
Molybdenum		0.0100		**0.812**	1.000	0	81.2	75	125	06/06/2023
Nickel		0.0050		**0.837**	1.000	0	83.7	75	125	06/06/2023
Potassium		0.100		**4.10**	5.000	0	82.0	75	125	06/06/2023
Silicon	*	0.0500		**0.948**	1.000	0	94.8	75	125	06/07/2023
Silver		0.0070		**0.0811**	0.1000	0	81.1	75	125	06/06/2023
Sodium		0.0500		**4.30**	5.000	0.03250	85.3	75	125	06/07/2023
Zinc		0.0100		**0.810**	1.000	0	81.0	75	125	06/06/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206873** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-044EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**3.17**	4.000	0	79.2	3.150	0.63	06/06/2023
Arsenic		0.0250		**0.844**	1.000	0	84.4	0.8525	1.03	06/06/2023
Barium		0.0025		**3.27**	4.000	0	81.8	3.270	0.00	06/06/2023
Beryllium		0.0005		**0.0839**	0.1000	0.0008000	83.1	0.08380	0.12	06/06/2023
Boron		0.0200		**0.819**	1.000	0	81.9	0.8172	0.17	06/06/2023
Cadmium		0.0020		**0.0806**	0.1000	0	80.6	0.08050	0.12	06/06/2023
Calcium		0.100		**4.26**	5.000	0	85.2	4.261	0.01	06/06/2023
Chromium		0.0050		**0.345**	0.4000	0	86.2	0.3444	0.17	06/06/2023
Copper		0.0050		**0.427**	0.5000	0	85.4	0.4275	0.16	06/06/2023
Iron		0.0400		**3.55**	4.000	0	88.8	3.550	0.00	06/06/2023
Lead		0.0150		**0.833**	1.000	0	83.3	0.8298	0.36	06/06/2023
Magnesium		0.0500		**4.05**	5.000	0	81.1	4.035	0.45	06/06/2023
Manganese		0.0070		**0.875**	1.000	0	87.5	0.8881	1.53	06/06/2023
Molybdenum		0.0100		**0.814**	1.000	0	81.4	0.8125	0.18	06/06/2023
Nickel		0.0050		**0.839**	1.000	0	83.9	0.8367	0.30	06/06/2023
Potassium		0.100		**4.09**	5.000	0	81.9	4.099	0.14	06/06/2023
Silicon	*	0.0500		**0.945**	1.000	0	94.5	0.9484	0.39	06/07/2023
Silver		0.0070		**0.0812**	0.1000	0	81.2	0.08110	0.12	06/06/2023
Sodium		0.0500		**4.29**	5.000	0.03250	85.2	4.299	0.20	06/07/2023
Zinc		0.0100		**0.811**	1.000	0	81.1	0.8098	0.15	06/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206891** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206891

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/06/2023
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	06/06/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/06/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/06/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/06/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/06/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/06/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/06/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/06/2023
Cobalt		0.0050		**< 0.0050**	0.0020	0	0	-100	100	06/06/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/06/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/06/2023
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	06/06/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/06/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/06/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/06/2023
Nickel		0.0050		**< 0.0050**	0.0016	0	0	-100	100	06/06/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/06/2023
Selenium		0.0400		**< 0.0400**	0.0170	0	0	-100	100	06/06/2023
Silicon	*	0.0500		**< 0.0500**	0.0500	0	0	-100	100	06/07/2023
Silver		0.0070		**< 0.0070**	0.0027	0	0	-100	100	06/06/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/06/2023
Thallium		0.0500		**< 0.0500**	0.0111	0	0	-100	100	06/06/2023
Vanadium		0.0100		**< 0.0100**	0.0009	0	0	-100	100	06/06/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206891** **SampType:** **LCS** Units **mg/L**

SampID: LCS-206891

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.79**	2.000	0	89.4	85	115	06/06/2023
Antimony		0.0500		**0.439**	0.5000	0	87.8	85	115	06/06/2023
Arsenic		0.0250		**0.468**	0.5000	0	93.7	85	115	06/06/2023
Barium		0.0025		**1.81**	2.000	0	90.4	85	115	06/06/2023
Beryllium		0.0005		**0.0455**	0.0500	0	91.0	85	115	06/06/2023
Boron		0.0200		**0.455**	0.5000	0	90.9	85	115	06/06/2023
Cadmium		0.0020		**0.0445**	0.0500	0	89.0	85	115	06/06/2023
Calcium		0.100		**2.35**	2.500	0	94.0	85	115	06/06/2023
Chromium		0.0050		**0.185**	0.2000	0	92.6	85	115	06/06/2023
Cobalt		0.0050		**0.475**	0.5000	0	95.0	85	115	06/06/2023
Copper		0.0050		**0.234**	0.2500	0	93.4	85	115	06/06/2023
Iron		0.0400		**1.84**	2.000	0	91.8	85	115	06/06/2023
Lead		0.0150		**0.458**	0.5000	0	91.6	85	115	06/06/2023
Magnesium		0.0500		**2.22**	2.500	0	89.0	85	115	06/06/2023
Manganese		0.0070		**0.475**	0.5000	0	95.1	85	115	06/06/2023
Molybdenum		0.0100		**0.447**	0.5000	0	89.4	85	115	06/06/2023
Nickel		0.0050		**0.456**	0.5000	0	91.2	85	115	06/06/2023
Potassium		0.100		**2.32**	2.500	0	92.8	85	115	06/06/2023
Selenium		0.0400		**0.441**	0.5000	0	88.3	85	115	06/06/2023
Silicon	*	0.0500		**0.522**	0.5000	0	104.5	85	115	06/07/2023
Silver		0.0070		**0.0436**	0.0500	0	87.2	85	115	06/06/2023
Sodium		0.0500		**2.23**	2.500	0	89.4	85	115	06/06/2023
Thallium		0.0500		**0.232**	0.2500	0	93.0	85	115	06/06/2023
Vanadium		0.0100		**0.449**	0.5000	0	89.7	85	115	06/06/2023
Zinc		0.0100		**0.451**	0.5000	0	90.3	85	115	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 206891 **SampType:** MS Units **mg/L**
SampID: 23051600-012DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.83**	2.000	0	91.6	75	125	06/06/2023
Calcium		0.100	S	**86.4**	2.500	85.59	34.0	75	125	06/06/2023
Iron		0.0400		**1.85**	2.000	0	92.7	75	125	06/06/2023
Magnesium		0.0500	S	**28.8**	2.500	26.91	74.8	75	125	06/06/2023
Manganese		0.0070		**0.480**	0.5000	0	96.0	75	125	06/06/2023
Potassium		0.100		**5.46**	2.500	3.178	91.2	75	125	06/06/2023
Silicon	*	0.0500		**5.06**	0.5000	4.550	101.7	75	125	06/07/2023
Sodium		0.0500	S	**38.9**	2.500	37.10	71.2	75	125	06/06/2023

Batch 206891 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-012DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**1.80**	2.000	0	90.1	1.832	1.65	06/06/2023
Calcium		0.100	S	**85.6**	2.500	85.59	-0.8	86.44	1.01	06/06/2023
Iron		0.0400		**1.83**	2.000	0	91.7	1.854	1.02	06/06/2023
Magnesium		0.0500	S	**28.6**	2.500	26.91	68.5	28.78	0.55	06/06/2023
Manganese		0.0070		**0.476**	0.5000	0	95.2	0.4798	0.82	06/06/2023
Potassium		0.100		**5.34**	2.500	3.178	86.6	5.459	2.14	06/06/2023
Silicon	*	0.0500		**5.07**	0.5000	4.550	104.7	5.059	0.30	06/07/2023
Sodium		0.0500	S	**38.3**	2.500	37.10	47.2	38.88	1.56	06/06/2023

Batch 206891 **SampType:** MS Units **mg/L**
SampID: 23051600-041DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**4.28**	2.000	2.550	86.5	75	125	06/06/2023
Calcium		0.100	S	**92.2**	2.500	91.26	36.8	75	125	06/06/2023
Iron		0.0400		**1.87**	2.000	0	93.3	75	125	06/06/2023
Magnesium		0.0500		**2.19**	2.500	0	87.7	75	125	06/06/2023
Manganese		0.0070		**0.484**	0.5000	0	96.7	75	125	06/06/2023
Potassium		0.500	S	**26.8**	2.500	24.93	74.9	75	125	06/08/2023
Silicon	*	0.0500	S	**11.2**	0.5000	10.80	74.7	75	125	06/07/2023
Sodium		0.0500	S	**105**	2.500	104.0	28.8	75	125	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch **206891** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-041DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**4.25**	2.000	2.550	85.0	4.280	0.70	06/06/2023
Calcium		0.100	S	**91.8**	2.500	91.26	23.2	92.18	0.37	06/06/2023
Iron		0.0400		**1.87**	2.000	0	93.3	1.866	0.07	06/06/2023
Magnesium		0.0500		**2.19**	2.500	0	87.7	2.192	0.02	06/06/2023
Manganese		0.0070		**0.483**	0.5000	0	96.6	0.4835	0.06	06/06/2023
Potassium		0.500		**26.8**	2.500	24.93	76.3	26.80	0.13	06/08/2023
Silicon	*	0.0500		**11.3**	0.5000	10.80	98.2	11.18	1.05	06/07/2023
Sodium		0.0500	S	**103**	2.500	104.0	-25.2	104.7	1.30	06/06/2023

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **MBLK** Units **mg/L**
SampID: MBLK-206856

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/05/2023
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	06/05/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/05/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/05/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/05/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/05/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/05/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/05/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023
Cobalt		0.0050		**< 0.0050**	0.0020	0	0	-100	100	06/05/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/05/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/05/2023
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	06/05/2023
Lithium		0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/14/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/05/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/05/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/05/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/05/2023
Selenium		0.0400		**< 0.0400**	0.0170	0	0	-100	100	06/05/2023
Silicon	*	0.0500	S	**0.0599**	0.0122	0	491.0	-100	100	06/07/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/05/2023
Thallium		0.0500		**< 0.0500**	0.0111	0	0	-100	100	06/05/2023
Vanadium		0.0100		**< 0.0100**	0.0009	0	0	-100	100	06/05/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/05/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **LCS** Units **mg/L**
SampID: LCS-206856

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.92**	2.000	0	96.0	85	115	06/05/2023
Antimony		0.0500		**0.490**	0.5000	0	97.9	85	115	06/05/2023
Arsenic		0.0250		**0.516**	0.5000	0	103.3	85	115	06/05/2023
Barium		0.0025		**2.02**	2.000	0	101.0	85	115	06/05/2023
Beryllium		0.0005		**0.0503**	0.0500	0	100.6	85	115	06/05/2023
Boron		0.0200		**0.491**	0.5000	0	98.2	85	115	06/05/2023
Cadmium		0.0020		**0.0528**	0.0500	0	105.6	85	115	06/05/2023
Calcium		0.100		**2.59**	2.500	0	103.7	85	115	06/05/2023
Chromium		0.0050		**0.194**	0.2000	0	97.2	85	115	06/05/2023
Cobalt		0.0050		**0.490**	0.5000	0	97.9	85	115	06/05/2023
Copper		0.0050		**0.247**	0.2500	0	99.0	85	115	06/05/2023
Iron		0.0400		**2.00**	2.000	0	100.0	85	115	06/05/2023
Lead		0.0150		**0.493**	0.5000	0	98.7	85	115	06/05/2023
Lithium		0.0050		**0.548**	0.5000	0	109.6	85	115	06/15/2023
Lithium		0.0050	S	**0.623**	0.5000	0	124.6	85	115	06/15/2023
Magnesium		0.0500		**2.36**	2.500	0	94.2	85	115	06/05/2023
Manganese		0.0070		**0.488**	0.5000	0	97.6	85	115	06/05/2023
Molybdenum		0.0100		**0.476**	0.5000	0	95.2	85	115	06/05/2023
Potassium		0.100		**2.62**	2.500	0	104.7	85	115	06/05/2023
Selenium		0.0400		**0.496**	0.5000	0	99.1	85	115	06/05/2023
Silicon	*	0.0500	BS	**0.602**	0.5000	0	120.5	85	115	06/07/2023
Sodium		0.0500		**2.50**	2.500	0	100.2	85	115	06/05/2023
Thallium		0.0500		**0.242**	0.2500	0	96.7	85	115	06/05/2023
Vanadium		0.0100		**0.490**	0.5000	0	98.0	85	115	06/05/2023
Zinc		0.0100		**0.499**	0.5000	0	99.7	85	115	06/05/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **MS** Units **mg/L**

SampID: 23051600-007DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.07**	2.000	0.05820	100.6	75	125	06/05/2023
Arsenic		0.0250		**0.524**	0.5000	0	104.9	75	125	06/05/2023
Barium		0.0025		**2.11**	2.000	0.1075	100.1	75	125	06/05/2023
Beryllium		0.0005		**0.0505**	0.0500	0.0003000	100.4	75	125	06/05/2023
Boron		0.0200		**0.591**	0.5000	0.08420	101.4	75	125	06/05/2023
Cadmium		0.0020		**0.0515**	0.0500	0	103.0	75	125	06/05/2023
Calcium		0.100	S	**201**	2.500	200.2	42.8	75	125	06/05/2023
Chromium		0.0050		**0.195**	0.2000	0	97.3	75	125	06/05/2023
Copper		0.0050		**0.263**	0.2500	0.007200	102.3	75	125	06/05/2023
Iron		0.0400		**2.20**	2.000	0.1000	105.0	75	125	06/05/2023
Lead		0.0150		**0.484**	0.5000	0	96.7	75	125	06/05/2023
Lithium		0.0050		**0.568**	0.5000	0.01140	111.3	75	125	06/15/2023
Magnesium		0.0500		**64.1**	2.500	61.99	86.0	75	125	06/05/2023
Manganese		0.0070		**0.508**	0.5000	0.01790	97.9	75	125	06/05/2023
Molybdenum		0.0100		**0.484**	0.5000	0	96.9	75	125	06/05/2023
Potassium		0.100		**6.61**	2.500	3.973	105.3	75	125	06/05/2023
Silicon	*	0.0500	B	**9.42**	0.5000	8.822	118.8	75	125	06/07/2023
Sodium		0.0500		**181**	2.500	178.4	96.8	75	125	06/05/2023
Zinc		0.0100		**0.514**	0.5000	0.01010	100.8	75	125	06/05/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-007DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**2.08**	2.000	0.05820	101.1	2.070	0.48	06/05/2023
Arsenic		0.0250		**0.525**	0.5000	0	105.0	0.5243	0.15	06/05/2023
Barium		0.0025		**2.13**	2.000	0.1075	101.1	2.110	0.94	06/05/2023
Beryllium		0.0005		**0.0507**	0.0500	0.0003000	100.8	0.05050	0.40	06/05/2023
Boron		0.0200		**0.592**	0.5000	0.08420	101.5	0.5912	0.08	06/05/2023
Cadmium		0.0020		**0.0519**	0.0500	0	103.8	0.05150	0.77	06/05/2023
Calcium		0.100		**203**	2.500	200.2	96.0	201.3	0.66	06/05/2023
Chromium		0.0050		**0.196**	0.2000	0	98.0	0.1946	0.72	06/05/2023
Copper		0.0050		**0.262**	0.2500	0.007200	102.0	0.2629	0.30	06/05/2023
Iron		0.0400		**2.17**	2.000	0.1000	103.5	2.200	1.37	06/05/2023
Lead		0.0150		**0.488**	0.5000	0	97.7	0.4837	0.99	06/05/2023
Lithium		0.0050		**0.569**	0.5000	0.01140	111.5	0.5681	0.16	06/15/2023
Magnesium		0.0500		**64.4**	2.500	61.99	95.8	64.14	0.38	06/05/2023
Manganese		0.0070		**0.513**	0.5000	0.01790	98.9	0.5076	0.98	06/05/2023
Molybdenum		0.0100		**0.485**	0.5000	0	96.9	0.4843	0.08	06/05/2023
Potassium		0.100		**6.54**	2.500	3.973	102.6	6.606	1.04	06/05/2023
Silicon	*	0.0500	BS	**9.51**	0.5000	8.822	136.9	9.416	0.96	06/07/2023
Sodium		0.0500	S	**180**	2.500	178.4	53.2	180.8	0.60	06/05/2023
Zinc		0.0100		**0.516**	0.5000	0.01010	101.1	0.5142	0.29	06/05/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **MS** Units **mg/L**

SampID: 23051600-024CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.22**	2.000	0.2164	100.2	75	125	06/05/2023
Arsenic		0.0250		**0.521**	0.5000	0	104.2	75	125	06/05/2023
Barium		0.0025		**2.06**	2.000	0.04100	101.0	75	125	06/05/2023
Beryllium		0.0005		**0.0512**	0.0500	0	102.4	75	125	06/05/2023
Boron		0.0200		**0.645**	0.5000	0.1428	100.4	75	125	06/05/2023
Cadmium		0.0020		**0.0522**	0.0500	0	104.4	75	125	06/05/2023
Calcium		0.100	S	**103**	2.500	102.2	47.6	75	125	06/05/2023
Chromium		0.0050		**0.197**	0.2000	0	98.6	75	125	06/05/2023
Iron		0.0400		**2.40**	2.000	0.2952	105.2	75	125	06/05/2023
Lead		0.0150		**0.494**	0.5000	0	98.8	75	125	06/05/2023
Lithium		0.0050	S	**0.644**	0.5000	0.002900	128.2	75	125	06/14/2023
Magnesium		0.0500		**41.7**	2.500	39.45	89.6	75	125	06/05/2023
Manganese		0.0070		**0.598**	0.5000	0.1040	98.9	75	125	06/05/2023
Molybdenum		0.0100		**0.486**	0.5000	0	97.2	75	125	06/05/2023
Potassium		0.100		**4.76**	2.500	2.222	101.7	75	125	06/05/2023
Silicon	*	0.0500	B	**7.18**	0.5000	6.601	115.5	75	125	06/07/2023
Sodium		0.0500		**42.1**	2.500	40.12	78.4	75	125	06/05/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206856** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-024CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**2.23**	2.000	0.2164	100.7	2.220	0.45	06/05/2023
Arsenic		0.0250		**0.525**	0.5000	0	105.0	0.5212	0.73	06/05/2023
Barium		0.0025		**2.05**	2.000	0.04100	100.5	2.060	0.49	06/05/2023
Beryllium		0.0005		**0.0508**	0.0500	0	101.6	0.05120	0.78	06/05/2023
Boron		0.0200		**0.645**	0.5000	0.1428	100.5	0.6447	0.06	06/05/2023
Cadmium		0.0020		**0.0516**	0.0500	0	103.2	0.05220	1.16	06/05/2023
Calcium		0.100	S	**104**	2.500	102.2	66.8	103.4	0.46	06/05/2023
Chromium		0.0050		**0.196**	0.2000	0	98.2	0.1972	0.36	06/05/2023
Iron		0.0400		**2.41**	2.000	0.2952	105.7	2.400	0.42	06/05/2023
Lead		0.0150		**0.487**	0.5000	0	97.4	0.4939	1.37	06/05/2023
Lithium		0.0050		**0.617**	0.5000	0.002900	122.9	0.6439	4.20	06/14/2023
Magnesium		0.0500		**41.8**	2.500	39.45	93.3	41.69	0.22	06/05/2023
Manganese		0.0070		**0.596**	0.5000	0.1040	98.5	0.5984	0.32	06/05/2023
Molybdenum		0.0100		**0.481**	0.5000	0	96.3	0.4859	0.93	06/05/2023
Potassium		0.100		**4.80**	2.500	2.222	102.9	4.764	0.65	06/05/2023
Silicon	*	0.0500	B	**7.20**	0.5000	6.601	118.9	7.178	0.24	06/07/2023
Sodium		0.0500		**42.3**	2.500	40.12	88.0	42.08	0.57	06/05/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

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Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/05/2023
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/02/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/05/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/02/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/02/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/05/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/02/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/05/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/02/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/05/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/05/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/02/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/05/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/02/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/05/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/02/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/05/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/02/2023
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	06/05/2023
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	06/02/2023
Lithium	*	0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/14/2023
Lithium	*	0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/02/2023
Lithium	*	0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/05/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/02/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/05/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/05/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/02/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/02/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/05/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/05/2023
Silicon	*	0.0500	S	**0.0543**	0.0122	0	445.1	-100	100	06/09/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/05/2023
Sodium		0.0500	JS	**0.023**	0.0180	0	128.3	-100	100	06/02/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/05/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/02/2023

Quality Control Results

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **LCS** Units **mg/L**

SampID: LCS-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.03**	2.000	0	101.5	85	115	06/05/2023
Aluminum		0.0250		**1.95**	2.000	0	97.5	85	115	06/02/2023
Arsenic		0.0250		**0.528**	0.5000	0	105.5	85	115	06/02/2023
Arsenic		0.0250		**0.566**	0.5000	0	113.3	85	115	06/05/2023
Barium		0.0025		**2.18**	2.000	0	109.0	85	115	06/05/2023
Barium		0.0025		**2.05**	2.000	0	102.5	85	115	06/02/2023
Beryllium		0.0005		**0.0507**	0.0500	0	101.4	85	115	06/02/2023
Beryllium		0.0005		**0.0543**	0.0500	0	108.6	85	115	06/05/2023
Boron		0.0200		**0.507**	0.5000	0	101.3	85	115	06/02/2023
Boron		0.0200		**0.531**	0.5000	0	106.1	85	115	06/05/2023
Cadmium		0.0020		**0.0568**	0.0500	0	113.6	85	115	06/05/2023
Cadmium		0.0020		**0.0511**	0.0500	0	102.2	85	115	06/02/2023
Calcium		0.100		**2.78**	2.500	0	111.0	85	115	06/05/2023
Chromium		0.0050		**0.205**	0.2000	0	102.4	85	115	06/02/2023
Chromium		0.0050		**0.216**	0.2000	0	108.2	85	115	06/05/2023
Copper		0.0050		**0.257**	0.2500	0	102.9	85	115	06/02/2023
Copper		0.0050		**0.261**	0.2500	0	104.3	85	115	06/05/2023
Iron		0.0400		**2.18**	2.000	0	109.0	85	115	06/05/2023
Iron		0.0400		**2.07**	2.000	0	103.5	85	115	06/02/2023
Lead		0.0150		**0.508**	0.5000	0	101.6	85	115	06/02/2023
Lead		0.0150		**0.550**	0.5000	0	110.1	85	115	06/05/2023
Lithium	*	0.0050		**0.533**	0.5000	0	106.7	85	115	06/02/2023
Lithium	*	0.0050		**0.546**	0.5000	0	109.1	85	115	06/05/2023
Lithium	*	0.0050		**0.550**	0.5000	0	110.0	85	115	06/15/2023
Magnesium		0.0500		**2.57**	2.500	0	102.7	85	115	06/05/2023
Magnesium		0.0500		**2.39**	2.500	0	95.5	85	115	06/02/2023
Manganese		0.0070		**0.513**	0.5000	0	102.7	85	115	06/02/2023
Manganese		0.0070		**0.544**	0.5000	0	108.8	85	115	06/05/2023
Molybdenum		0.0100		**0.524**	0.5000	0	104.9	85	115	06/05/2023
Molybdenum		0.0100		**0.495**	0.5000	0	99.0	85	115	06/02/2023
Potassium		0.100		**2.62**	2.500	0	105.0	85	115	06/05/2023
Silicon	*	0.0500	B	**0.521**	0.5000	0	104.1	85	115	06/09/2023
Sodium		0.0500		**2.55**	2.500	0	101.9	85	115	06/05/2023
Sodium		0.0500	B	**2.46**	2.500	0	98.5	85	115	06/02/2023
Zinc		0.0100		**0.538**	0.5000	0	107.6	85	115	06/05/2023
Zinc		0.0100		**0.507**	0.5000	0	101.4	85	115	06/02/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 206857 **SampType:** LCS Units **mg/L**
SampID: LCS-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed

Batch 206857 **SampType:** MS Units **mg/L**
SampID: 23051600-032CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.12**	2.000	0	106.0	75	125	06/05/2023
Arsenic		0.0250		**0.596**	0.5000	0	119.2	75	125	06/05/2023
Barium		0.0025		**2.30**	2.000	0.08020	111.0	75	125	06/05/2023
Beryllium		0.0005		**0.0562**	0.0500	0	112.4	75	125	06/05/2023
Boron		0.0200		**0.949**	0.5000	0.3785	114.2	75	125	06/05/2023
Cadmium		0.0020		**0.0567**	0.0500	0	113.4	75	125	06/05/2023
Calcium		0.100	S	**95.9**	2.500	88.19	308.4	75	125	06/05/2023
Chromium		0.0050		**0.223**	0.2000	0	111.3	75	125	06/05/2023
Iron		0.0400		**2.23**	2.000	0	111.5	75	125	06/05/2023
Lead		0.0150		**0.556**	0.5000	0	111.3	75	125	06/05/2023
Lithium		0.0050		**0.584**	0.5000	0.01010	114.7	75	125	06/15/2023
Magnesium		0.0500	S	**33.2**	2.500	29.12	164.0	75	125	06/05/2023
Manganese		0.0070		**0.562**	0.5000	0	112.4	75	125	06/05/2023
Molybdenum		0.0100		**0.577**	0.5000	0.03020	109.4	75	125	06/05/2023
Potassium		0.100		**7.79**	2.500	4.870	116.8	75	125	06/05/2023
Silicon	*	0.0500	BS	**7.09**	0.5000	6.449	128.7	75	125	06/09/2023
Sodium		0.0500	S	**58.9**	2.500	53.10	232.0	75	125	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-032CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**2.02**	2.000	0	101.0	2.120	4.83	06/05/2023
Arsenic		0.0250		**0.562**	0.5000	0	112.4	0.5958	5.82	06/05/2023
Barium		0.0025		**2.19**	2.000	0.08020	105.5	2.300	4.90	06/05/2023
Beryllium		0.0005		**0.0535**	0.0500	0	107.0	0.05620	4.92	06/05/2023
Boron		0.0200		**0.903**	0.5000	0.3785	105.0	0.9494	4.98	06/05/2023
Cadmium		0.0020		**0.0546**	0.0500	0	109.2	0.05670	3.77	06/05/2023
Calcium		0.100		**90.8**	2.500	88.19	102.8	95.90	5.51	06/05/2023
Chromium		0.0050		**0.213**	0.2000	0	106.4	0.2226	4.45	06/05/2023
Iron		0.0400		**2.12**	2.000	0	106.0	2.230	5.06	06/05/2023
Lead		0.0150		**0.534**	0.5000	0	106.8	0.5565	4.15	06/05/2023
Lithium		0.0050		**0.582**	0.5000	0.01010	114.3	0.5838	0.39	06/15/2023
Magnesium		0.0500		**31.6**	2.500	29.12	99.2	33.22	5.00	06/05/2023
Manganese		0.0070		**0.534**	0.5000	0	106.9	0.5621	5.03	06/05/2023
Molybdenum		0.0100		**0.547**	0.5000	0.03020	103.3	0.5771	5.41	06/05/2023
Potassium		0.100		**7.43**	2.500	4.870	102.3	7.790	4.77	06/05/2023
Silicon	*	0.0500	B	**7.02**	0.5000	6.449	114.4	7.092	1.01	06/09/2023
Sodium		0.0500		**55.9**	2.500	53.10	112.4	58.90	5.21	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **MS** Units **mg/L**
SampID: 23051600-037CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.06**	2.000	0	103.0	75	125	06/05/2023
Arsenic		0.0250		**0.576**	0.5000	0	115.2	75	125	06/05/2023
Barium		0.0025		**2.21**	2.000	0.05370	107.8	75	125	06/05/2023
Beryllium		0.0005		**0.0548**	0.0500	0	109.6	75	125	06/05/2023
Boron		0.0200		**0.825**	0.5000	0.2937	106.2	75	125	06/05/2023
Cadmium		0.0020		**0.0558**	0.0500	0	111.6	75	125	06/05/2023
Calcium		0.100	S	**87.7**	2.500	85.94	70.4	75	125	06/05/2023
Chromium		0.0050		**0.217**	0.2000	0	108.7	75	125	06/05/2023
Iron		0.0400		**2.19**	2.000	0.02510	108.2	75	125	06/05/2023
Lead		0.0150		**0.542**	0.5000	0	108.5	75	125	06/05/2023
Lithium		0.0050		**0.579**	0.5000	0.01080	113.7	75	125	06/15/2023
Magnesium		0.0500		**33.8**	2.500	31.65	86.8	75	125	06/05/2023
Manganese		0.0070		**0.547**	0.5000	0	109.4	75	125	06/05/2023
Molybdenum		0.0100		**0.554**	0.5000	0.02230	106.3	75	125	06/05/2023
Potassium		0.100		**7.63**	2.500	5.112	100.7	75	125	06/05/2023
Silicon	*	0.0500	BS	**8.97**	0.5000	8.193	156.0	75	125	06/09/2023
Sodium		0.0500		**46.8**	2.500	44.50	93.2	75	125	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206857** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-037CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**1.97**	2.000	0	98.5	2.060	4.43	06/05/2023
Arsenic		0.0250		**0.562**	0.5000	0	112.4	0.5760	2.46	06/05/2023
Barium		0.0025		**2.14**	2.000	0.05370	104.3	2.210	3.22	06/05/2023
Beryllium		0.0005		**0.0529**	0.0500	0	105.8	0.05480	3.53	06/05/2023
Boron		0.0200		**0.803**	0.5000	0.2937	101.9	0.8249	2.69	06/05/2023
Cadmium		0.0020		**0.0536**	0.0500	0	107.2	0.05580	4.02	06/05/2023
Calcium		0.100	S	**84.8**	2.500	85.94	-46.0	87.70	3.37	06/05/2023
Chromium		0.0050		**0.210**	0.2000	0	105.0	0.2173	3.37	06/05/2023
Iron		0.0400		**2.12**	2.000	0.02510	104.7	2.190	3.25	06/05/2023
Lead		0.0150		**0.528**	0.5000	0	105.6	0.5423	2.67	06/05/2023
Lithium		0.0050		**0.578**	0.5000	0.01080	113.4	0.5972	3.30	06/15/2023
Magnesium		0.0500	S	**32.8**	2.500	31.65	46.2	33.82	3.05	06/05/2023
Manganese		0.0070		**0.530**	0.5000	0	106.1	0.5469	3.04	06/05/2023
Molybdenum		0.0100		**0.534**	0.5000	0.02230	102.3	0.5540	3.75	06/05/2023
Potassium		0.100		**7.46**	2.500	5.112	94.1	7.630	2.19	06/05/2023
Silicon	*	0.0500	BS	**9.03**	0.5000	8.193	167.7	8.973	0.65	06/09/2023
Sodium		0.0500	S	**45.8**	2.500	44.50	50.4	46.83	2.31	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206885** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/06/2023
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/07/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/06/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/07/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/07/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/06/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/07/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/06/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/07/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/06/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/07/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/06/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/06/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/07/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/06/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/07/2023
Copper		0.0050	J	**0.0013**	0.0013	0	100.0	-100	100	06/06/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/06/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/07/2023
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	06/06/2023
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	06/07/2023
Lithium	*	0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/07/2023
Lithium	*	0.0050		**< 0.0050**	0.0019	0	0	-100	100	06/14/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/07/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/06/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/06/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/07/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/06/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/07/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/06/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/07/2023
Silicon	*	0.0500	JS	**0.049**	0.0122	0	404.1	-100	100	06/07/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/07/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/06/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/07/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/06/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206885** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206885** **SampType:** **LCS** Units **mg/L**

SampID: LCS-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.88**	2.000	0	94.1	85	115	06/07/2023
Aluminum		0.0250		**1.90**	2.000	0	95.0	85	115	06/06/2023
Arsenic		0.0250		**0.529**	0.5000	0	105.7	85	115	06/06/2023
Arsenic		0.0250		**0.511**	0.5000	0	102.2	85	115	06/07/2023
Barium		0.0025		**1.98**	2.000	0	99.2	85	115	06/06/2023
Barium		0.0025		**1.97**	2.000	0	98.4	85	115	06/07/2023
Beryllium		0.0005		**0.0512**	0.0500	0	102.4	85	115	06/06/2023
Beryllium		0.0005		**0.0489**	0.0500	0	97.8	85	115	06/07/2023
Boron		0.0200		**0.505**	0.5000	0	101.0	85	115	06/06/2023
Boron		0.0200		**0.488**	0.5000	0	97.6	85	115	06/07/2023
Cadmium		0.0020		**0.0550**	0.0500	0	110.0	85	115	06/06/2023
Cadmium		0.0020		**0.0490**	0.0500	0	98.0	85	115	06/07/2023
Calcium		0.100		**2.60**	2.500	0	104.1	85	115	06/06/2023
Chromium		0.0050		**0.205**	0.2000	0	102.4	85	115	06/06/2023
Chromium		0.0050		**0.197**	0.2000	0	98.5	85	115	06/07/2023
Copper		0.0050		**0.246**	0.2500	0	98.4	85	115	06/06/2023
Copper		0.0050		**0.248**	0.2500	0	99.2	85	115	06/07/2023
Iron		0.0400		**2.06**	2.000	0	103.0	85	115	06/06/2023
Iron		0.0400		**1.96**	2.000	0	98.1	85	115	06/07/2023
Lead		0.0150		**0.490**	0.5000	0	98.0	85	115	06/07/2023
Lead		0.0150		**0.518**	0.5000	0	103.7	85	115	06/06/2023
Lithium	*	0.0050		**0.513**	0.5000	0	102.6	85	115	06/07/2023
Lithium	*	0.0050	S	**0.613**	0.5000	0	122.6	85	115	06/14/2023
Lithium	*	0.0050		**0.568**	0.5000	0	113.5	85	115	06/15/2023
Magnesium		0.0500		**2.47**	2.500	0	98.7	85	115	06/06/2023
Magnesium		0.0500		**2.45**	2.500	0	98.1	85	115	06/07/2023
Manganese		0.0070		**0.498**	0.5000	0	99.6	85	115	06/07/2023
Manganese		0.0070		**0.512**	0.5000	0	102.3	85	115	06/06/2023
Molybdenum		0.0100		**0.492**	0.5000	0	98.3	85	115	06/06/2023
Molybdenum		0.0100		**0.475**	0.5000	0	95.0	85	115	06/07/2023
Potassium		0.100		**2.50**	2.500	0	100.1	85	115	06/06/2023
Potassium		0.100		**2.75**	2.500	0	109.9	85	115	06/07/2023
Silicon	*	0.0500	B	**0.557**	0.5000	0	111.5	85	115	06/07/2023
Sodium		0.0500		**2.49**	2.500	0	99.6	85	115	06/06/2023
Sodium		0.0500		**2.51**	2.500	0	100.5	85	115	06/07/2023
Zinc		0.0100		**0.492**	0.5000	0	98.3	85	115	06/07/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 206885 **SampType:** LCS Units **mg/L**
SampID: LCS-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Zinc		0.0100		**0.506**	0.5000	0	101.2	85	115	06/06/2023

Batch 206885 **SampType:** MS Units **mg/L**
SampID: 23051600-029CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**2.03**	2.000	0	101.5	75	125	06/06/2023
Arsenic		0.0250		**0.553**	0.5000	0	110.6	75	125	06/06/2023
Barium		0.0025		**2.14**	2.000	0.03980	105.0	75	125	06/06/2023
Boron		0.0200		**2.51**	0.5000	1.928	116.2	75	125	06/06/2023
Cadmium		0.0020		**0.0532**	0.0500	0	106.4	75	125	06/06/2023
Calcium		0.100	S	**71.0**	2.500	65.93	201.2	75	125	06/06/2023
Chromium		0.0050		**0.208**	0.2000	0	104.2	75	125	06/06/2023
Copper		0.0050		**0.262**	0.2500	0.002000	104.2	75	125	06/06/2023
Iron		0.0400		**2.08**	2.000	0	104.0	75	125	06/06/2023
Lead		0.0150		**0.522**	0.5000	0	104.5	75	125	06/06/2023
Magnesium		0.0500	S	**31.9**	2.500	28.49	138.1	75	125	06/06/2023
Molybdenum		0.0100		**0.565**	0.5000	0.04800	103.4	75	125	06/06/2023
Potassium		0.100		**9.25**	2.500	6.688	102.6	75	125	06/06/2023
Sodium		0.0500	S	**47.4**	2.500	43.95	137.2	75	125	06/06/2023
Zinc		0.0100		**0.530**	0.5000	0	106.1	75	125	06/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **206885** **SampType:** **MSD** Units **mg/L** RPD Limit: **20**

SampID: 23051600-029CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aluminum		0.0250		**2.03**	2.000	0	101.5	2.030	0.00	06/06/2023
Arsenic		0.0250		**0.561**	0.5000	0	112.3	0.5532	1.47	06/06/2023
Barium		0.0025		**2.14**	2.000	0.03980	105.0	2.140	0.00	06/06/2023
Boron		0.0200		**2.52**	0.5000	1.928	119.3	2.510	0.60	06/06/2023
Cadmium		0.0020		**0.0534**	0.0500	0	106.8	0.05320	0.38	06/06/2023
Calcium		0.100	S	**71.6**	2.500	65.93	225.2	70.96	0.84	06/06/2023
Chromium		0.0050		**0.208**	0.2000	0	104.2	0.2083	0.00	06/06/2023
Copper		0.0050		**0.261**	0.2500	0.002000	103.7	0.2625	0.46	06/06/2023
Iron		0.0400		**2.08**	2.000	0	104.0	2.080	0.00	06/06/2023
Lead		0.0150		**0.525**	0.5000	0	105.0	0.5223	0.50	06/06/2023
Magnesium		0.0500	S	**32.1**	2.500	28.49	145.7	31.94	0.59	06/06/2023
Molybdenum		0.0100		**0.565**	0.5000	0.04800	103.3	0.5649	0.05	06/06/2023
Potassium		0.100		**9.26**	2.500	6.688	103.0	9.252	0.13	06/06/2023
Sodium		0.0500	S	**47.5**	2.500	43.95	140.8	47.38	0.19	06/06/2023
Zinc		0.0100		**0.530**	0.5000	0	106.0	0.5304	0.04	06/06/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **207204** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-207204

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/14/2023
Aluminum		0.0250		**< 0.0250**	0.0127	0	0	-100	100	06/13/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/14/2023
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	06/13/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/13/2023
Barium		0.0025		**< 0.0025**	0.0007	0	0	-100	100	06/14/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/14/2023
Beryllium		0.0005		**< 0.0005**	0.0002	0	0	-100	100	06/13/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/14/2023
Boron		0.0200		**< 0.0200**	0.0090	0	0	-100	100	06/13/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/13/2023
Cadmium		0.0020		**< 0.0020**	0.0005	0	0	-100	100	06/14/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/13/2023
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	06/14/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/13/2023
Chromium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/14/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/14/2023
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	06/13/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/14/2023
Iron		0.0400		**< 0.0400**	0.0200	0	0	-100	100	06/13/2023
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	06/14/2023
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	06/13/2023
Lithium	*	0.0050	S	**0.0864**	0.0019	0	4547	-100	100	06/16/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/13/2023
Magnesium		0.0500		**< 0.0500**	0.0055	0	0	-100	100	06/14/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/14/2023
Manganese		0.0070		**< 0.0070**	0.0025	0	0	-100	100	06/13/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/13/2023
Molybdenum		0.0100		**< 0.0100**	0.0037	0	0	-100	100	06/14/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/13/2023
Potassium		0.100		**< 0.100**	0.0400	0	0	-100	100	06/14/2023
Silicon	*	0.0500		**< 0.0500**	0.0122	0	0	-100	100	06/14/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/14/2023
Sodium		0.0500		**< 0.0500**	0.0180	0	0	-100	100	06/13/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/13/2023
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	06/14/2023

Quality Control Results

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **207204** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-207204

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch **207204** **SampType:** **LCS** Units **mg/L**

SampID: LCS-207204

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aluminum		0.0250		**1.96**	2.000	0	98.1	85	115	06/13/2023
Aluminum		0.0250		**1.92**	2.000	0	96.1	85	115	06/14/2023
Arsenic		0.0250		**0.521**	0.5000	0	104.2	85	115	06/13/2023
Arsenic		0.0250		**0.516**	0.5000	0	103.1	85	115	06/14/2023
Barium		0.0025		**2.10**	2.000	0	105.0	85	115	06/13/2023
Barium		0.0025		**1.95**	2.000	0	97.3	85	115	06/14/2023
Beryllium		0.0005		**0.0512**	0.0500	0	102.4	85	115	06/13/2023
Beryllium		0.0005		**0.0494**	0.0500	0	98.8	85	115	06/14/2023
Boron		0.0200		**0.517**	0.5000	0	103.5	85	115	06/13/2023
Boron		0.0200		**0.495**	0.5000	0	99.0	85	115	06/14/2023
Cadmium		0.0020		**0.0520**	0.0500	0	104.0	85	115	06/13/2023
Cadmium		0.0020		**0.0501**	0.0500	0	100.2	85	115	06/14/2023
Calcium		0.100		**2.59**	2.500	0	103.6	85	115	06/14/2023
Calcium		0.100		**2.67**	2.500	0	106.7	85	115	06/13/2023
Chromium		0.0050		**0.207**	0.2000	0	103.7	85	115	06/13/2023
Chromium		0.0050		**0.197**	0.2000	0	98.7	85	115	06/14/2023
Copper		0.0050		**0.254**	0.2500	0	101.6	85	115	06/14/2023
Copper		0.0050		**0.256**	0.2500	0	102.6	85	115	06/13/2023
Iron		0.0400		**2.15**	2.000	0	107.5	85	115	06/13/2023
Iron		0.0400		**1.97**	2.000	0	98.6	85	115	06/14/2023
Lead		0.0150		**0.515**	0.5000	0	103.1	85	115	06/13/2023
Lead		0.0150		**0.494**	0.5000	0	98.8	85	115	06/14/2023
Lithium	*	0.0050	B	**0.544**	0.5000	0	108.8	85	115	06/16/2023
Magnesium		0.0500		**2.42**	2.500	0	96.9	85	115	06/13/2023
Magnesium		0.0500		**2.45**	2.500	0	97.8	85	115	06/14/2023
Manganese		0.0070		**0.494**	0.5000	0	98.8	85	115	06/14/2023
Manganese		0.0070		**0.529**	0.5000	0	105.8	85	115	06/13/2023
Molybdenum		0.0100		**0.481**	0.5000	0	96.3	85	115	06/14/2023
Molybdenum		0.0100		**0.504**	0.5000	0	100.8	85	115	06/13/2023
Potassium		0.100		**2.60**	2.500	0	104.0	85	115	06/13/2023
Potassium		0.100		**2.43**	2.500	0	97.3	85	115	06/14/2023
Silicon	*	0.0500		**0.501**	0.5000	0	100.3	85	115	06/14/2023
Sodium		0.0500		**2.45**	2.500	0	98.1	85	115	06/13/2023
Sodium		0.0500		**2.41**	2.500	0	96.5	85	115	06/14/2023
Zinc		0.0100		**0.498**	0.5000	0	99.6	85	115	06/14/2023
Zinc		0.0100		**0.507**	0.5000	0	101.4	85	115	06/13/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 207204 **SampType:** LCS Units **mg/L**

SampID: LCS-207204

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 206871 **SampType:** MBLK Units **mg/L**

SampID: MBLK-206871

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/05/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/05/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/05/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/05/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023

Batch 206871 **SampType:** LCS Units **mg/L**

SampID: LCS-206871

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.447**	0.5000	0	89.5	80	120	06/05/2023
Cobalt		0.0010		**0.461**	0.5000	0	92.3	80	120	06/05/2023
Selenium		0.0010		**0.451**	0.5000	0	90.2	80	120	06/05/2023
Thallium		0.0020		**0.218**	0.2500	0	87.2	80	120	06/05/2023
Vanadium		0.0050		**0.456**	0.5000	0	91.2	80	120	06/05/2023

Batch 206871 **SampType:** MS Units **mg/L**

SampID: 23051600-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Selenium		0.0010		**0.473**	0.5000	0.002202	94.2	75	125	06/05/2023
Vanadium		0.0050		**0.456**	0.5000	0	91.1	75	125	06/05/2023

Batch 206871 **SampType:** MSD Units **mg/L** RPD Limit: **20**

SampID: 23051600-003DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Selenium		0.0010		**0.456**	0.5000	0.002202	90.8	0.4734	3.68	06/05/2023
Vanadium		0.0050		**0.451**	0.5000	0	90.1	0.4557	1.12	06/05/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 206871 **SampType:** MS Units **mg/L**
SampID: 23051600-008EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.449**	0.5000	0	89.8	75	125	06/05/2023
Cobalt		0.0010		**0.435**	0.5000	0.0006618	87.0	75	125	06/05/2023
Selenium		0.0010		**0.459**	0.5000	0.001402	91.5	75	125	06/05/2023
Thallium		0.0020		**0.219**	0.2500	0	87.6	75	125	06/05/2023
Vanadium		0.0050		**0.446**	0.5000	0	89.1	75	125	06/05/2023

Batch 206871 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-008EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.453**	0.5000	0	90.6	0.4491	0.89	06/05/2023
Cobalt		0.0010		**0.423**	0.5000	0.0006618	84.5	0.4354	2.89	06/05/2023
Selenium		0.0010		**0.442**	0.5000	0.001402	88.0	0.4590	3.85	06/05/2023
Thallium		0.0020		**0.215**	0.2500	0	86.2	0.2190	1.63	06/05/2023
Vanadium		0.0050		**0.431**	0.5000	0	86.2	0.4457	3.38	06/05/2023

Batch 206873 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206873

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/05/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/05/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/05/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/05/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023

Batch 206873 **SampType:** LCS Units **mg/L**
SampID: LCS-206873

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.447**	0.5000	0	89.4	80	120	06/05/2023
Cobalt		0.0010		**0.463**	0.5000	0	92.6	80	120	06/05/2023
Selenium		0.0010		**0.442**	0.5000	0	88.4	80	120	06/05/2023
Thallium		0.0020		**0.220**	0.2500	0	87.9	80	120	06/05/2023
Vanadium		0.0050		**0.450**	0.5000	0	89.9	80	120	06/05/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)

Batch 206873 **SampType:** MS Units **mg/L**
SampID: 23051600-044EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.905**	1.000	0	90.5	75	125	06/05/2023
Cobalt		0.0010		**0.812**	1.000	0	81.2	75	125	06/05/2023
Selenium		0.0010		**0.807**	1.000	0	80.7	75	125	06/05/2023
Thallium		0.0020		**0.406**	0.5000	0	81.2	75	125	06/05/2023
Vanadium		0.0050		**0.813**	1.000	0	81.3	75	125	06/05/2023

Batch 206873 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-044EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.922**	1.000	0	92.2	0.9050	1.85	06/05/2023
Cobalt		0.0010		**0.814**	1.000	0	81.4	0.8117	0.24	06/05/2023
Selenium		0.0010		**0.790**	1.000	0	79.0	0.8065	2.08	06/05/2023
Thallium		0.0020		**0.403**	0.5000	0	80.6	0.4060	0.74	06/05/2023
Vanadium		0.0050		**0.814**	1.000	0	81.4	0.8126	0.16	06/05/2023

Batch 206891 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206891

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/06/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/06/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/06/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/07/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/06/2023

Batch 206891 **SampType:** LCS Units **mg/L**
SampID: LCS-206891

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.433**	0.5000	0	86.5	80	120	06/06/2023
Cobalt		0.0010		**0.449**	0.5000	0	89.8	80	120	06/06/2023
Selenium		0.0010		**0.447**	0.5000	0	89.4	80	120	06/06/2023
Thallium		0.0020		**0.211**	0.2500	0	84.5	80	120	06/07/2023
Vanadium		0.0050		**0.434**	0.5000	0	86.8	80	120	06/06/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 206856 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206856

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/05/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/05/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/05/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/05/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023

Batch 206856 **SampType:** LCS Units **mg/L**
SampID: LCS-206856

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.493**	0.5000	0	98.5	80	120	06/05/2023
Cobalt		0.0010		**0.469**	0.5000	0	93.8	80	120	06/05/2023
Selenium		0.0010		**0.494**	0.5000	0	98.8	80	120	06/05/2023
Thallium		0.0020		**0.229**	0.2500	0	91.6	80	120	06/05/2023
Vanadium		0.0050		**0.468**	0.5000	0	93.6	80	120	06/05/2023

Batch 206856 **SampType:** MS Units **mg/L**
SampID: 23051600-007DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.497**	0.5000	0	99.5	75	125	06/05/2023
Cobalt		0.0010		**0.461**	0.5000	0.004599	91.2	75	125	06/05/2023
Selenium		0.0010		**0.491**	0.5000	0	98.1	75	125	06/05/2023
Thallium		0.0020		**0.237**	0.2500	0	94.7	75	125	06/05/2023
Vanadium		0.0050		**0.475**	0.5000	0	95.0	75	125	06/05/2023

Batch 206856 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-007DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.489**	0.5000	0	97.8	0.4974	1.66	06/05/2023
Cobalt		0.0010		**0.461**	0.5000	0.004599	91.3	0.4607	0.07	06/05/2023
Selenium		0.0010		**0.503**	0.5000	0	100.5	0.4905	2.45	06/05/2023
Thallium		0.0020		**0.235**	0.2500	0	94.1	0.2368	0.69	06/05/2023
Vanadium		0.0050		**0.472**	0.5000	0	94.4	0.4752	0.64	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 206856 **SampType:** MS Units **mg/L**
SampID: 23051600-024CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.491**	0.5000	0	98.2	75	125	06/05/2023
Cobalt		0.0010		**0.479**	0.5000	0.001809	95.4	75	125	06/05/2023
Selenium		0.0010		**0.522**	0.5000	0	104.5	75	125	06/05/2023
Thallium		0.0020		**0.240**	0.2500	0	95.9	75	125	06/05/2023

Batch 206856 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-024CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.503**	0.5000	0	100.5	0.4909	2.36	06/05/2023
Cobalt		0.0010		**0.492**	0.5000	0.001809	98.1	0.4789	2.74	06/05/2023
Selenium		0.0010		**0.542**	0.5000	0	108.5	0.5223	3.75	06/05/2023
Thallium		0.0020		**0.251**	0.2500	0	100.5	0.2397	4.75	06/05/2023

Batch 206857 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/05/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/05/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/05/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/05/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/05/2023

Batch 206857 **SampType:** LCS Units **mg/L**
SampID: LCS-206857

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.512**	0.5000	0	102.4	80	120	06/05/2023
Cobalt		0.0010		**0.473**	0.5000	0	94.7	80	120	06/05/2023
Selenium		0.0010		**0.482**	0.5000	0	96.4	80	120	06/05/2023
Thallium		0.0020		**0.235**	0.2500	0	94.2	80	120	06/05/2023
Vanadium		0.0050		**0.471**	0.5000	0	94.2	80	120	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 206857 **SampType:** MS Units **mg/L**
SampID: 23051600-032CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.505**	0.5000	0.0008773	100.8	75	125	06/05/2023
Cobalt		0.0010		**0.462**	0.5000	0.0005179	92.3	75	125	06/05/2023
Selenium		0.0010		**0.505**	0.5000	0.001397	100.7	75	125	06/05/2023
Thallium		0.0020		**0.238**	0.2500	0	95.2	75	125	06/05/2023

Batch 206857 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-032CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.513**	0.5000	0.0008773	102.4	0.5047	1.60	06/05/2023
Cobalt		0.0010		**0.466**	0.5000	0.0005179	93.1	0.4621	0.85	06/05/2023
Selenium		0.0010		**0.516**	0.5000	0.001397	103.0	0.5048	2.29	06/05/2023
Thallium		0.0020		**0.242**	0.2500	0	96.9	0.2379	1.80	06/05/2023

Batch 206857 **SampType:** MS Units **mg/L**
SampID: 23051600-037CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.514**	0.5000	0	102.9	75	125	06/05/2023
Cobalt		0.0010		**0.469**	0.5000	0.0001901	93.8	75	125	06/05/2023
Selenium		0.0010		**0.505**	0.5000	0.001439	100.8	75	125	06/05/2023
Thallium		0.0020		**0.243**	0.2500	0	97.0	75	125	06/05/2023

Batch 206857 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-037CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		**0.504**	0.5000	0	100.8	0.5144	2.00	06/05/2023
Cobalt		0.0010		**0.454**	0.5000	0.0001901	90.7	0.4694	3.43	06/05/2023
Selenium		0.0010		**0.478**	0.5000	0.001439	95.4	0.5054	5.52	06/05/2023
Thallium		0.0020		**0.237**	0.2500	0	94.7	0.2426	2.43	06/05/2023

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll **Work Order:** 23051600

Client Project: HEN-23Q2 **Report Date:** 21-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 206885 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**< 0.0010**	0.0004	0	0	-100	100	06/06/2023
Cobalt		0.0010		**< 0.0010**	0.0001	0	0	-100	100	06/06/2023
Selenium		0.0010		**< 0.0010**	0.0006	0	0	-100	100	06/06/2023
Thallium		0.0020		**< 0.0020**	0.0010	0	0	-100	100	06/07/2023
Vanadium		0.0050		**< 0.0050**	0.0028	0	0	-100	100	06/06/2023

Batch 206885 **SampType:** LCS Units **mg/L**
SampID: LCS-206885

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		**0.525**	0.5000	0	104.9	80	120	06/06/2023
Cobalt		0.0010		**0.512**	0.5000	0	102.5	80	120	06/06/2023
Selenium		0.0010		**0.547**	0.5000	0	109.3	80	120	06/06/2023
Thallium		0.0020		**0.232**	0.2500	0	92.6	80	120	06/07/2023
Vanadium		0.0050		**0.503**	0.5000	0	100.7	80	120	06/06/2023

Batch 206885 **SampType:** MS Units **mg/L**
SampID: 23051600-029CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Selenium		0.0010		**0.538**	0.5000	0.003991	106.9	75	125	06/06/2023
Vanadium		0.0050		**0.494**	0.5000	0.005282	97.7	75	125	06/06/2023

Batch 206885 **SampType:** MSD Units **mg/L** RPD Limit: **20**
SampID: 23051600-029CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Selenium		0.0010		**0.499**	0.5000	0.003991	99.0	0.5384	7.56	06/06/2023
Vanadium		0.0050		**0.466**	0.5000	0.005282	92.1	0.4935	5.84	06/06/2023

SW-846 7470A (DISSOLVED)

Batch 206867 **SampType:** MS Units **mg/L**
SampID: 23051600-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00497**	0.0050	0	99.4	75	125	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 7470A (DISSOLVED)

Batch 206867 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-003DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		**0.00493**	0.0050	0	98.5	0.004970	0.89	06/05/2023

Batch 206893 **SampType:** MS Units **mg/L**
SampID: 23051600-029DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00513**	0.0050	0	102.6	75	125	06/05/2023

Batch 206893 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-029DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		**0.00523**	0.0050	0	104.5	0.005132	1.85	06/05/2023

SW-846 7470A (TOTAL)

Batch 206867 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206867

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**< 0.00020**	0.0001	0	0	-100	100	06/05/2023

Batch 206867 **SampType:** LCS Units **mg/L**
SampID: LCS-206867

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00486**	0.0050	0	97.2	85	115	06/05/2023

Batch 206867 **SampType:** MS Units **mg/L**
SampID: 23051600-014DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00502**	0.0050	0	100.5	75	125	06/05/2023

Batch 206867 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-014DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		**0.00521**	0.0050	0	104.1	0.005023	3.59	06/05/2023

Quality Control Results

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051600
Report Date: 21-Jun-23

SW-846 7470A (TOTAL)

Batch 206869 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206869

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**< 0.00020**	0.0001	0	0	-100	100	06/05/2023

Batch 206869 **SampType:** LCS Units **mg/L**
SampID: LCS-206869

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00490**	0.0050	0	98.1	85	115	06/05/2023

Batch 206869 **SampType:** MS Units **mg/L**
SampID: 23051600-019CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00521**	0.0050	0	104.3	75	125	06/05/2023

Batch 206869 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-019CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		**0.00501**	0.0050	0	100.1	0.005215	4.10	06/05/2023

Batch 206893 **SampType:** MBLK Units **mg/L**
SampID: MBLK-206893

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**< 0.00020**	0.0001	0	0	-100	100	06/05/2023

Batch 206893 **SampType:** LCS Units **mg/L**
SampID: LCS-206893

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00511**	0.0050	0	102.2	85	115	06/05/2023

Batch 206893 **SampType:** MS Units **mg/L**
SampID: 23051600-005DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		**0.00501**	0.0050	0	100.2	75	125	06/05/2023

Batch 206893 **SampType:** MSD Units **mg/L** RPD Limit: **15**
SampID: 23051600-005DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		**0.00476**	0.0050	0	95.3	0.005009	5.04	06/05/2023

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051600
Report Date: 21-Jun-23

Carrier: Joe Riley

Received By: ANC

Completed by: Allison Colin
On: 02-Jun-23

Reviewed by: Ellie Hopkins
On: 02-Jun-23

Pages to follow: Chain of custody 6 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☑	NA ☐

Any No responses must be detailed below or on the COC.

pH strip #88374/79929. - TWM/acolin - 6/1/2023 3:15:29 PM

Additional HNO3 (89071) was needed in Field Blank and additonal NaOH (81662) was needed in HEN-18&D upon arrival at the laboratory. - TWM/acolin - 6/1/2023 3:15:51 PM

Per Joe Riley, 22 and 22D bottles were switched in the field. - EAH 6/1/23

Samples collected on 6/1/23 were delivered same-day at 14.4C (on ice - LTG 5). - ehurley - 6/5/2023 3:49:12 PM

23051600

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
								Preservatives																						ADDED HNO3 TO DISS. FB ADDED NaOH TO HEN 84D TAL 48374/79929
1	HEN-02						7	3		1	2	1															✓			23051600-001
2	HEN-03R			5-31-23	1312		10	3	2	2	2	1					✓				✓			✓		✓	✓			002
3	HEN-05IR			5-31-23	1517		9	2	2	2	2	1								✓										003
4	HEN-05&DR			5-31-23	1458		9	2	2	2	2	1								✓										004
5	HEN-07						10	3	2	2	2	1					✓	✓			✓	✓		✓		✓	✓			005
6	HEN-08	TT		~~5-31-23~~	~~1510~~ ☆		11	3	3	2	2	1					✓	✓		✓	✓	✓		✓		✓	✓			006
7	HEN-08&D	409	120	5/31/23	1510		11	3	3	2	2	1					✓	✓		✓	✓	✓		✓		✓	✓			007
8	HEN-10			5-31-23	922		10	3	2	2	2	1								✓							✓			008
9	HEN-12			5-31-23	1137		10	2	3	2	2	1						✓		✓		✓				✓				009
10	HEN-13			5-31-23	1204		10	2	3	2	2	1						✓		✓		✓				✓				010
11	HEN-16						6	2	2	2								✓				✓				✓				011
12	HEN-17						6	2	2	2								✓				✓				✓				012
13	HEN-18#S			5-31-23	1415		10	3	2	2	2	1					✓				✓			✓		✓	✓			013
14	HEN-18&D			5-31-23	1349		10	3	2	2	2	1					✓				✓			✓		✓	✓			014
15	HEN-21R			5-31-23	1109		6	2	2	2									✓				✓		✓	✓		✓		015
16	HEN-22 ⊕			5-31-23	1401		6	2	2	2									✓				✓		✓	✓		✓		016

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	[signature]	6/1/23	1201	[signature]	6/1/23	1201	Y N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 6/1/23 1200

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

☆ 08D was collected on 5/31/23 per Joe Riley. [illegible] 6/1/23

⊕ 22 and 22D bottles were switched in the field per Joe Riley. [illegible] 6/1/23

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-22&D			5-31-23	1419		6	2	2	2									✓				✓		✓	✓		✓		23051600-017
2	HEN-23				1200		6	2	2	2									✓				✓		✓	✓		✓		018
3	HEN-25				1259		6	2	2	2									✓						✓	✓				019
4	HEN-26				1241		6	2	2	2									✓						✓	✓				020
5	HEN-27				0915		6	2	2	2									✓				✓		✓	✓		✓		021
6	HEN-30			5-30-23	1509		0												✓						✓					022
7	HEN-31			5-30-23	1504		0												✓						✓					023
8	HEN-32			5-31-23	0946		6	2	2	2									✓				✓		✓	✓		✓		024
9	HEN-33			5-30-23	1515		0												✓						✓					025
10	HEN-34			5-31-23	1039		6	2	2	2									✓				✓		✓	✓		✓		026
11	HEN-35			5-31-23	1009		6	2	2	2									✓				✓		✓	✓		✓		027
12	HEN-36			5-30-23	1528		0												✓						✓					028
13	HEN-40#S						9	2	2	2	2	1								✓										029
14	HEN-45#S						10	3	2	2	2	1					✓				✓			✓		✓	✓			030
15	HEN-46			5-31-23	1100		6	2	2	2								✓				✓				✓				031
16	HEN-47			5-31-23	956		6	2	2	2								✓				✓				✓				032

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	Tek lab	6/1/23	1201	[illegible]	6/1	1201	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Ryker

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 6/1/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 3

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:	10 day

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	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): HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-49			5-31-23	1219		6	2	2	2								✓				✓		✓	✓		✓		23051600 - 033
2	HEN-50			↓	1337		6	2	2	2								✓				✓		✓	✓		✓		034
3	HEN-51			↓	1137		6	2	2	2								✓				✓		✓	✓		✓		035
4	HEN-52						6	2	2	2							✓				✓				✓				036
5	HEN-54			5-31-23	1027		6	2	2	2							✓				✓				✓				037
6	HEN-55			5-30-23	1438		0										✓				✓								038
7	HEN-XPW01-pore						6	2	2	2							✓								✓				039
8	HEN-XPW02-pore						6	2	2	2							✓								✓				040
9	HEN-XPW03-pore						6	2	2	2							✓								✓				041
10	HEN-XSG01			5-30-23	1403		0										✓				✓								042
11	HEN-YSG-ILRIVER			5-30-23	1371		0									✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		043
12	Field Blank			6/1/23	0822		11	3	3	2	2	1				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		044
13	HEN-08 Duplicate						11	3	3	2	2	1				✓	✓		✓	✓	✓	✓	✓		✓	✓			045
14																						FE Chem Standards							
15																													
16																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	Tekfab	6/1/23	1201	[illegible]	6/1	12:01	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Riley

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 6/1/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

23051600

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Vistra Corp	Report To:	Brian Voelker	Attention:	Jason Stuckey
Address:	13498 E. 900th St	Copy To:	Jason Stuckey	Company Name:	Vistra Corp
				Address:	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.:		Quote Reference:	
Phone:	(217) 753-8911	Fax:		Project Manager:	
Requested Due Date/TAT:	10 day	Project Name:		Profile #:	
		Project Number:	2285		

REGULATORY AGENCY		
NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE:	IL	

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

PCBs ✓ 88374 TM - 79929

Ø HEADSPACE TM

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-02			6/1/23	1102		7	3		1	2	1															✓			23051600-001
2	HEN-03R						10	3	2	2	2	1					✓				✓			✓		✓	✓			002
3	HEN-05!R						9	2	2	2	2	1								✓										003
4	HEN-05&DR						9	2	2	2	2	1								✓										004
5	HEN-07			6-1-23	1145		10	3	2	2	2	1					✓	✓			✓	✓		✓		✓	✓			005
6	HEN-08			6-1-23	0854		11	3	3	2	2	1					✓	✓		✓	✓	✓		✓		✓	✓			006
7	HEN-08&D			~~5-31-23~~	~~1510~~		11	3	3	2	2	1					✓	✓		✓	✓	✓		✓		✓	✓			007
8	HEN-10						10	3	2	2	2	1								✓							✓			008
9	HEN-12						10	2	3	2	2	1						✓		✓		✓				✓				009
10	HEN-13						10	2	3	2	2	1						✓		✓		✓				✓				010
11	HEN-16			6-1-23	0940		6	2	2	2								✓				✓				✓				011
12	HEN-17			6-1-23	1008		6	2	2	2								✓				✓				✓				012
13	HEN-18#S						10	3	2	2	2	1					✓				✓			✓		✓	✓			013
14	HEN-18&D						10	3	2	2	2	1					✓				✓			✓		✓	✓			014
15	HEN-21R						6	2	2	2									✓				✓		✓	✓		✓		015
16	HEN-22						6	2	2	2									✓				✓		✓	✓		✓		016

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q2 Rev 1	Tracy Carroll	6/1/23	1600	[illegible]	6/1/23	1600	14.4	Y	N	
							4.65			
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TCarroll BGillihan JCalp

SIGNATURE of SAMPLER: Tracy Carroll

DATE Signed (MM/DD/YY): 6/1/23

23051600

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 3

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:	10 day

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

Requested Analysis Filtered (Y/N)

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)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-22&D						6	2	2	2									✓				✓		✓	✓		✓		23051600-017
2	HEN-23						6	2	2	2									✓				✓		✓	✓		✓		018
3	HEN-25						6	2	2	2									✓						✓	✓				019
4	HEN-26						6	2	2	2									✓						✓	✓				020
5	HEN-27						6	2	2	2									✓				✓		✓	✓		✓		021
6	HEN-30						0												✓						✓					022
7	HEN-31						0												✓						✓					023
8	HEN-32						6	2	2	2									✓				✓		✓	✓		✓		024
9	HEN-33						0												✓						✓					025
10	HEN-34						6	2	2	2									✓				✓		✓	✓		✓		026
11	HEN-35						6	2	2	2									✓				✓		✓	✓		✓		027
12	HEN-36						0												✓						✓					028
13	HEN-40#S			6-1-23	1034		9	2	2	2	2	1								✓										029
14	HEN-45#S			6-1-23	1106		10	3	2	2	2	1					✓				✓			✓		✓	✓			030
15	HEN-46						6	2	2	2								✓				✓				✓				031
16	HEN-47						6	2	2	2								✓				✓				✓				032

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q2 Rev 1	Trevor Carroll	6/1/23	1600	Elizabeth A Hurley	6/1/23	1600				
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: T Carroll B Gillman J Colp

SIGNATURE of SAMPLER: Trevor Carroll DATE Signed (MM/DD/YY): 6/1/23

CHAIN-OF-CUSTODY / Analytical Request Document

23051600

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 3 of 3

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:	10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-49						6	2	2	2									✓				✓		✓	✓		✓		23051600 - 033
2	HEN-50						6	2	2	2									✓				✓		✓	✓		✓		034
3	HEN-51						6	2	2	2									✓				✓		✓	✓		✓		035
4	HEN-52			6/1/23	1029		6	2	2	2								✓				✓				✓				036
5	HEN-54						6	2	2	2								✓				✓				✓				037
6	HEN-55						0											✓				✓								038
7	HEN-XPW01-pore			6/1/23	858		6	2	2	2								✓								✓				039
8	HEN-XPW02-pore				925		6	2	2	2								✓								✓				040
9	HEN-XPW03-pore				952		6	2	2	2								✓								✓				041
10	HEN-XSG01						0											✓				✓								042
11	HEN-YSG-ILRIVER						0										✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		043
12	Field Blank						11	3	3	2	2	1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		044
13	HEN-08 Duplicate			6-1-23	0854		11	3	3	2	2	1					✓	✓		✓	✓	✓	✓	✓		✓	✓			045
14																							EE SAME SIZE/23							
15																														
16																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	Tracy Carroll	6/1/23	1600	Elizabeth A Thaler	6/1/23	1600	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: AC, BG, JC

SIGNATURE of SAMPLER: Tracy Carroll

DATE Signed (MM/DD/YY): 6/1/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

July 13, 2023

Eric Bauer
Ramboll
300 S. Wacker Drive
Suite 130
Chicago, IL 60606
TEL: (414) 837-3607
FAX: (414) 837-3608

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: HEN-23Q2 **WorkOrder:** 23051601

Dear Eric Bauer:

TEKLAB, INC received 30 samples on 6/1/2023 4:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley

Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Report Contents

Client: Ramboll

Client Project: HEN-23Q2

Work Order: 23051601

Report Date: 13-Jul-23

This reporting package includes the following:

Definitions

Client: Ramboll **Work Order:** 23051601

Client Project: HEN-23Q2 **Report Date:** 13-Jul-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

Client: Ramboll

Work Order: 23051601

Client Project: HEN-23Q2

Report Date: 13-Jul-23

Qualifiers

- Unknown hydrocarbon
C - RL shown is a Client Requested Quantitation Limit
H - Holding times exceeded
J - Analyte detected below quantitation limits
ND - Not Detected at the Reporting Limit
S - Spike Recovery outside recovery limits
X - Value exceeds Maximum Contaminant Level
B - Analyte detected in associated Method Blank
E - Value above quantitation range
I - Associated internal standard was outside method criteria
M - Manual Integration used to determine area response
R - RPD outside accepted recovery limits
T - TIC(Tentatively identified compound)

Case Narrative

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23

Cooler Receipt Temp: 5.4 °C

An employee of Teklab, Inc. collected the sample(s).

HEN-18&D will be reported as collected at 1349 rather than 1359 per raw field file. EAH 7/13/23

Analyses were performed by Pace Analytical National. See attached report for results and QC.

Locations

Collinsville

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Springfield

Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Kansas City

Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Collinsville Air

Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Chicago

Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-001
Client Sample ID: HEN-03R
Matrix: GROUNDWATER
Collection Date: 05/31/2023 13:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-002
Client Sample ID: HEN-07
Matrix: GROUNDWATER
Collection Date: 06/01/2023 11:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-003
Client Sample ID: HEN-08
Matrix: GROUNDWATER
Collection Date: 06/01/2023 8:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-004
Client Sample ID: HEN-08D
Matrix: GROUNDWATER
Collection Date: 05/31/2023 15:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-005
Client Sample ID: HEN-12
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-006
Client Sample ID: HEN-13
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-007
Client Sample ID: HEN-16
Matrix: GROUNDWATER
Collection Date: 06/01/2023 9:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-008
Client Sample ID: HEN-17
Matrix: GROUNDWATER
Collection Date: 06/01/2023 10:08

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-009
Client Sample ID: HEN-18#S
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/03/2023 16:14	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-010
Client Sample ID: HEN-18&D
Matrix: GROUNDWATER
Collection Date: 05/31/2023 13:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-011
Client Sample ID: HEN-21R
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:09

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-012
Client Sample ID: HEN-22
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-013
Client Sample ID: HEN-22&D
Matrix: GROUNDWATER
Collection Date: 05/31/2023 14:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-014
Client Sample ID: HEN-23
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-015
Client Sample ID: HEN-25
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-016
Client Sample ID: HEN-26
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-017
Client Sample ID: HEN-27
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-018
Client Sample ID: HEN-32
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:46

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-019
Client Sample ID: HEN-34
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:39

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-020
Client Sample ID: HEN-35
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:09

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-021
Client Sample ID: HEN-45#S
Matrix: GROUNDWATER
Collection Date: 06/01/2023 11:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-022
Client Sample ID: HEN-46
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-023
Client Sample ID: HEN-47
Matrix: GROUNDWATER
Collection Date: 05/31/2023 9:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-024
Client Sample ID: HEN-49
Matrix: GROUNDWATER
Collection Date: 05/31/2023 12:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-025
Client Sample ID: HEN-50
Matrix: GROUNDWATER
Collection Date: 05/31/2023 13:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-026
Client Sample ID: HEN-51
Matrix: GROUNDWATER
Collection Date: 05/31/2023 11:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-027
Client Sample ID: HEN-52
Matrix: GROUNDWATER
Collection Date: 06/01/2023 10:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-028
Client Sample ID: HEN-54
Matrix: GROUNDWATER
Collection Date: 05/31/2023 10:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-029
Client Sample ID: Field Blank
Matrix: AQUEOUS
Collection Date: 06/01/2023 8:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 16:26	R331495

Laboratory Results

http://www.teklabinc.com/

Client: Ramboll
Work Order: 23051601
Client Project: HEN-23Q2
Report Date: 13-Jul-23
Lab ID: 23051601-030
Client Sample ID: HEN-08 Duplicate
Matrix: GROUNDWATER
Collection Date: 06/01/2023 8:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SEE ATTACHED FOR SUBCONTRACTING ANALYSIS								
Subcontracted Analysis	*	0		**See Attached**		1	07/05/2023 21:27	R331495

Sample Summary

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051601
Report Date: 13-Jul-23

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
23051601-001	HEN-03R	Groundwater	1	05/31/2023 13:12
23051601-002	HEN-07	Groundwater	1	06/01/2023 11:45
23051601-003	HEN-08	Groundwater	1	06/01/2023 8:54
23051601-004	HEN-08D	Groundwater	1	05/31/2023 15:10
23051601-005	HEN-12	Groundwater	1	05/31/2023 11:37
23051601-006	HEN-13	Groundwater	1	05/31/2023 12:04
23051601-007	HEN-16	Groundwater	1	06/01/2023 9:40
23051601-008	HEN-17	Groundwater	1	06/01/2023 10:08
23051601-009	HEN-18#S	Groundwater	1	05/31/2023 14:15
23051601-010	HEN-18&D	Groundwater	1	05/31/2023 13:49
23051601-011	HEN-21R	Groundwater	1	05/31/2023 11:09
23051601-012	HEN-22	Groundwater	1	05/31/2023 14:01
23051601-013	HEN-22&D	Groundwater	1	05/31/2023 14:19
23051601-014	HEN-23	Groundwater	1	05/31/2023 12:00
23051601-015	HEN-25	Groundwater	1	05/31/2023 12:59
23051601-016	HEN-26	Groundwater	1	05/31/2023 12:41
23051601-017	HEN-27	Groundwater	1	05/31/2023 9:15
23051601-018	HEN-32	Groundwater	1	05/31/2023 9:46
23051601-019	HEN-34	Groundwater	1	05/31/2023 10:39
23051601-020	HEN-35	Groundwater	1	05/31/2023 10:09
23051601-021	HEN-45#S	Groundwater	1	06/01/2023 11:06
23051601-022	HEN-46	Groundwater	1	05/31/2023 11:00
23051601-023	HEN-47	Groundwater	1	05/31/2023 9:56
23051601-024	HEN-49	Groundwater	1	05/31/2023 12:19
23051601-025	HEN-50	Groundwater	1	05/31/2023 13:37
23051601-026	HEN-51	Groundwater	1	05/31/2023 11:37
23051601-027	HEN-52	Groundwater	1	06/01/2023 10:29
23051601-028	HEN-54	Groundwater	1	05/31/2023 10:27
23051601-029	Field Blank	Aqueous	1	06/01/2023 8:22
23051601-030	HEN-08 Duplicate	Groundwater	1	06/01/2023 8:54

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051601
Report Date: 13-Jul-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
23051601-001A	HEN-03R	05/31/2023 13:12	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-002A	HEN-07	06/01/2023 11:45	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-003A	HEN-08	06/01/2023 8:54	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-004A	HEN-08D	05/31/2023 15:10	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-005A	HEN-12	05/31/2023 11:37	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-006A	HEN-13	05/31/2023 12:04	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-007A	HEN-16	06/01/2023 9:40	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-008A	HEN-17	06/01/2023 10:08	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-009A	HEN-18#S	05/31/2023 14:15	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/03/2023 16:14
23051601-010A	HEN-18&D	05/31/2023 13:49	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-011A	HEN-21R	05/31/2023 11:09	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-012A	HEN-22	05/31/2023 14:01	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-013A	HEN-22&D	05/31/2023 14:19	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-014A	HEN-23	05/31/2023 12:00	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-015A	HEN-25	05/31/2023 12:59	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-016A	HEN-26	05/31/2023 12:41	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-017A	HEN-27	05/31/2023 9:15	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-018A	HEN-32	05/31/2023 9:46	06/01/2023 12:08		

Dates Report

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2
Work Order: 23051601
Report Date: 13-Jul-23

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-019A	HEN-34	05/31/2023 10:39	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-020A	HEN-35	05/31/2023 10:09	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-021A	HEN-45#S	06/01/2023 11:06	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-022A	HEN-46	05/31/2023 11:00	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-023A	HEN-47	05/31/2023 9:56	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-024A	HEN-49	05/31/2023 12:19	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-025A	HEN-50	05/31/2023 13:37	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-026A	HEN-51	05/31/2023 11:37	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-027A	HEN-52	06/01/2023 10:29	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-028A	HEN-54	05/31/2023 10:27	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-029A	Field Blank	06/01/2023 8:22	06/01/2023 12:08		
	See Attached for Subcontracting Analysis				07/05/2023 16:26
23051601-030A	HEN-08 Duplicate	06/01/2023 8:54	06/01/2023 16:00		
	See Attached for Subcontracting Analysis				07/05/2023 21:27

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Ramboll
Client Project: HEN-23Q2

Work Order: 23051601
Report Date: 13-Jul-23

Carrier: Joe Riley

Received By: ANC

Completed by: Allison Colin
On: 02-Jun-23

Reviewed by: Ellie Hopkins
On: 02-Jun-23

Pages to follow: Chain of custody 6 Extra pages included 51

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #88374. - TWM/acolin - 6/1/2023 3:23:50 PM

Per Joe Riley, 22 and 22D bottles were switched in the field. - EAH 6/1/23

Samples collected on 6/1/23 were delivered same-day at 14.4C (on ice - LTG 5). - ehurley - 6/5/2023 3:57:25 PM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): PCBs ✓ on SS374

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-02																												
2	HEN-03R			5-31-23	1312		2			2						✓				✓									23051601-001
3	HEN-05IR			↓	1517																								
4	HEN-05&DR			↓	1458																								
5	HEN-07						2			2						✓	✓			✓	✓								002
6	HEN-08	TE		~~5-31-23~~	~~1510~~ *		2			2						✓	✓			✓	✓								003
7	HEN-08&D	SAH 6/1/23		5/31/23	1510		2			2						✓	✓			✓	✓								004
8	HEN-10																												
9	HEN-12			5-31-23	1137		2			2							✓				✓								005
10	HEN-13			5-31-23	1204		2			2							✓				✓								006
11	HEN-16						2			2							✓				✓								007
12	HEN-17						2			2							✓				✓								008
13	HEN-18#S			5-31-23	1415		2			2						✓				✓									009
14	HEN-18&D			5-31-23	1359		2			2						✓				✓									010
15	HEN-21R			5-31-23	1109		2			2								✓				✓							011
16	HEN-22 ⊕			5-31-23	1401		2			2								✓				✓							012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
HEN-23Q2 Rev 1	[signature]	6/1/23	1201	[signature]	6/1	1201
Rev 22b/22H only.						

SAMPLE CONDITIONS: Temp in °C 5.4 / 6.2 #1 | Received on Ice (Y/N): Y | Custody Sealed Cooler (Y/N): N | Samples Intact (Y/N):

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Joe Riley / Justin Cole / Brett Gillihan / Travis Carlo
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 6/1/23 1208

* 08D was collected on 5/31/23 per Joe Riley. SAH 6/1/23

⊕ 22 and 22D bottles were switched in the field. SAH 6/1/23 (per Joe Riley)

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-22&D ⊕			5-31-23	1419		2			2								✓				✓							23051601-013
2	HEN-23			↓	1200		2			2								✓				✓							014
3	HEN-25				1259		2			2															✓				015
4	HEN-26				1241		2			2															✓				016
5	HEN-27			↓	0915		2			2								✓				✓							017
6	HEN-30																												
7	HEN-31																												
8	HEN-32			5-31-23	0946		2			2								✓				✓							018
9	HEN-33																												
10	HEN-34			5-31-23	1039		2			2								✓				✓							019
11	HEN-35			5-31-23	1009		2			2								✓				✓							020
12	HEN-36																												
13	HEN-40#S																												
14	HEN-45#S						2			2						✓				✓									021
15	HEN-46			5-31-23	1100		2			2							✓				✓								022
16	HEN-47			5-31-23	956		2			2							✓				✓								023

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	[signature] RK/93	6/1/23	1201	Allison Cole	6/1	12:01	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Ritel

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 6/1/23

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.

Page: 3 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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) HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-49			5-31-23	1219		2			2								✓				✓							23051601-024
2	HEN-50			↓	1337		2			2								✓				✓							025
3	HEN-51			↓	1137		2			2								✓				✓							026
4	HEN-52						2			2							✓				✓								027
5	HEN-54			5-31-23	1027		2			2							✓				✓								028
6	HEN-55																												
7	HEN-XPW01-pore																												
8	HEN-XPW02-pore																												
9	HEN-XPW03-pore																												
10	HEN-XSG01			5/30/23	1403																								
11	HEN-YSG-ILRIVER			↓	1321																								
12	Field Blank			6/1/23	0822		2			2						✓	✓	✓		✓	✓	✓			✓				029
13	HEN-08 Duplicate						2			2						✓	✓			✓	✓								030
14																													
15																													
16																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	[signature] TRI/lab	6/1/23	1201	[signature]	6/1	12:01	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: JOE RITZ

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 6/1/23

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.

23051601 ~~HEN-257-804~~

Page: 1 of 3

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:	10 day

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

Requested Analysis Filtered (Y/N)

PBES/88374 Ta

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-02																													
2	HEN-03R						2			2							✓				✓									23051601-001
3	HEN-05!R																													
4	HEN-05&DR																													
5	HEN-07			6-1-23	1145		2			2							✓	✓			✓	✓								002
6	HEN-08			6-1-23	0859		2			2							✓	✓			✓	✓								003
7	HEN-08&D						2			2							✓	✓			✓	✓								004
8	HEN-10																													
9	HEN-12						2			2								✓				✓								005
10	HEN-13						2			2								✓				✓								006
11	HEN-16			6-1-23	0940		2			2								✓				✓								007
12	HEN-17			6-1-23	1008		2			2								✓				✓								008
13	HEN-18#S						2			2							✓				✓									009
14	HEN-18&D						2			2							✓				✓									010
15	HEN-21R						2			2									✓				✓							011
16	HEN-22						2			2									✓				✓							012

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q2 Rev 1	Tracy Carroll	6/1/23	1600	Elizabeth A Thoby	6/1/23	1600	14.4	Y	N	
Ra-226/228 only.										
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DAC, BB, JC

SIGNATURE of SAMPLER: Tracy Carroll

DATE Signed (MM/DD/YY): 6/1/23

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 3

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:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-22&D						2			2									✓				✓							23051601-013
2	HEN-23						2			2									✓				✓							014
3	HEN-25						2			2																✓				015
4	HEN-26						2			2																✓				016
5	HEN-27						2			2									✓				✓							017
6	HEN-30																													
7	HEN-31																													
8	HEN-32						2			2									✓				✓							018
9	HEN-33																													
10	HEN-34						2			2									✓				✓							019
11	HEN-35						2			2									✓				✓							020
12	HEN-36																													
13	HEN-40#S																													
14	HEN-45#S			6-1-23	1106		2			2							✓				✓									021
15	HEN-46						2			2								✓				✓								022
16	HEN-47						2			2								✓				✓								023

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q2 Rev 1	Tiffany Carroll	6/1/23	1600	Elizabeth A Thurby	6/1/23	1600	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TAC, BG, JC

SIGNATURE of SAMPLER: Tiffany Carroll

DATE Signed (MM/DD/YY): 6/1/23

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.

Page: 3 of 3

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:	10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN-257-802	HEN-257-803	HEN-257-804	HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-CLOSURE-802-805	HEN-CLOSURE-804	HEN-SUP-000	HEN-WPCP-East	HEN-WPCP-West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN-49						2			2									✓				✓							23051601-024
2	HEN-50						2			2									✓				✓							025
3	HEN-51						2			2									✓				✓							026
4	HEN-52			6/1/23	1029		2			2								✓				✓								027
5	HEN-54						2			2								✓				✓								028
6	HEN-55																													
7	HEN-XPW01-pore																													
8	HEN-XPW02-pore																													
9	HEN-XPW03-pore																													
10	HEN-XSG01																													
11	HEN-YSG-ILRIVER																													
12	Field Blank						2			2							✓	✓	✓		✓	✓	✓			✓				029
13	HEN-08 Duplicate			6-1-23	0854		2			2							✓	✓			✓	✓								030
14																														
15																														
16																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q2 Rev 1	Travis Carroll	6/1/23	1600	Elizabeth A Stanley	6/1/23	1600				
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TAC, BG, JC

SIGNATURE of SAMPLER: Travis Carroll

DATE Signed (MM/DD/YY): 6/1/23

Pace Analytical®

ANALYTICAL REPORT

July 12, 2023

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

TEKLAB, Inc.

Sample Delivery Group:	L1623471
Samples Received:	06/07/2023
Project Number:	23051601
Description:	
Report To:	Elizabeth Hurley 5445 Horseshoe Lake Road Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Sc: Sample Chain of Custody

23051601-001 L1623471-01 Non-Potable Water

Collected by: Not specified; Collected date/time: 05/31/23 13:12; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087358	1	06/30/23 15:34	07/06/23 00:10	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087358	1	06/30/23 15:34	07/06/23 00:10	RGT	Mt. Juliet, TN

23051601-002 L1623471-02 Non-Potable Water

Collected by: Not specified; Collected date/time: 06/01/23 11:45; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087358	1	06/30/23 15:34	07/06/23 00:10	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087358	1	06/30/23 15:34	07/06/23 00:10	RGT	Mt. Juliet, TN

23051601-003 L1623471-03 Non-Potable Water

Collected by: Not specified; Collected date/time: 06/01/23 08:54; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-004 L1623471-04 Non-Potable Water

Collected by: Not specified; Collected date/time: 05/31/23 15:10; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-005 L1623471-05 Non-Potable Water

Collected by: Not specified; Collected date/time: 05/31/23 11:37; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-006 L1623471-06 Non-Potable Water

Collected by: Not specified; Collected date/time: 05/31/23 12:04; Received date/time: 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-007 L1623471-07 Non-Potable Water

Collected by | Collected date/time 06/01/23 09:40 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-008 L1623471-08 Non-Potable Water

Collected by | Collected date/time 06/01/23 10:08 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-009 L1623471-09 Non-Potable Water

Collected by | Collected date/time 05/31/23 14:15 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084727	1	06/26/23 18:37	07/03/23 16:14	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-010 L1623471-10 Non-Potable Water

Collected by | Collected date/time 05/31/23 13:49 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-011 L1623471-11 Non-Potable Water

Collected by | Collected date/time 05/31/23 11:09 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-012 L1623471-12 Non-Potable Water

Collected by | Collected date/time 05/31/23 14:01 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-013 L1623471-13 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 14:19	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-014 L1623471-14 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 12:00	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-015 L1623471-15 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 12:59	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-016 L1623471-16 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 12:41	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-017 L1623471-17 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 09:15	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-018 L1623471-18 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 09:46	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-019 L1623471-19 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 10:39	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2087644	1	07/05/23 11:52	07/06/23 17:45	RGT	Mt. Juliet, TN

23051601-020 L1623471-20 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 10:09	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-021 L1623471-21 Non-Potable Water

Collected by	Collected date/time	Received date/time
	06/01/23 11:06	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-022 L1623471-22 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 11:00	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-023 L1623471-23 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 09:56	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-024 L1623471-24 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/31/23 12:19	06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-025 L1623471-25 Non-Potable Water

Collected by | Collected date/time 05/31/23 13:37 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-026 L1623471-26 Non-Potable Water

Collected by | Collected date/time 05/31/23 11:37 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-027 L1623471-27 Non-Potable Water

Collected by | Collected date/time 06/01/23 10:29 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-028 L1623471-28 Non-Potable Water

Collected by | Collected date/time 05/31/23 10:27 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-029 L1623471-29 Non-Potable Water

Collected by | Collected date/time 06/01/23 08:22 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2084950	1	06/27/23 11:11	07/05/23 16:26	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

23051601-030 L1623471-30 Non-Potable Water

Collected by | Collected date/time 06/01/23 08:54 | Received date/time 06/07/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

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.

Mark W. Beasley
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.558	J	0.405	0.724	07/03/2023 16:14	WG2084727
(T) Barium	*110*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*86.7*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.807		0.483	0.806	07/06/2023 00:10	WG2087358

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.249	J	0.264	0.354	07/06/2023 00:10	WG2087358
(T) Barium-133	*99.0*			*30.0-143*	*07/06/2023 00:10*	WG2087358

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.465	U	0.256	0.480	07/03/2023 16:14	WG2084727
(T) Barium	*105*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*108*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.203	U	0.337	0.562	07/06/2023 00:10	WG2087358

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.203	J	0.219	0.292	07/06/2023 00:10	WG2087358
(T) Barium-133	*95.3*			*30.0-143*	*07/06/2023 00:10*	WG2087358

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.479		0.220	0.387	07/03/2023 16:14	WG2084727
(T) Barium	*100*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*115*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.598		0.259	0.424	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.119	J	0.136	0.174	07/06/2023 17:45	WG2087644
(T) Barium-133	*94.2*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.625		0.216	0.375	07/03/2023 16:14	WG2084727
(T) Barium	*94.3*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*111*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.10		0.525	0.459	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.47		0.478	0.264	07/06/2023 17:45	WG2087644
(T) Barium-133	*92.7*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.104	U	0.267	0.487	07/03/2023 16:14	WG2084727
(T) Barium	*104*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*111*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.36		0.569	0.510	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	2.26		0.502	0.152	07/06/2023 17:45	WG2087644
(T) Barium-133	*100*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0670	U	0.254	0.466	07/03/2023 16:14	WG2084727
(T) Barium	*101*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*114*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.60		0.530	0.529	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.54		0.465	0.250	07/06/2023 17:45	WG2087644
(T) Barium-133	*93.6*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.232	U	0.221	0.414	07/03/2023 16:14	WG2084727
(T) Barium	*100*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*113*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0656	U	0.265	0.485	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0656	U	0.146	0.253	07/06/2023 17:45	WG2087644
(T) Barium-133	*91.9*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.530		0.260	0.459	07/03/2023 16:14	WG2084727
(T) Barium	*107*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*106*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.597		0.332	0.581	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0666	U	0.206	0.357	07/06/2023 17:45	WG2087644
(T) Barium-133	*91.0*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.292	J	0.226	0.405	07/03/2023 16:14	WG2084727
(T) Barium	*107*			*30.0-143*	*07/03/2023 16:14*	WG2084727
(T) Yttrium	*104*			*30.0-136*	*07/03/2023 16:14*	WG2084727

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.745		0.357	0.466	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.453		0.276	0.230	07/06/2023 17:45	WG2087644
(T) Barium-133	*94.4*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.558	U	0.372	0.686	07/05/2023 16:26	WG2084950
(T) Barium	*115*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*110*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.06		0.551	0.730	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.06		0.407	0.250	07/06/2023 17:45	WG2087644
(T) Barium-133	*106*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.20		0.314	0.532	07/05/2023 16:26	WG2084950
(T) Barium	*112*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*122*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.44		0.528	0.600	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.23		0.424	0.277	07/06/2023 17:45	WG2087644
(T) Barium-133	*102*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.211	U	0.310	0.551	07/05/2023 16:26	WG2084950
(T) Barium	*108*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*99.4*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.781		0.453	0.638	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.570		0.331	0.322	07/06/2023 17:45	WG2087644
(T) Barium-133	*96.4*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.111	U	0.311	0.561	07/05/2023 16:26	WG2084950
(T) Barium	*107*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*95.1*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.104	U	0.364	0.633	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.104	U	0.189	0.294	07/06/2023 17:45	WG2087644
(T) Barium-133	*104*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0354	U	0.270	0.486	07/05/2023 16:26	WG2084950
(T) Barium	*107*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*117*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.392	J	0.347	0.519	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.357		0.218	0.181	07/06/2023 17:45	WG2087644
(T) Barium-133	*92.9*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.846		0.257	0.437	07/05/2023 16:26	WG2084950
(T) Barium	*119*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*106*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.70		0.417	0.469	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.850		0.328	0.169	07/06/2023 17:45	WG2087644
(T) Barium-133	*108*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.646		0.248	0.427	07/05/2023 16:26	WG2084950
(T) Barium	*126*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*110*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.38		0.431	0.530	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.738		0.353	0.314	07/06/2023 17:45	WG2087644
(T) Barium-133	*104*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.202	U	0.231	0.430	07/05/2023 16:26	WG2084950
(T) Barium	*122*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*83.5*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.219	J	0.332	0.537	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.219	J	0.239	0.321	07/06/2023 17:45	WG2087644
(T) Barium-133	*108*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.173	U	0.325	0.579	07/05/2023 16:26	WG2084950
(T) Barium	*116*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*91.5*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.312	J	0.361	0.614	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.139	J	0.156	0.205	07/06/2023 17:45	WG2087644
(T) Barium-133	*104*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0723	U	0.226	0.409	07/05/2023 16:26	WG2084950
(T) Barium	*119*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*95.0*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.492	J	0.357	0.495	07/06/2023 17:45	WG2087644

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.420		0.276	0.278	07/06/2023 17:45	WG2087644
(T) Barium-133	*104*			*30.0-143*	*07/06/2023 17:45*	WG2087644

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.246	J	0.257	0.457	07/05/2023 16:26	WG2084950
(T) Barium	*108*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*101*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.353	J	0.309	0.529	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.107	J	0.171	0.266	07/06/2023 21:21	WG2089290
(T) Barium-133	*91.8*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.427	J	0.278	0.487	07/05/2023 16:26	WG2084950
(T) Barium	*112*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*98.5*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	3.90		0.720	0.540	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	3.47		0.664	0.234	07/06/2023 21:21	WG2089290
(T) Barium-133	*108*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.0999	U	0.284	0.513	07/05/2023 16:26	WG2084950
(T) Barium	*115*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*91.2*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.20		0.571	0.535	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	2.20		0.495	0.152	07/06/2023 21:21	WG2089290
(T) Barium-133	*102*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.0655	U	0.332	0.603	07/05/2023 16:26	WG2084950
(T) Barium	*126*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*103*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.73		0.622	0.662	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.73	J3	0.526	0.274	07/06/2023 21:21	WG2089290
(T) Barium-133	*84.8*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.446		0.219	0.382	07/05/2023 16:26	WG2084950
(T) Barium	*114*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*102*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.583		0.307	0.502	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.136	J	0.215	0.325	07/06/2023 21:21	WG2089290
(T) Barium-133	*118*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.265	J	0.260	0.461	07/05/2023 16:26	WG2084950
(T) Barium	*111*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*111*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.580		0.346	0.510	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.315		0.228	0.217	07/06/2023 21:21	WG2089290
(T) Barium-133	*104*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.878		0.250	0.421	07/05/2023 16:26	WG2084950
(T) Barium	*116*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*103*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.43		0.547	0.490	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.55		0.487	0.250	07/06/2023 21:21	WG2089290
(T) Barium-133	*113*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.650		0.211	0.359	07/05/2023 16:26	WG2084950
(T) Barium	*116*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*107*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.37		0.396	0.453	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.719		0.335	0.277	07/06/2023 21:21	WG2089290
(T) Barium-133	*113*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0354	U	0.286	0.512	07/05/2023 16:26	WG2084950
(T) Barium	*108*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*97.7*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.504	J	0.424	0.610	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.469		0.313	0.332	07/06/2023 21:21	WG2089290
(T) Barium-133	*93.5*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.396		0.223	0.391	07/05/2023 16:26	WG2084950
(T) Barium	*122*			*30.0-143*	*07/05/2023 16:26*	WG2084950
(T) Yttrium	*102*			*30.0-136*	*07/05/2023 16:26*	WG2084950

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.403	J	0.278	0.504	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.00705	U	0.166	0.318	07/06/2023 21:21	WG2089290
(T) Barium-133	*92.3*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	3.42		0.359	0.561	07/05/2023 21:27	WG2085377
(T) Barium	*87.3*			*30.0-143*	*07/05/2023 21:27*	WG2085377
(T) Yttrium	*108*			*30.0-136*	*07/05/2023 21:27*	WG2085377

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	3.60		0.392	0.586	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.186		0.157	0.168	07/06/2023 21:21	WG2089290
(T) Barium-133	*113*			*30.0-143*	*07/06/2023 21:21*	WG2089290

Method Blank (MB)

(MB) R3946607-1 07/03/23 16:14

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.106	U	0.159	0.289
(T) Barium	*119*		*119*	
(T) Yttrium	*98.9*		*98.9*	

L1623471-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-01 07/03/23 16:14 • (DUP) R3946607-5 07/03/23 16:14

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	0.558	0.405	0.724	-0.454	0.392	0.724	1	200	1.80	U	20	3
(T) Barium	*110*			*110*	*110*							
(T) Yttrium	*86.7*			*111*	*111*							

Laboratory Control Sample (LCS)

(LCS) R3946607-2 07/03/23 16:14

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.14	103	80.0-120	
(T) Barium			*110*		
(T) Yttrium			*112*		

L1622211-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1622211-01 07/03/23 16:14 • (MS) R3946607-3 07/03/23 16:14 • (MSD) R3946607-4 07/03/23 16:14

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	0.191	9.44	9.96	92.5	97.7	1	70.0-130			5.32		20
(T) Barium		*111*			*116*	*110*							
(T) Yttrium		*103*			*110*	*111*							

Method Blank (MB)

(MB) R3946627-1 07/05/23 16:26

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.219	J	0.164	0.291
(T) Barium	*131*		*131*	
(T) Yttrium	*96.4*		*96.4*	

L1623471-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-10 07/05/23 16:26 • (DUP) R3946627-5 07/05/23 16:26

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	-0.558	0.372	0.686	-0.377	0.373	0.686	1	0.000	0.343	U	20	3
(T) Barium	*115*			*117*	*117*							
(T) Yttrium	*110*			*105*	*105*							

Laboratory Control Sample (LCS)

(LCS) R3946627-2 07/05/23 16:26

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.40	108	80.0-120	
(T) Barium			*122*		
(T) Yttrium			*98.3*		

L1623471-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-23 07/05/23 16:26 • (MS) R3946627-3 07/05/23 16:26 • (MSD) R3946627-4 07/05/23 16:26

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	-0.0655	19.0	17.9	114	107	1	70.0-130			6.23		20
(T) Barium		*126*			*123*	*122*							
(T) Yttrium		*103*			*102*	*116*							

Method Blank (MB)

(MB) R3946996-1 07/05/23 21:27

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.202	J	0.186	0.335
(T) Barium	*84.2*		*84.2*	
(T) Yttrium	*106*		*106*	

L1623496-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1623496-03 07/05/23 21:27 • (DUP) R3946996-5 07/05/23 21:27

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	1.09	0.320	0.550	1.05	0.420	0.550	1	4.30	0.0871		20	3
(T) Barium	*77.6*			*93.1*	*93.1*							
(T) Yttrium	*108*			*107*	*107*							

Laboratory Control Sample (LCS)

(LCS) R3946996-2 07/05/23 21:27

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.08	102	80.0-120	
(T) Barium			*92.3*		
(T) Yttrium			*117*		

L1623493-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623493-01 07/05/23 21:27 • (MS) R3946996-3 07/05/23 21:27 • (MSD) R3946996-4 07/05/23 21:27

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	0.153	10.4	11.1	102	109	1	70.0-130			6.34		20
(T) Barium		*75.2*			*90.8*	*87.9*							
(T) Yttrium		*109*			*109*	*110*							

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3945585-5 07/06/23 00:18

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	0.00365	U	0.0189	0.0365
(T) Barium-133	*96.3*		*96.3*	

L1623344-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1623344-01 07/06/23 00:18 • (DUP) R3945585-4 07/06/23 00:10

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	7.21	1.02	0.218	6.41	0.904	0.218	1	11.7	0.583		20	3
(T) Barium-133	*99.5*			*97.6*	*97.6*							

Laboratory Control Sample (LCS)

(LCS) R3945585-1 07/06/23 00:10

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.26	105	80.0-120	
(T) Barium-133			*99.6*		

L1623471-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-01 07/06/23 00:10 • (MS) R3945585-2 07/06/23 00:10 • (MSD) R3945585-3 07/06/23 00:10

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	0.249	18.6	19.0	91.8	93.8	1	75.0-125			2.13		20
(T) Barium-133		*99.0*			*86.4*	*87.8*							

Method Blank (MB)

(MB) R3946754-1 07/06/23 17:45

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	0.00425	U	0.0395	0.0803
(T) Barium-133	*92.2*		*92.2*	

L1628140-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1628140-23 07/06/23 17:45 • (DUP) R3946754-5 07/06/23 17:45

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	0.0812	0.183	0.298	-0.0667	0.0975	0.298	1	200	0.714	U	20	3
(T) Barium-133	*105*			*94.2*	*94.2*							

Laboratory Control Sample (LCS)

(LCS) R3946754-2 07/06/23 17:45

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.01	80.0	80.0-120	
(T) Barium-133			*91.2*		

L1623471-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-05 07/06/23 17:45 • (MS) R3946754-6 07/07/23 23:34 • (MSD) R3946754-4 07/06/23 17:45

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	2.26	17.4	19.1	75.8	84.4	1	75.0-125			9.41		20
(T) Barium-133		*100*			*90.1*	*86.9*							

Method Blank (MB)

(MB) R3946774-1 07/06/23 21:21

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	-0.00437	U	0.0542	0.105
(T) Barium-133	*77.4*		*77.4*	

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-5 07/06/23 21:21

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	1.73	0.526	0.274	0.0499	0.0948	0.274	1	189	3.14	J3 U	20	3
(T) Barium-133	*84.8*			*99.6*	*99.6*							

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-6 07/07/23 23:34

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	1.73	0.526	0.274	0.0460	0.165	0.274	1	190	3.05	J3 U	20	3
(T) Barium-133	*84.8*			*99.6*	*99.6*							

Laboratory Control Sample (LCS)

(LCS) R3946774-2 07/06/23 21:21

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.08	81.5	80.0-120	
(T) Barium-133			*88.5*		

L1623471-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-28 07/06/23 21:21 • (MS) R3946774-3 07/06/23 21:21 • (MSD) R3946774-4 07/06/23 21:21

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	0.469	16.8	17.9	81.6	87.0	1	75.0-125			6.23		20
(T) Barium-133		*93.5*			*84.3*	*89.3*							

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

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.
J3	The associated batch QC was outside the established quality control range for precision.
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	LAO00356
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.

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Tracy Carroll/TEKLAB QC Level: 3

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23051601

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 34507 Phone: (618) 344-1004

4623471

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228
-01	23051601-001	5/31/23 1312	HNO3	Groundwater	✔
-02	23051601-002	6/1/23 1145	HNO3	Groundwater	✔
-03	23051601-003	6/1/23 0854	HNO3	Groundwater	✔
-04	23051601-004	5/31/23 1510	HNO3	Groundwater	✔
-05	23051601-005	5/31/23 1137	HNO3	Groundwater	✔
-06	23051601-006	5/31/23 1204	HNO3	Groundwater	✔
-07	23051601-007	6/1/23 0940	HNO3	Groundwater	✔
-08	23051601-008	6/1/23 1008	HNO3	Groundwater	✔
-09	23051601-009	5/31/23 1415	HNO3	Groundwater	✔
-10	23051601-010	5/31/23 1359	HNO3	Groundwater	✔
-11	23051601-011	5/31/23 1109	HNO3	Groundwater	✔

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	6/5/23	Hailey Robertson	6/7/23 1030

PH-10BDH4321 TRC-2144141
CR6-220221V

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Tracy Carroll/TEKLAB QC Level: 3

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23051601

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 34507 Phone: (618) 344-1004

L1623471

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-12	23051601-012	5/31/23 1401	HNO3	Groundwater	✔											
-13	23051601-013	5/31/23 1419	HNO3	Groundwater	✔											
-14	23051601-014	5/31/23 1200	HNO3	Groundwater	✔											
-15	23051601-015	5/31/23 1259	HNO3	Groundwater	✔											
-16	23051601-016	5/31/23 1241	HNO3	Groundwater	✔											
-17	23051601-017	5/31/23 0915	HNO3	Groundwater	✔											
-18	23051601-018	5/31/23 0946	HNO3	Groundwater	✔											
-19	23051601-019	5/31/23 1039	HNO3	Groundwater	✔											
-20	23051601-020	5/31/23 1009	HNO3	Groundwater	✔											
-21	23051601-021	6/1/23 1106	HNO3	Groundwater	✔											
-22	23051601-022	5/31/23 1100	HNO3	Groundwater	✔											

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	6/5/23	Hardy Robinson	6/7/23 1030

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Tracy Carroll/TEKLAB QC Level: 3

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23051601

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 34507 Phone: (618) 344-1004

L1623471

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-23	23051601-023	5/31/23 0956	HNO3	Groundwater	✔											
-24	23051601-024	5/31/23 1219	HNO3	Groundwater	✔											
-25	23051601-025	5/31/23 1337	HNO3	Groundwater	✔											
-26	23051601-026	5/31/23 1137	HNO3	Groundwater	✔											
-27	23051601-027	6/1/23 1029	HNO3	Groundwater	✔											
-28	23051601-028	5/31/23 1027	HNO3	Groundwater	✔											
-29	23051601-029	6/1/23 0822	HNO3	Groundwater	✔											
-30	23051601-030	6/1/23 0854	HNO3	Groundwater	✔											
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
Dome	6/5/23	Hailey Rotter	6/7/23 1030

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: 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

If Applicable
VOA Zero Headspace: Y N
Pres.Correct/Check: Y N

es not provide client/sampler information without proper authorization. and proprietary rights,
d by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

U1623471

Tracking Numbers	NS A7. Temperature
6319 36116 3004	22.2±0=22.2
6319 36116 3705	21.0±0=21.0
6319 36116 3053	22.7±0=22.7

Site Sampling Event	HEN-Q2-2023									
LIMS Workorder	23051600									
Technician	JR,JC/TAC,BG		hmm	hhmm						
WO Sample	Well ID	Date	Time	Time (adj)	DTB (ft)	DTW (ft)	MP Elev (ft)	GW Elev (ft)	Well Condition	Sampling Device
001A	HEN02	06/01/2023	1102	1102		44.96			Good	Bladder Pump
002A	HEN03R	05/31/2023	1312	1312		35.04			Good	Bladder Pump
003A	HEN05R	05/31/2023	1517	1517		41.35			Good	Bladder Pump
004A	HEN05DR	05/31/2023	1458	1458		41.32			Good	Bladder Pump
005A	HEN07	06/01/2023	1145	1145		67.8			Good	Bladder Pump
006A	HEN08	06/01/2023	854	0854		53.84			Good	Bladder Pump
007A	HEN08D	05/31/2023	1510	1510		54.12			Good	Bladder Pump
008A	HEN10	05/31/2023	922	0922		50.78			Good	Bladder Pump
009A	HEN12	05/31/2023	1137	1137		51.21			Good	Bladder Pump
010A	HEN13	05/31/2023	1204	1204		51.21			Good	Bladder Pump
011A	HEN16	06/01/2023	940	0940		54.57			Good	Bladder Pump
012A	HEN17	06/01/2023	1008	1008		55.96			Good	Bladder Pump
013A	HEN18S	05/31/2023	1415	1415		40.86			Good	Bladder Pump
014A	HEN18D	05/31/2023	1349	1349		40.91			Good	Bladder Pump
015A	HEN21R	05/31/2023	1109	1109		5.92			Good	Bladder Pump
016A	HEN22	05/31/2023	1401	1401		18.45			Good	Bladder Pump
017A	HEN22D	05/31/2023	1419	1419		19.1			Good	Bladder Pump
018A	HEN23	05/31/2023	1200	1200		16.72			Good	Bladder Pump
019A	HEN25	05/31/2023	1259	1259		15.94			Good	Bladder Pump
020A	HEN26	05/31/2023	1241	1241		16			Good	Bladder Pump
021A	HEN27	05/31/2023	915	0915		4.14			Good	Bladder Pump
022A	HEN30	05/30/2023	1509	1509		6.62				
023A	HEN31	05/30/2023	1509	1509		6.56				
024A	HEN32	05/31/2023	946	0946		5.22			Good	Bladder Pump
025A	HEN33	05/30/2023	1515	1515		4.03				
026A	HEN34	05/31/2023	1039	1039		8.66			Good	Bladder Pump
027A	HEN35	05/31/2023	1009	1009		8.3			Good	Bladder Pump
028A	HEN36	05/30/2023	1528	1528		15.32				
029A	HEN40S	06/01/2023	1034	1034		40.54			Good	Bladder Pump
030A	HEN45S	06/01/2023	1106	1106		20.42			Good	Bladder Pump
031A	HEN46	05/31/2023	1100	1100		51.4			Good	Bladder Pump
032A	HEN47	05/31/2023	956	0956		55.66			Good	Bladder Pump
033A	HEN49	05/31/2023	1219	1219		21.54			Good	Bladder Pump
034A	HEN50	05/31/2023	1337	1337		18.25			Good	Bladder Pump
035A	HEN51	05/31/2023	1137	1137		18.5			Good	Bladder Pump
036A	HEN52	06/01/2023	1029	1029		53.89			Good	Bladder Pump
037A	HEN54	05/31/2023	1027	1027		53.23			Good	Bladder Pump

Site Sampling Event	HEN-Q2-2023									
LIMS Workorder	23051600									
Technician	JR,JC/TAC,BG		hmm	hhmm						
WO Sample	Well ID	Date	Time	Time (adj)	DTB (ft)	DTW (ft)	MP Elev (ft)	GW Elev (ft)	Well Condition	Sampling Device
038A	HEN55	05/30/2023	1438	1438		50.55				
039A	HENXPW01	06/01/2023	858	0858		10.25			Good	Peristaltic Pump
040A	HENXPW02	06/01/2023	925	0925		15.37			Good	Peristaltic Pump
041A	HENXPW03	06/01/2023	952	0952		6.41			Good	Peristaltic Pump
042A	HENXSG01	05/30/2023	1403	1403		7.17				
043A	HENYSGILRIVER	05/30/2023	1321	1321		440.5				
044A	FIELD Blank	06/01/2023	822	0822						
045A	HEN08 Dup	06/01/2023	854	0854		53.84			Good	Bladder Pump
				0						

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	JR,JC/TAC,BG

WO Sample	Well ID	Samling Method	Field Filtered	Appearance	Odor	Color	Turbidity (visible)	Ferrous Iron	Transducer SN
001A	HEN02	Low Flow	Yes	Clear	None	None	None	3.598	NA
002A	HEN03R	Low Flow	Yes	Clear	None	None	None	3.23	21615140
003A	HEN05R	Low Flow	Yes	Clear	None	None	None	3.317	NA
004A	HEN05DR	Low Flow	Yes	Clear	None	None	None	3.839	NA
005A	HEN07	Low Flow	Yes	Clear	None	None	None	0.511	21615139
006A	HEN08	Low Flow	Yes	Clear	None	None	None	1.751	21615138
007A	HEN08D	Low Flow	Yes	Clear	None	None	None	1.526	21615598
008A	HEN10	Low Flow	Yes	Clear	None	None	None	3.38	NA
009A	HEN12	Low Flow	Yes	Clear	None	None	None	3.602	21615520
010A	HEN13	Low Flow	Yes	Clear	None	None	None	3.597	21615515
011A	HEN16	Low Flow	Yes	Clear	None	None	None	1.094	21615137
012A	HEN17	Low Flow	Yes	Clear	None	None	None	0.887	21615500
013A	HEN18S	Low Flow	Yes	Clear	None	None	None	3.813	21615482
014A	HEN18D	Low Flow	Yes	Clear	None	None	Slight	4.136	21615609
015A	HEN21R	Low Flow	Yes	Clear	Moder	None	None	6.598	21615613
016A	HEN22	Low Flow	Yes	Clear	None	None	None	0.608	21615497
017A	HEN22D	Low Flow	Yes	Clear	Slight	None	None	2.585	21564134
018A	HEN23	Low Flow	Yes	Clear	Moder	None	None	1.207	21615600
019A	HEN25	Low Flow	Yes	Clear	None	None	None	1.25	
020A	HEN26	Low Flow	Yes	Clear	Slight	None	None	0.884	
021A	HEN27	Low Flow	Yes	Clear	Slight	None	None	over	21615576
022A	HEN30								
023A	HEN31								
024A	HEN32	Low Flow	Yes	Clear	Slight	None	None	2.916	21615487
025A	HEN33								
026A	HEN34	Low Flow	Yes	Clear	None	None	None	over	21615509
027A	HEN35	Low Flow	Yes	Clear	None	None	None	4.586	21615510
028A	HEN36								
029A	HEN40S	Low Flow	Yes	Clear	None	None	None	1.052	
030A	HEN45S	Low Flow	Yes	Clear	None	None	None	1.017	
031A	HEN46	Low Flow	Yes	Clear	None	None	None	3.258	21615491
032A	HEN47	Low Flow	Yes	Clear	None	None	None	3.336	21615505
033A	HEN49	Low Flow	Yes	Clear	None	None	None	0.72	21615490
034A	HEN50	Low Flow	Yes	Clear	None	None	None	0.977	21615489
035A	HEN51	Low Flow	Yes	Clear	Slight	None	None	over	21615608
036A	HEN52	Low Flow	Yes	Clear	None	None	None	3.4	21615145
037A	HEN54	Low Flow	Yes	Clear	None	None	None	3.597	21615143

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	JR,JC/TAC,BG

WO Sample	Well ID	Samling Method	Field Filtered	Appearance	Odor	Color	Turbidity (visible)	Ferrous Iron	Transducer SN
038A	HEN55								21615612
039A	HENXPW01	Low Flow	Yes	Clear	None	None	Slight	3.164	NA
040A	HENXPW02	Low Flow	Yes	Clear	None	None	None	3.193	NA
041A	HENXPW03	Low Flow	Yes	Clear	None	None	None	3.823	NA
042A	HENXSG01								
043A	HENYSGILRIVER								
044A	FIELD Blank								
045A	HEN08 Dup	Low Flow	Yes	Clear	None	None	None	1.751	21615138

Site Sampling Event	HEN-Q2-2023	
LIMS Workorder	23051600	
Technician	JR,JC/TAC,BG	
WO Sample	Well ID	Trans Reads
001A	HEN02	
002A	HEN03R	447.0424
003A	HEN05R	
004A	HEN05DR	
005A	HEN07	137.3366
006A	HEN08	136.4609
007A	HEN08D	448.15
008A	HEN10	NA
009A	HEN12	447.3286
010A	HEN13	447.4906
011A	HEN16	136.388
012A	HEN17	137.7737
013A	HEN18S	447.0615
014A	HEN18D	447.3612
015A	HEN21R	447.75
016A	HEN22	447.26
017A	HEN22D	447.58
018A	HEN23	447.9
019A	HEN25	
020A	HEN26	
021A	HEN27	447.76
022A	HEN30	
023A	HEN31	
024A	HEN32	447.65
025A	HEN33	
026A	HEN34	446.53
027A	HEN35	447.75
028A	HEN36	
029A	HEN40S	
030A	HEN45S	
031A	HEN46	447.5016
032A	HEN47	447.2565
033A	HEN49	447.82
034A	HEN50	447.15
035A	HEN51	447.8
036A	HEN52	447.4773
037A	HEN54	447.2757

Site Sampling Event	HEN-Q2-2023	
LIMS Workorder	23051600	
Technician	JR,JC/TAC,BG	
WO Sample	Well ID	Trans Reads
038A	HEN55	
039A	HENXPW01	
040A	HENXPW02	
041A	HENXPW03	
042A	HENXSG01	
043A	HENYSGILRIVER	
044A	FIELD Blank	
045A	HEN08 Dup	136.4609

KorDSS MEASUREMENT DATA FILE EXPORT

FILE CREATED: 6/2/2023 16:55

DATE	TIME	SITE	DATA ID	Barometer	Temp (°C)	Cond (µS/c	Sp Cond (µS/cm	Sal (psu)	nLFCond (µ	TDS (mg/L)	Resistivity (	Sigma-T (s
5/31/2023	9:16:16 AM	Hennepin	HEN10	747.6	17.5	727.7	848.9	0.42	859.4	552	1374.2	-1
5/31/2023	9:19:16 AM	Hennepin	HEN10	747.5	17.5	724.5	846.3	0.42	856.9	550	1380.3	-1
5/31/2023	9:22:16 AM	Hennepin	HEN10	747.5	17.5	724.3	845.7	0.42	856.2	550	1380.6	-1
5/31/2023	9:50:05 AM	Hennepin	HEN47	747.6	18.1	754.3	868.4	0.43	878.4	564	1325.8	-1.1
5/31/2023	9:53:05 AM	Hennepin	HEN47	747.5	18.1	753.3	867.3	0.43	877.4	564	1327.5	-1.1
5/31/2023	9:56:05 AM	Hennepin	HEN47	747.6	18.1	754	868.3	0.43	878.4	564	1326.3	-1.1
5/31/2023	10:21:41 AM	Hennepin	HEN54	747.6	17.2	728.3	855.8	0.42	866.7	556	1373	-0.9
5/31/2023	10:24:41 AM	Hennepin	HEN54	747.5	17.2	704.7	828.3	0.41	839	538	1419.1	-0.9
5/31/2023	10:27:41 AM	Hennepin	HEN54	747.6	17.1	703.5	827.9	0.41	838.5	538	1421.4	-0.9
5/31/2023	10:54:26 AM	Hennepin	HEN46	747.6	16.4	683.4	818.5	0.4	829.8	532	1463.2	-0.8
5/31/2023	10:57:26 AM	Hennepin	HEN46	747.6	16.2	679.3	815.9	0.4	827.3	530	1472.1	-0.8
5/31/2023	11:00:26 AM	Hennepin	HEN46	747.6	16.1	677.1	815.3	0.4	826.8	530	1476.9	-0.8
5/31/2023	11:31:34 AM	Hennepin	HEN12	747.6	16.3	689.5	827.5	0.41	839	538	1450.3	-0.8
5/31/2023	11:34:34 AM	Hennepin	HEN12	747.6	15.7	672.3	816.9	0.4	828.7	531	1487.5	-0.7
5/31/2023	11:37:34 AM	Hennepin	HEN12	747.6	15.7	672	817.4	0.4	829.3	531	1488.1	-0.7
5/31/2023	11:58:05 AM	Hennepin	HEN13	747.3	16.1	676.8	815.2	0.4	826.7	530	1477.6	-0.8
5/31/2023	12:01:05 PM	Hennepin	HEN13	747.3	16.2	677.8	814.4	0.4	825.7	529	1475.3	-0.8
5/31/2023	12:04:05 PM	Hennepin	HEN13	747.1	16.2	677.5	813.7	0.4	825.1	529	1475.9	-0.8
5/31/2023	1:06:38 PM	Hennepin	HEN03R	747.2	18.5	813.8	928.9	0.46	939.2	604	1228.7	-1.1
5/31/2023	1:09:38 PM	Hennepin	HEN03R	747.3	18.4	811.2	927.4	0.46	937.7	603	1232.7	-1.1
5/31/2023	1:12:38 PM	Hennepin	HEN03R	747.2	18.4	809.8	926.7	0.46	937.1	602	1234.8	-1.1
5/31/2023	1:43:10 PM	Hennepin	HEN18D	746.9	17.5	789.8	920.9	0.46	932.3	599	1266.1	-1
5/31/2023	1:46:10 PM	Hennepin	HEN18D	747	17.5	790.9	923.1	0.46	934.6	600	1264.4	-1
5/31/2023	1:49:10 PM	Hennepin	HEN18D	746.8	17.5	789.6	921.7	0.46	933.1	599	1266.5	-1
5/31/2023	2:09:37 PM	Hennepin	HEN18S	746.7	17.2	782.4	919.8	0.46	931.6	598	1278.2	-0.9
5/31/2023	2:12:37 PM	Hennepin	HEN18S	746.7	17.2	783.5	920.3	0.46	932.1	598	1276.4	-0.9
5/31/2023	2:15:37 PM	Hennepin	HEN18S	746.8	17.2	783.4	921	0.46	932.8	599	1276.6	-0.9
5/31/2023	2:52:51 PM	Hennepin	HEN05DR	746.8	17.3	735.2	861.5	0.43	872.4	560	1360.2	-0.9
5/31/2023	2:55:50 PM	Hennepin	HEN05DR	747	17.4	739.7	864.8	0.43	875.6	562	1352	-1
5/31/2023	2:58:50 PM	Hennepin	HEN05DR	747	17.5	739.8	864.3	0.43	875	562	1351.7	-1
5/31/2023	3:11:19 PM	Hennepin	HEN05R	747.2	17.1	730	858.7	0.42	869.8	558	1370	-0.9
5/31/2023	3:14:19 PM	Hennepin	HEN05R	747.2	17.2	729.5	858	0.42	869	558	1370.8	-0.9
5/31/2023	3:17:19 PM	Hennepin	HEN05R	747.2	17.1	728.2	857.7	0.42	868.7	557	1373.3	-0.9
6/1/2023	8:49:06 AM	Hennepin	HENXPW01	748.7	16.7	934.1	1109.1	0.55	1123.9	721	1070.5	-0.8

KorDSS MEASUREMENT DATA FILE EXPORT

FILE CREATED: 6/2/2023 16:55

DATE	TIME	SITE	DATA ID	Barometer	Temp (°C)	Cond (µS/c	Sp Cond (µS/cm	Sal (psu)	nLFCond (µ	TDS (mg/L)	Resistivity (	Sigma-T (s
6/1/2023	8:52:06 AM	Hennepin	HENXPW01	748.7	16.7	933.5	1109.8	0.55	1124.6	721	1071.3	-0.7
6/1/2023	8:55:06 AM	Hennepin	HENXPW01	748.8	16.6	935.6	1114.3	0.56	1129.3	724	1068.8	-0.7
6/1/2023	8:58:06 AM	Hennepin	HENXPW01	748.7	16.5	935.8	1116.4	0.56	1131.6	726	1068.6	-0.7
6/1/2023	9:19:17 AM	Hennepin	HENXPW02	748.8	16.6	3096.9	3687.5	1.95	3737.2	2397	322.9	0.3
6/1/2023	9:22:17 AM	Hennepin	HENXPW02	748.7	16.3	3075.7	3686.2	1.95	3737.1	2396	325.1	0.4
6/1/2023	9:25:17 AM	Hennepin	HENXPW02	748.8	16.3	3074.1	3688	1.96	3739.1	2397	325.3	0.4
6/1/2023	9:46:56 AM	Hennepin	HENXPW03	749.1	15.3	1283	1574.7	0.8	1598.2	1024	779.4	-0.3
6/1/2023	9:49:56 AM	Hennepin	HENXPW03	749	15.4	1277.1	1564.2	0.79	1587.3	1017	783	-0.3
6/1/2023	9:52:56 AM	Hennepin	HENXPW03	749	15.5	1286.8	1573.1	0.8	1596.3	1023	777.2	-0.3
6/1/2023	10:23:49 AM	Hennepin	HEN52	748.8	18.1	758.7	874.4	0.43	884.6	568	1318	-1.1
6/1/2023	10:26:49 AM	Hennepin	HEN52	748.8	17.4	700.9	820.1	0.4	830.4	533	1426.7	-1
6/1/2023	10:29:49 AM	Hennepin	HEN52	748.8	17.3	697.1	816.8	0.4	827.2	531	1434.4	-1
6/1/2023	10:56:37 AM	Hennepin	HEN02	749.2	12.9	658.3	855.3	0.42	869.7	556	1519.1	-0.3
6/1/2023	10:59:37 AM	Hennepin	HEN02	749.1	12.2	754.2	997.9	0.5	1015.1	649	1325.9	-0.1
6/1/2023	11:02:37 AM	Hennepin	HEN02	749.1	12.2	765.1	1012.2	0.5	1029.5	658	1307	-0.1

DATE	TIME	SITE	DATA ID	Barometer	ODO (mg/L	TSS (mg/L)	Turbidity (NTU)	pH	pH (mV)	ORP (mV)	Temp (°C)	Cond (µS/c
5/31/2023	9:06:03 AM	Hennepin	HEN27	758.5	1.22	0	11.64	6.97	-21.1	3.1	12	847
5/31/2023	9:09:03 AM	Hennepin	HEN27	758.5	1.15	0	9.39	6.98	-21.3	-4.6	11.9	846.5
5/31/2023	9:12:03 AM	Hennepin	HEN27	758.6	1.09	0	5.47	6.98	-21.4	-10.3	11.9	846.1
5/31/2023	9:15:03 AM	Hennepin	HEN27	758.6	1.05	0	8.18	6.98	-21.4	-15.7	12	849
5/31/2023	9:33:46 AM	Hennepin	HEN32	758.6	2.69	0	31.45	6.98	-21.6	83.2	11.1	734.6
5/31/2023	9:36:46 AM	Hennepin	HEN32	758.6	1.9	0	19.9	6.95	-19.8	84	11	732.9
5/31/2023	9:39:46 AM	Hennepin	HEN32	758.7	1.56	0	14.63	6.93	-18.5	84.9	11	732.3
5/31/2023	9:42:46 AM	Hennepin	HEN32	758.7	1.37	0	9.91	6.92	-18.1	85.3	11.1	732.4
5/31/2023	9:45:46 AM	Hennepin	HEN32	758.7	1.24	0	6.19	6.92	-17.9	85.7	11	730.9
5/31/2023	10:03:07 AM	Hennepin	HEN35	758.7	3.18	0	8.32	6.89	-16.4	107.4	13	1281.4
5/31/2023	10:06:07 AM	Hennepin	HEN35	758.6	2.04	0	3.93	6.88	-16	106.1	12.9	1269.5
5/31/2023	10:09:07 AM	Hennepin	HEN35	758.6	1.6	0	2.18	6.88	-16	104.8	12.9	1267.7
5/31/2023	10:33:00 AM	Hennepin	HEN34	758.7	2.92	0	10.71	7.02	-23.5	-13	12.2	907.6
5/31/2023	10:36:00 AM	Hennepin	HEN34	758.7	1.98	0	4.75	6.94	-19.3	-64.2	12.2	926.4
5/31/2023	10:39:00 AM	Hennepin	HEN34	758.7	1.6	0	1.79	6.92	-18.2	-82.7	12.3	944.6
5/31/2023	10:57:16 AM	Hennepin	HEN21R	758.7	1.91	0	69.19	7.34	-41.3	-157.6	13.1	887.7
5/31/2023	11:00:16 AM	Hennepin	HEN21R	758.6	1.53	0	50.27	7.35	-41.9	-167.6	13.1	888.4

KorDSS MEASUREMENT DATA FILE EXPORT

FILE CREATED: 6/2/2023 16:55

DATE	TIME	SITE	DATA ID	Barometer	Temp (°C)	Cond (µS/c	Sp Cond (µS/cm	Sal (psu)	nLFCond (µ	TDS (mg/L)	Resistivity (	Sigma-T (s
5/31/2023	11:03:16 AM	Hennepin	HEN21R	758.7	1.33	0	54.99	7.36	-42.5	-173.5	13	889
5/31/2023	11:06:16 AM	Hennepin	HEN21R	758.7	1.21	0	46.74	7.36	-42.8	-177	13.1	889.6
5/31/2023	11:09:16 AM	Hennepin	HEN21R	758.7	1.12	0	42.19	7.37	-43.1	-178.5	13.2	891.8
5/31/2023	11:28:07 AM	Hennepin	HEN51	758.2	2.56	0	9.63	7.2	-33.5	-121.3	13	867.5
5/31/2023	11:31:07 AM	Hennepin	HEN51	758.1	1.96	0	8.84	7.22	-34.8	-128.8	13	867.9
5/31/2023	11:34:07 AM	Hennepin	HEN51	758.2	1.66	0	6.89	7.23	-35.4	-133	12.9	866.9
5/31/2023	11:37:07 AM	Hennepin	HEN51	758.1	1.5	0	6.08	7.24	-35.6	-135.3	12.9	867.2
5/31/2023	11:54:11 AM	Hennepin	HEN23	758	3.09	0	-0.46	7.4	-44.9	-128.2	12.9	996.3
5/31/2023	11:57:11 AM	Hennepin	HEN23	758	1.96	0	-1.38	7.41	-45.1	-132.4	12.9	991.7
5/31/2023	12:00:11 PM	Hennepin	HEN23	758	1.55	0	-1.79	7.41	-45.5	-127.1	13	988.6
5/31/2023	12:10:43 PM	Hennepin	HEN49	757.9	5.26	0	6.14	7.16	-31.7	-68.4	14.8	870.9
5/31/2023	12:13:43 PM	Hennepin	HEN49	757.9	2.34	0	20.09	7.07	-26.7	-39.8	14.8	869.8
5/31/2023	12:16:43 PM	Hennepin	HEN49	757.9	1.65	0	23.12	7.05	-25.4	-27.3	14.7	867.8
5/31/2023	12:19:43 PM	Hennepin	HEN49	757.9	1.36	0	21.09	7.04	-24.8	-19	14.9	869.7
5/31/2023	12:35:31 PM	Hennepin	HEN26	757.9	2.58	0	-1.65	7.1	-28.4	19.6	15	857
5/31/2023	12:38:31 PM	Hennepin	HEN26	757.9	1.75	0	-2.66	7.07	-26.6	18.3	14.9	854.4
5/31/2023	12:41:31 PM	Hennepin	HEN26	757.9	1.42	0	-2.77	7.06	-25.8	18.3	15	855.5
5/31/2023	12:53:20 PM	Hennepin	HEN25	757.7	2.94	0	9.17	7.17	-32	34.3	13.5	696.9
5/31/2023	12:56:20 PM	Hennepin	HEN25	757.8	2.49	0	0.38	7.15	-30.9	34.8	13.4	689.5
5/31/2023	12:59:20 PM	Hennepin	HEN25	757.7	2.45	0	-1.34	7.15	-30.7	36.3	13.4	685.8
5/31/2023	1:31:49 PM	Hennepin	HEN50	757.5	1.48	0	10.75	7.34	-41.7	37.6	15.5	864.1
5/31/2023	1:34:49 PM	Hennepin	HEN50	757.4	1.29	0	5.59	7.35	-41.9	35.2	15.6	865.3
5/31/2023	1:37:49 PM	Hennepin	HEN50	757.3	1.17	0	1.85	7.35	-42	33.5	15.5	863.8
5/31/2023	1:55:01 PM	Hennepin	HEN22	757.3	2.78	0	-0.9	7.58	-55	56.8	15.9	826.3
5/31/2023	1:58:01 PM	Hennepin	HEN22	757.3	1.8	0	-2.23	7.58	-55	52.4	15.8	825.1
5/31/2023	2:01:01 PM	Hennepin	HEN22	757.3	1.43	0	-2.68	7.58	-55	48.8	15.7	822.1
5/31/2023	2:13:23 PM	Hennepin	HEN22D	757.1	2.87	0	4.8	7.24	-35.9	-108	15.9	930.6
5/31/2023	2:16:23 PM	Hennepin	HEN22D	757.2	1.74	0	3.75	7.24	-35.8	-118.3	15.9	927.2
5/31/2023	2:19:23 PM	Hennepin	HEN22D	757.1	1.41	0	1.83	7.24	-35.9	-121	15.9	925.4
5/31/2023	3:04:48 PM	Hennepin	HEN08D	756.7	2.5	0	-0.62	6.65	-2.9	68.5	13.9	1782.4
5/31/2023	3:07:48 PM	Hennepin	HEN08D	756.7	1.85	0	-1.36	6.64	-2.3	73.3	13.9	1772.6
5/31/2023	3:10:48 PM	Hennepin	HEN08D	756.7	1.55	0	-2.01	6.63	-2.2	77.1	13.8	1767.2
6/1/2023	8:48:28 AM	Hennepin	HEN08	758.6	2.95	0	-2.93	6.52	1.3	169.5	13.4	1256.7
6/1/2023	8:51:28 AM	Hennepin	HEN08	758.7	2.73	0	-2.96	6.53	1	168.6	13.3	1256.1

KorDSS MEASUREMENT DATA FILE EXPORT

FILE CREATED: 6/2/2023 16:55

DATE	TIME	SITE	DATA ID	Barometer	Temp (°C)	Cond (µS/c	Sp Cond (µS/cm	Sal (psu)	nLFCond (µ	TDS (mg/L)	Resistivity (	Sigma-T (s
6/1/2023	8:54:28 AM	Hennepin	HEN08	758.6	2.59	0	-3.01	6.53	0.8	167.7	13.3	1255.5
6/1/2023	9:34:53 AM	Hennepin	HEN16	758.6	3.09	0	-2.75	7.22	-37.3	137.7	18.8	710.6
6/1/2023	9:37:53 AM	Hennepin	HEN16	758.6	2.92	0	-2.85	7.21	-36.9	138.1	18.7	710.6
6/1/2023	9:40:53 AM	Hennepin	HEN16	758.5	2.82	0	-2.83	7.21	-36.7	138.1	18.8	710.8
6/1/2023	10:02:08 AM	Hennepin	HEN17	758.4	8.14	0	-0.9	6.99	-24.4	148.6	15.9	721.9
6/1/2023	10:05:08 AM	Hennepin	HEN17	758.4	8.09	0	-1.64	6.97	-23.1	150.4	15.9	721
6/1/2023	10:08:08 AM	Hennepin	HEN17	758.5	8.01	0	-0.91	6.96	-22.8	151.1	15.9	720.5
6/1/2023	10:28:24 AM	Hennepin	HEN40S	759.1	1.94	0	-2.52	7.67	-62	126.4	17	681.8
6/1/2023	10:31:24 AM	Hennepin	HEN40S	759	1.55	0	-2.72	7.67	-62.3	125.1	16.9	680.4
6/1/2023	10:34:24 AM	Hennepin	HEN40S	759.1	1.34	0	-2.71	7.68	-62.4	124.2	16.9	681.2
6/1/2023	11:00:10 AM	Hennepin	HEN45S	759.7	1.53	0	4.52	6.94	-21.7	136.5	19.9	1006.2
6/1/2023	11:03:10 AM	Hennepin	HEN45S	759.6	1.26	0	2.67	6.94	-21.5	137.5	19.9	1005
6/1/2023	11:06:10 AM	Hennepin	HEN45S	759.6	1.11	0	2.52	6.94	-21.4	137.8	19.9	1005.4
6/1/2023	11:39:31 AM	Hennepin	HEN07	758.3	3.3	0	-2.91	6.7	-8.4	152.9	11.8	897.4
6/1/2023	11:42:31 AM	Hennepin	HEN07	758.3	2.88	0	-2.95	6.68	-7.3	154	11.8	901.6
6/1/2023	11:45:31 AM	Hennepin	HEN07	758.3	2.6	0	-3.05	6.66	-6.6	154.7	11.8	903.9

KorDSS MEASUREMENT DATA FILE EXPORT

FILE CREATED: 6/2/2023 16:55

DATE	TIME	SITE	DATA ID	Sigma (s)	TSS (mg/L)	Turbidity (NTU)	ODO (mg/L	pH	pH (mV)	ORP (mV)
5/31/2023	9:16:16 AM	Hennepin	HEN10	-1	0	-0.43	3.43	6.72	-5.8	145.1
5/31/2023	9:19:16 AM	Hennepin	HEN10	-1	0	-0.86	3.71	6.76	-8.1	145.2
5/31/2023	9:22:16 AM	Hennepin	HEN10	-1	0	-0.87	3.81	6.79	-9.9	145.3
5/31/2023	9:50:05 AM	Hennepin	HEN47	-1.1	0	-0.04	3.73	6.94	-17.6	141.7
5/31/2023	9:53:05 AM	Hennepin	HEN47	-1.1	0	0.03	3.63	6.9	-15.8	143.4
5/31/2023	9:56:05 AM	Hennepin	HEN47	-1.1	0	-0.83	3.6	6.89	-15	144.7
5/31/2023	10:21:41 AM	Hennepin	HEN54	-0.9	0	1.43	5.9	7.23	-33.6	140.7
5/31/2023	10:24:41 AM	Hennepin	HEN54	-0.9	0	0.45	5.73	7.11	-26.9	145.4
5/31/2023	10:27:41 AM	Hennepin	HEN54	-0.9	0	-0.33	5.71	7.07	-24.7	148.6
5/31/2023	10:54:26 AM	Hennepin	HEN46	-0.8	0	0.24	5.15	7.25	-34.6	131.4
5/31/2023	10:57:26 AM	Hennepin	HEN46	-0.8	0	-0.06	4.91	7.14	-28.5	136.5
5/31/2023	11:00:26 AM	Hennepin	HEN46	-0.8	0	-0.46	4.84	7.1	-26.7	139.6
5/31/2023	11:31:34 AM	Hennepin	HEN12	-0.8	0	-0.14	6.12	7.56	-51.7	139.8
5/31/2023	11:34:34 AM	Hennepin	HEN12	-0.7	0	-0.7	5.16	7.25	-34.5	144.7
5/31/2023	11:37:34 AM	Hennepin	HEN12	-0.7	0	-0.77	5.17	7.17	-30.1	147.9
5/31/2023	11:58:05 AM	Hennepin	HEN13	-0.8	0	-0.34	5.24	7.21	-32.3	151.1
5/31/2023	12:01:05 PM	Hennepin	HEN13	-0.8	0	-0.77	5.21	7.2	-31.8	151.7
5/31/2023	12:04:05 PM	Hennepin	HEN13	-0.8	0	-0.78	5.2	7.2	-31.7	152.2
5/31/2023	1:06:38 PM	Hennepin	HEN03R	-1.1	0	3.21	0.95	7.47	-46.9	116
5/31/2023	1:09:38 PM	Hennepin	HEN03R	-1.1	0	1.17	0.82	7.31	-38.1	116
5/31/2023	1:12:38 PM	Hennepin	HEN03R	-1.1	0	0.61	0.78	7.27	-35.7	116
5/31/2023	1:43:10 PM	Hennepin	HEN18D	-1	0	5.27	1.16	7.24	-34.3	139.7
5/31/2023	1:46:10 PM	Hennepin	HEN18D	-1	0	12.32	1	7.2	-32.1	140.2
5/31/2023	1:49:10 PM	Hennepin	HEN18D	-1	0	16.77	0.86	7.19	-31.7	140.1
5/31/2023	2:09:37 PM	Hennepin	HEN18S	-0.9	0	-0.5	0.87	7.37	-41.4	136
5/31/2023	2:12:37 PM	Hennepin	HEN18S	-0.9	0	-0.74	0.84	7.36	-40.8	135.3
5/31/2023	2:15:37 PM	Hennepin	HEN18S	-0.9	0	-0.81	0.85	7.36	-40.7	134.9
5/31/2023	2:52:51 PM	Hennepin	HEN05DR	-0.9	0	-0.34	3.51	7.53	-49.9	146.5
5/31/2023	2:55:50 PM	Hennepin	HEN05DR	-1	0	-0.35	1.22	7.44	-45	146.6
5/31/2023	2:58:50 PM	Hennepin	HEN05DR	-1	0	-0.78	1.1	7.43	-44.3	145.8
5/31/2023	3:11:19 PM	Hennepin	HEN05R	-0.9	0	1.09	1.4	7.65	-56.3	145.1
5/31/2023	3:14:19 PM	Hennepin	HEN05R	-0.9	0	-0.05	1.07	7.61	-54.3	144.8
5/31/2023	3:17:19 PM	Hennepin	HEN05R	-0.9	0	-0.52	1.03	7.6	-53.8	144.2
6/1/2023	8:49:06 AM	Hennepin	HENXPW01	-0.8	0	7.68	1.54	11.01	-246.7	-123.4

KorDSS MEASUREMENT DATA FILE EXPORT

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DATE	TIME	SITE	DATA ID	Sigma (s)	TSS (mg/L)	Turbidity (NTU)	ODO (mg/L	pH	pH (mV)	ORP (mV)
6/1/2023	8:52:06 AM	Hennepin	HENXPW01	-0.7	0	2.59	1.29	10.98	-245.5	-147.2
6/1/2023	8:55:06 AM	Hennepin	HENXPW01	-0.7	0	2.15	1.18	10.98	-245.4	-161.9
6/1/2023	8:58:06 AM	Hennepin	HENXPW01	-0.7	0	1.99	1.1	10.99	-245.5	-172.4
6/1/2023	9:19:17 AM	Hennepin	HENXPW02	0.3	0	4.88	2.1	11.76	-288.7	-53.1
6/1/2023	9:22:17 AM	Hennepin	HENXPW02	0.4	0	3.53	1.88	11.8	-290.5	-66.7
6/1/2023	9:25:17 AM	Hennepin	HENXPW02	0.4	0	1.35	1.57	11.82	-291.5	-74.7
6/1/2023	9:46:56 AM	Hennepin	HENXPW03	-0.3	0	0.56	1.95	11.52	-273.9	-30.6
6/1/2023	9:49:56 AM	Hennepin	HENXPW03	-0.3	0	0	1.5	11.42	-268.7	-33.5
6/1/2023	9:52:56 AM	Hennepin	HENXPW03	-0.3	0	-0.23	1.35	11.4	-267.4	-35.9
6/1/2023	10:23:49 AM	Hennepin	HEN52	-1.1	0	3.09	6.13	8.37	-100.7	64.1
6/1/2023	10:26:49 AM	Hennepin	HEN52	-1	0	6.07	3.85	7.77	-67.3	80.1
6/1/2023	10:29:49 AM	Hennepin	HEN52	-1	0	2.82	3.71	7.49	-51.4	92.2
6/1/2023	10:56:37 AM	Hennepin	HEN02	-0.3	0	0.45	8.69	7.68	-61.4	114.6
6/1/2023	10:59:37 AM	Hennepin	HEN02	-0.1	0	-0.11	2.31	7.03	-26.2	127.1
6/1/2023	11:02:37 AM	Hennepin	HEN02	-0.1	0	-0.24	2.31	6.89	-18.1	132.4

DATE	TIME	SITE	DATA ID	Sp Cond (µ	Sal (psu)	nLFCond (µS/cm	TDS (mg/L)	Resistivity (	Sigma-T (s	Sigma (s)
5/31/2023	9:06:03 AM	Hennepin	HEN27	1128	0.56	1147.5	733	1180.6	-0.1	-0.1
5/31/2023	9:09:03 AM	Hennepin	HEN27	1128.4	0.56	1147.9	733	1181.3	-0.1	-0.1
5/31/2023	9:12:03 AM	Hennepin	HEN27	1128	0.56	1147.5	733	1181.9	-0.1	-0.1
5/31/2023	9:15:03 AM	Hennepin	HEN27	1128.8	0.56	1148.3	734	1177.9	-0.1	-0.1
5/31/2023	9:33:46 AM	Hennepin	HEN32	1001.2	0.5	1018.8	651	1361.2	0	0
5/31/2023	9:36:46 AM	Hennepin	HEN32	999.6	0.5	1017.1	650	1364.4	0	0
5/31/2023	9:39:46 AM	Hennepin	HEN32	999	0.5	1016.6	649	1365.6	0	0
5/31/2023	9:42:46 AM	Hennepin	HEN32	997.5	0.5	1015	648	1365.4	0	0
5/31/2023	9:45:46 AM	Hennepin	HEN32	997.2	0.5	1014.8	648	1368.1	0	0
5/31/2023	10:03:07 AM	Hennepin	HEN35	1663.9	0.85	1691.7	1082	780.4	0	0
5/31/2023	10:06:07 AM	Hennepin	HEN35	1652.8	0.84	1680.6	1074	787.7	0.1	0.1
5/31/2023	10:09:07 AM	Hennepin	HEN35	1647.1	0.84	1674.7	1071	788.8	0	0
5/31/2023	10:33:00 AM	Hennepin	HEN34	1201.8	0.6	1222.5	781	1101.8	-0.1	-0.1
5/31/2023	10:36:00 AM	Hennepin	HEN34	1225.3	0.61	1246.3	796	1079.4	0	0
5/31/2023	10:39:00 AM	Hennepin	HEN34	1247.9	0.63	1269.2	811	1058.6	0	0
5/31/2023	10:57:16 AM	Hennepin	HEN21R	1149.1	0.58	1168.3	747	1126.5	-0.2	-0.2
5/31/2023	11:00:16 AM	Hennepin	HEN21R	1150.9	0.58	1170.1	748	1125.6	-0.2	-0.2

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DATE	TIME	SITE	DATA ID	Sigma (s)	TSS (mg/L)	Turbidity (NTU)	ODO (mg/L	pH	pH (mV)	ORP (mV)
5/31/2023	11:03:16 AM	Hennepin	HEN21R	1152.8	0.58	1172	749	1124.8	-0.2	-0.2
5/31/2023	11:06:16 AM	Hennepin	HEN21R	1150.1	0.58	1169.2	748	1124.1	-0.2	-0.2
5/31/2023	11:09:16 AM	Hennepin	HEN21R	1152.6	0.58	1171.8	749	1121.3	-0.2	-0.2
5/31/2023	11:28:07 AM	Hennepin	HEN51	1126.5	0.56	1145.3	732	1152.8	-0.2	-0.2
5/31/2023	11:31:07 AM	Hennepin	HEN51	1126.6	0.56	1145.5	732	1152.2	-0.2	-0.2
5/31/2023	11:34:07 AM	Hennepin	HEN51	1127	0.56	1145.9	733	1153.6	-0.2	-0.2
5/31/2023	11:37:07 AM	Hennepin	HEN51	1128.8	0.56	1147.8	734	1153.1	-0.2	-0.2
5/31/2023	11:54:11 AM	Hennepin	HEN23	1295.7	0.65	1317.4	842	1003.7	-0.1	-0.1
5/31/2023	11:57:11 AM	Hennepin	HEN23	1289.1	0.65	1310.7	838	1008.4	-0.1	-0.1
5/31/2023	12:00:11 PM	Hennepin	HEN23	1282	0.64	1303.5	833	1011.5	-0.1	-0.1
5/31/2023	12:10:43 PM	Hennepin	HEN49	1082.6	0.54	1099.3	704	1148.2	-0.4	-0.4
5/31/2023	12:13:43 PM	Hennepin	HEN49	1080.4	0.54	1097	702	1149.7	-0.4	-0.4
5/31/2023	12:16:43 PM	Hennepin	HEN49	1079.3	0.54	1095.9	702	1152.4	-0.4	-0.4
5/31/2023	12:19:43 PM	Hennepin	HEN49	1078.8	0.54	1095.3	701	1149.8	-0.5	-0.5
5/31/2023	12:35:31 PM	Hennepin	HEN26	1059.8	0.53	1075.9	689	1166.9	-0.5	-0.5
5/31/2023	12:38:31 PM	Hennepin	HEN26	1058	0.53	1074.1	688	1170.4	-0.5	-0.5
5/31/2023	12:41:31 PM	Hennepin	HEN26	1058.7	0.53	1074.8	688	1168.9	-0.5	-0.5
5/31/2023	12:53:20 PM	Hennepin	HEN25	893.9	0.44	908.6	581	1435	-0.3	-0.3
5/31/2023	12:56:20 PM	Hennepin	HEN25	885.4	0.44	900	576	1450.3	-0.3	-0.3
5/31/2023	12:59:20 PM	Hennepin	HEN25	881.5	0.44	896.1	573	1458.3	-0.3	-0.3
5/31/2023	1:31:49 PM	Hennepin	HEN50	1055.5	0.53	1071	686	1157.3	-0.6	-0.6
5/31/2023	1:34:49 PM	Hennepin	HEN50	1054.7	0.53	1070.1	686	1155.6	-0.6	-0.6
5/31/2023	1:37:49 PM	Hennepin	HEN50	1054.6	0.53	1070.1	686	1157.6	-0.6	-0.6
5/31/2023	1:55:01 PM	Hennepin	HEN22	1000.6	0.5	1014.9	650	1210.2	-0.6	-0.6
5/31/2023	1:58:01 PM	Hennepin	HEN22	1000.3	0.5	1014.7	650	1211.9	-0.6	-0.6
5/31/2023	2:01:01 PM	Hennepin	HEN22	998.8	0.5	1013.2	649	1216.4	-0.6	-0.6
5/31/2023	2:13:23 PM	Hennepin	HEN22D	1126.4	0.56	1142.5	732	1074.5	-0.6	-0.6
5/31/2023	2:16:23 PM	Hennepin	HEN22D	1122.3	0.56	1138.4	730	1078.5	-0.6	-0.6
5/31/2023	2:19:23 PM	Hennepin	HEN22D	1119	0.56	1134.9	727	1080.6	-0.6	-0.6
5/31/2023	3:04:48 PM	Hennepin	HEN08D	2259.7	1.17	2296.1	1469	561	0.2	0.2
5/31/2023	3:07:48 PM	Hennepin	HEN08D	2251.9	1.16	2288.3	1464	564.1	0.2	0.2
5/31/2023	3:10:48 PM	Hennepin	HEN08D	2246.5	1.16	2282.8	1460	565.9	0.2	0.2
6/1/2023	8:48:28 AM	Hennepin	HEN08	1615.4	0.82	1642	1050	795.8	0	0
6/1/2023	8:51:28 AM	Hennepin	HEN08	1615.8	0.82	1642.4	1050	796.1	0	0

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DATE	TIME	SITE	DATA ID	Sigma (s)	TSS (mg/L)	Turbidity (NTU)	ODO (mg/L	pH	pH (mV)	ORP (mV)
6/1/2023	8:54:28 AM	Hennepin	HEN08	1616.9	0.82	1643.6	1051	796.5	0	0
6/1/2023	9:34:53 AM	Hennepin	HEN16	806.9	0.4	815.5	524	1407.3	-1.2	-1.2
6/1/2023	9:37:53 AM	Hennepin	HEN16	807	0.4	815.7	525	1407.3	-1.2	-1.2
6/1/2023	9:40:53 AM	Hennepin	HEN16	807	0.4	815.6	525	1406.8	-1.2	-1.2
6/1/2023	10:02:08 AM	Hennepin	HEN17	874.7	0.43	887.2	569	1385.3	-0.7	-0.7
6/1/2023	10:05:08 AM	Hennepin	HEN17	873	0.43	885.5	567	1387	-0.7	-0.7
6/1/2023	10:08:08 AM	Hennepin	HEN17	872.1	0.43	884.6	567	1388	-0.7	-0.7
6/1/2023	10:28:24 AM	Hennepin	HEN40S	805.5	0.4	816	524	1466.6	-0.9	-0.9
6/1/2023	10:31:24 AM	Hennepin	HEN40S	804.2	0.4	814.8	523	1469.8	-0.9	-0.9
6/1/2023	10:34:24 AM	Hennepin	HEN40S	805.7	0.4	816.3	524	1467.9	-0.9	-0.9
6/1/2023	11:00:10 AM	Hennepin	HEN45S	1114.4	0.55	1124.4	724	993.8	-1.4	-1.4
6/1/2023	11:03:10 AM	Hennepin	HEN45S	1113.9	0.55	1123.9	724	995.1	-1.3	-1.3
6/1/2023	11:06:10 AM	Hennepin	HEN45S	1114.4	0.55	1124.5	724	994.6	-1.3	-1.3
6/1/2023	11:39:31 AM	Hennepin	HEN07	1199.7	0.6	1220.5	780	1114.3	0	0
6/1/2023	11:42:31 AM	Hennepin	HEN07	1206.5	0.6	1227.5	784	1109.2	0	0
6/1/2023	11:45:31 AM	Hennepin	HEN07	1209.8	0.61	1230.8	786	1106.3	0	0

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	JR,JC/TAC,BG

Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HEN02	6/1/2023	11:02	1102	12.2	53.96	6.89	1012.2	1012.2	2.31
HEN03R	5/31/2023	13:12	1312	18.4	65.12	7.27	926.7	926.7	0.78
HEN05R	5/31/2023	15:17	1517	17.1	62.78	7.6	857.7	857.7	1.03
HEN05DR	5/31/2023	14:58	1458	17.5	63.5	7.43	864.3	864.3	1.1
HEN07	6/1/2023	11:45	1145	11.8	53.24	6.66	1209.8	1209.8	2.6
HEN08	6/1/2023	8:54	0854	13.3	55.94	6.53	1616.9	1616.9	2.59
HEN08D	5/31/2023	15:10	1510	13.8	56.84	6.63	2246.5	2246.5	1.55
HEN10	5/31/2023	9:22	0922	17.5	63.5	6.79	845.7	845.7	3.81
HEN12	5/31/2023	11:37	1137	15.7	60.26	7.17	817.4	817.4	5.17
HEN13	5/31/2023	12:04	1204	16.2	61.16	7.2	813.7	813.7	5.2
HEN16	6/1/2023	9:40	0940	18.8	65.84	7.21	807	807	2.82
HEN17	6/1/2023	10:08	1008	15.9	60.62	6.96	872.1	872.1	8.01
HEN18S	5/31/2023	14:15	1415	17.2	62.96	7.36	921	921	0.85
HEN18D	5/31/2023	13:49	1349	17.5	63.5	7.19	921.7	921.7	0.86
HEN21R	5/31/2023	11:09	1109	13.2	55.76	7.37	1152.6	1152.6	1.12
HEN22	5/31/2023	14:01	1401	15.7	60.26	7.58	998.8	998.8	1.43
HEN22D	5/31/2023	14:19	1419	15.9	60.62	7.24	1119	1119	1.41
HEN23	5/31/2023	12:00	1200	13	55.4	7.41	1282	1282	1.55
HEN25	5/31/2023	12:59	1259	13.4	56.12	7.15	881.5	881.5	2.45
HEN26	5/31/2023	12:41	1241	15	59	7.06	1058.7	1058.7	1.42
HEN27	5/31/2023	9:15	0915	12	53.6	6.98	1128.8	1128.8	1.05
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HEN32	5/31/2023	9:45	0945	11	51.8	6.92	997.2	997.2	1.24
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HEN34	5/31/2023	10:39	1039	12.3	54.14	6.92	1247.9	1247.9	1.6
HEN35	5/31/2023	10:09	1009	12.9	55.22	6.88	1647.1	1647.1	1.6
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HEN40S	6/1/2023	10:34	1034	16.9	62.42	7.68	805.7	805.7	1.34
HEN45S	6/1/2023	11:06	1106	19.9	67.82	6.94	1114.4	1114.4	1.11
HEN46	5/31/2023	11:00	1100	16.1	60.98	7.1	815.3	815.3	4.84
HEN47	5/31/2023	9:56	0956	18.1	64.58	6.89	868.3	868.3	3.6
HEN49	5/31/2023	12:19	1219	14.9	58.82	7.04	1078.8	1078.8	1.36
HEN50	5/31/2023	13:37	1337	15.5	59.9	7.35	1054.6	1054.6	1.17
HEN51	5/31/2023	11:37	1137	12.9	55.22	7.24	1128.8	1128.8	1.5
HEN52	6/1/2023	10:29	1029	17.3	63.14	7.49	816.8	816.8	3.71

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	JR,JC/TAC,BG

Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HEN54	5/31/2023	10:27	1027	17.1	62.78	7.07	827.9	827.9	5.71
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
HENXPW01	6/1/2023	8:58	0858	16.5	61.7	10.99	1116.4	1116.4	1.1
HENXPW02	6/1/2023	9:25	0925	16.3	61.34	11.82	3688	3688	1.57
HENXPW03	6/1/2023	9:52	0952	15.5	59.9	11.4	1573.1	1573.1	1.35
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)
Well ID	Date	Time	Time (adj)	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)

Site Sampling Event								
LIMS Workorder								
Technician								
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)	DTB (ft)	DTW (ft)	MP Elev (ft)	GW Elev (ft)	LIMS ID
HEN02	-0.24	132.4			44.96			23051600-001A
HEN03R	0.61	116			35.04			23051600-002A
HEN05R	-0.52	144.2			41.35			23051600-003A
HEN05DR	-0.78	145.8			41.32			23051600-004A
HEN07	-3.05	154.7			67.8			23051600-005A
HEN08	-3.01	167.7			53.84			23051600-006A
HEN08D	-2.01	77.1			54.12			23051600-007A
HEN10	-0.87	145.3			50.78			23051600-008A
HEN12	-0.77	147.9			51.21			23051600-009A
HEN13	-0.78	152.2			51.21			23051600-010A
HEN16	-2.83	138.1			54.57			23051600-011A
HEN17	-0.91	151.1			55.96			23051600-012A
HEN18S	-0.81	134.9			40.86			23051600-013A
HEN18D	16.77	140.1			40.91			23051600-014A
HEN21R	42.19	-178.5			5.92			23051600-015A
HEN22	-2.68	48.8			18.45			23051600-016A
HEN22D	1.83	-121			19.1			23051600-017A
HEN23	-1.79	-127.1			16.72			23051600-018A
HEN25	-1.34	36.3			15.94			23051600-019A
HEN26	-2.77	18.3			16			23051600-020A
HEN27	8.18	-15.7			4.14			23051600-021A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		6.62			23051600-022A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		6.56			23051600-023A
HEN32	6.19	85.7			5.22			23051600-024A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		4.03			23051600-025A
HEN34	1.79	-82.7			8.66			23051600-026A
HEN35	2.18	104.8			8.3			23051600-027A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		15.32			23051600-028A
HEN40S	-2.71	124.2			40.54			23051600-029A
HEN45S	2.52	137.8			20.42			23051600-030A
HEN46	-0.46	139.6			51.4			23051600-031A
HEN47	-0.83	144.7			55.66			23051600-032A
HEN49	21.09	-19			21.54			23051600-033A
HEN50	1.85	33.5			18.25			23051600-034A
HEN51	6.08	-135.3			18.5			23051600-035A
HEN52	2.82	92.2			53.89			23051600-036A

Site Sampling Event								
LIMS Workorder								
Technician								
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)	DTB (ft)	DTW (ft)	MP Elev (ft)	GW Elev (ft)	LIMS ID
HEN54	-0.33	148.6			53.23			23051600-037A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		50.55			23051600-038A
HENXPW01	1.99	-172.4			10.25			23051600-039A
HENXPW02	1.35	-74.7			15.37			23051600-040A
HENXPW03	-0.23	-35.9			6.41			23051600-041A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		7.17			23051600-042A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		440.5			23051600-043A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)					23051600-044A
Well ID	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)		53.84			23051600-045A

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN02	6/1/2023	10:56	1056	44.96		12.9	55.22	7.68	855.3	855.3
HEN02	6/1/2023	10:59	1059	44.96		12.2	53.96	7.03	997.9	997.9
HEN02	6/1/2023	11:02	1102	44.96		12.2	53.96	6.89	1012.2	1012.2

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN02	6/1/2023	8.69	0.45	114.6	
HEN02	6/1/2023	2.31	-0.11	127.1	
HEN02	6/1/2023	2.31	-0.24	132.4	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN03R	5/31/2023	13:06	1306	35.04		18.5	65.3	7.47	928.9	928.9
HEN03R	5/31/2023	13:09	1309	35.04		18.4	65.12	7.31	927.4	927.4
HEN03R	5/31/2023	13:12	1312	35.04		18.4	65.12	7.27	926.7	926.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN03R	5/31/2023	0.95	3.21	116	
HEN03R	5/31/2023	0.82	1.17	116	
HEN03R	5/31/2023	0.78	0.61	116	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN05R	5/31/2023	15:11	1511	41.35		17.1	62.78	7.65	858.7	858.7
HEN05R	5/31/2023	15:14	1514	41.35		17.2	62.96	7.61	858	858
HEN05R	5/31/2023	15:17	1517	41.35		17.1	62.78	7.6	857.7	857.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN05R	5/31/2023	1.4	1.09	145.1	
HEN05R	5/31/2023	1.07	-0.05	144.8	
HEN05R	5/31/2023	1.03	-0.52	144.2	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN05DR	5/31/2023	14:52	1452	41.32		17.3	63.14	7.53	861.5	861.5
HEN05DR	5/31/2023	14:55	1455	41.32		17.4	63.32	7.44	864.8	864.8
HEN05DR	5/31/2023	14:58	1458	41.32		17.5	63.5	7.43	864.3	864.3

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN05DR	5/31/2023	3.51	-0.34	146.5	
HEN05DR	5/31/2023	1.22	-0.35	146.6	
HEN05DR	5/31/2023	1.1	-0.78	145.8	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN07	6/1/2023	11:39	1139	67.8		11.8	53.24	6.7	1199.7	1199.7
HEN07	6/1/2023	11:42	1142	67.8		11.8	53.24	6.68	1206.5	1206.5
HEN07	6/1/2023	11:45	1145	67.8		11.8	53.24	6.66	1209.8	1209.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN07	6/1/2023	3.3	-2.91	152.9	
HEN07	6/1/2023	2.88	-2.95	154	
HEN07	6/1/2023	2.6	-3.05	154.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN08	6/1/2023	8:48	0848	53.84		13.4	56.12	6.52	1615.4	1615.4
HEN08	6/1/2023	8:51	0851	53.84		13.3	55.94	6.53	1615.8	1615.8
HEN08	6/1/2023	8:54	0854	53.84		13.3	55.94	6.53	1616.9	1616.9

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN08	6/1/2023	2.95	-2.93	169.5	
HEN08	6/1/2023	2.73	-2.96	168.6	
HEN08	6/1/2023	2.59	-3.01	167.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN08D	5/31/2023	15:04	1504	54.12		13.9	57.02	6.65	2259.7	2259.7
HEN08D	5/31/2023	15:07	1507	54.12		13.9	57.02	6.64	2251.9	2251.9
HEN08D	5/31/2023	15:10	1510	54.12		13.8	56.84	6.63	2246.5	2246.5

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN08D	5/31/2023	2.5	-0.62	68.5	
HEN08D	5/31/2023	1.85	-1.36	73.3	
HEN08D	5/31/2023	1.55	-2.01	77.1	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN10	5/31/2023	9:16	0916	50.78		17.5	63.5	6.72	848.9	848.9
HEN10	5/31/2023	9:19	0919	50.78		17.5	63.5	6.76	846.3	846.3
HEN10	5/31/2023	9:22	0922	50.78		17.5	63.5	6.79	845.7	845.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN10	5/31/2023	3.43	-0.43	145.1	
HEN10	5/31/2023	3.71	-0.86	145.2	
HEN10	5/31/2023	3.81	-0.87	145.3	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN12	5/31/2023	11:31	1131	51.21		16.3	61.34	7.56	827.5	827.5
HEN12	5/31/2023	11:34	1134	51.21		15.7	60.26	7.25	816.9	816.9
HEN12	5/31/2023	11:37	1137	51.21		15.7	60.26	7.17	817.4	817.4

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN12	5/31/2023	6.12	-0.14	139.8	
HEN12	5/31/2023	5.16	-0.7	144.7	
HEN12	5/31/2023	5.17	-0.77	147.9	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN13	5/31/2023	11:58	1158	51.21		16.1	60.98	7.21	815.2	815.2
HEN13	5/31/2023	12:01	1201	51.21		16.2	61.16	7.2	814.4	814.4
HEN13	5/31/2023	12:04	1204	51.21		16.2	61.16	7.2	813.7	813.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN13	5/31/2023	5.24	-0.34	151.1	
HEN13	5/31/2023	5.21	-0.77	151.7	
HEN13	5/31/2023	5.2	-0.78	152.2	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN16	6/1/2023	9:34	0934	54.57		18.8	65.84	7.22	806.9	806.9
HEN16	6/1/2023	9:37	0937	54.57		18.7	65.66	7.21	807	807
HEN16	6/1/2023	9:40	0940	54.57		18.8	65.84	7.21	807	807

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN16	6/1/2023	3.09	-2.75	137.7	
HEN16	6/1/2023	2.92	-2.85	138.1	
HEN16	6/1/2023	2.82	-2.83	138.1	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN17	6/1/2023	10:02	1002	55.96		15.9	60.62	6.99	874.7	874.7
HEN17	6/1/2023	10:05	1005	55.96		15.9	60.62	6.97	873	873
HEN17	6/1/2023	10:08	1008	55.96		15.9	60.62	6.96	872.1	872.1

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN17	6/1/2023	8.14	-0.9	148.6	
HEN17	6/1/2023	8.09	-1.64	150.4	
HEN17	6/1/2023	8.01	-0.91	151.1	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN18S	5/31/2023	14:09	1409	40.86		17.2	62.96	7.37	919.8	919.8
HEN18S	5/31/2023	14:12	1412	40.86		17.2	62.96	7.36	920.3	920.3
HEN18S	5/31/2023	14:15	1415	40.86		17.2	62.96	7.36	921	921

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN18S	5/31/2023	0.87	-0.5	136	
HEN18S	5/31/2023	0.84	-0.74	135.3	
HEN18S	5/31/2023	0.85	-0.81	134.9	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN18D	5/31/2023	13:43	1343	40.91		17.5	63.5	7.24	920.9	920.9
HEN18D	5/31/2023	13:46	1346	40.91		17.5	63.5	7.2	923.1	923.1
HEN18D	5/31/2023	13:49	1349	40.91		17.5	63.5	7.19	921.7	921.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN18D	5/31/2023	1.16	5.27	139.7	
HEN18D	5/31/2023	1	12.32	140.2	
HEN18D	5/31/2023	0.86	16.77	140.1	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN21R	5/31/2023	10:57	1057	5.92		13.1	55.58	7.34	1149.1	1149.1
HEN21R	5/31/2023	11:00	1100	5.92		13.1	55.58	7.35	1150.9	1150.9
HEN21R	5/31/2023	11:03	1103	5.92		13	55.4	7.36	1152.8	1152.8
HEN21R	5/31/2023	11:06	1106	5.92		13.1	55.58	7.36	1150.1	1150.1
HEN21R	5/31/2023	11:09	1109	5.92		13.2	55.76	7.37	1152.6	1152.6

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN21R	5/31/2023	1.91	69.19	-157.6	
HEN21R	5/31/2023	1.53	50.27	-167.6	
HEN21R	5/31/2023	1.33	54.99	-173.5	
HEN21R	5/31/2023	1.21	46.74	-177	
HEN21R	5/31/2023	1.12	42.19	-178.5	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN22	5/31/2023	13:55	1355	18.45		15.9	60.62	7.58	1000.6	1000.6
HEN22	5/31/2023	13:58	1358	18.45		15.8	60.44	7.58	1000.3	1000.3
HEN22	5/31/2023	14:01	1401	18.45		15.7	60.26	7.58	998.8	998.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN22	5/31/2023	2.78	-0.9	56.8	
HEN22	5/31/2023	1.8	-2.23	52.4	
HEN22	5/31/2023	1.43	-2.68	48.8	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN22D	5/31/2023	14:13	1413	19.1		15.9	60.62	7.24	1126.4	1126.4
HEN22D	5/31/2023	14:16	1416	19.1		15.9	60.62	7.24	1122.3	1122.3
HEN22D	5/31/2023	14:19	1419	19.1		15.9	60.62	7.24	1119	1119

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN22D	5/31/2023	2.87	4.8	-108	
HEN22D	5/31/2023	1.74	3.75	-118.3	
HEN22D	5/31/2023	1.41	1.83	-121	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN23	5/31/2023	11:54	1154	16.72		12.9	55.22	7.4	1295.7	1295.7
HEN23	5/31/2023	11:57	1157	16.72		12.9	55.22	7.41	1289.1	1289.1
HEN23	5/31/2023	12:00	1200	16.72		13	55.4	7.41	1282	1282

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN23	5/31/2023	3.09	-0.46	-128.2	
HEN23	5/31/2023	1.96	-1.38	-132.4	
HEN23	5/31/2023	1.55	-1.79	-127.1	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN25	5/31/2023	12:53	1253	15.94		13.5	56.3	7.17	893.9	893.9
HEN25	5/31/2023	12:56	1256	15.94		13.4	56.12	7.15	885.4	885.4
HEN25	5/31/2023	12:59	1259	15.94		13.4	56.12	7.15	881.5	881.5

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN25	5/31/2023	2.94	9.17	34.3	
HEN25	5/31/2023	2.49	0.38	34.8	
HEN25	5/31/2023	2.45	-1.34	36.3	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN26	5/31/2023	12:35	1235	16		15	59	7.1	1059.8	1059.8
HEN26	5/31/2023	12:38	1238	16		14.9	58.82	7.07	1058	1058
HEN26	5/31/2023	12:41	1241	16		15	59	7.06	1058.7	1058.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN26	5/31/2023	2.58	-1.65	19.6	
HEN26	5/31/2023	1.75	-2.66	18.3	
HEN26	5/31/2023	1.42	-2.77	18.3	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN27	5/31/2023	9:06	0906	4.14		12	53.6	6.97	1128	1128
HEN27	5/31/2023	9:09	0909	4.14		11.9	53.42	6.98	1128.4	1128.4
HEN27	5/31/2023	9:12	0912	4.14		11.9	53.42	6.98	1128	1128
HEN27	5/31/2023	9:15	0915	4.14		12	53.6	6.98	1128.8	1128.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN27	5/31/2023	1.22	11.64	3.1	
HEN27	5/31/2023	1.15	9.39	-4.6	
HEN27	5/31/2023	1.09	5.47	-10.3	
HEN27	5/31/2023	1.05	8.18	-15.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN30	5/30/2023	1509	1509							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN30	5/30/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN31	5/30/2023	1509	1509							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN31	5/30/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN32	5/31/2023	9:33	0933	5.22		11.1	51.98	6.98	1001.2	1001.2
HEN32	5/31/2023	9:36	0936	5.22		11	51.8	6.95	999.6	999.6
HEN32	5/31/2023	9:39	0939	5.22		11	51.8	6.93	999	999
HEN32	5/31/2023	9:42	0942	5.22		11.1	51.98	6.92	997.5	997.5
HEN32	5/31/2023	9:45	0945	5.22		11	51.8	6.92	997.2	997.2

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN32	5/31/2023	2.69	31.45	83.2	
HEN32	5/31/2023	1.9	19.9	84	
HEN32	5/31/2023	1.56	14.63	84.9	
HEN32	5/31/2023	1.37	9.91	85.3	
HEN32	5/31/2023	1.24	6.19	85.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN33	5/30/2023	1515	1515							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN33	5/30/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN34	5/31/2023	10:33	1033	8.66		12.2	53.96	7.02	1201.8	1201.8
HEN34	5/31/2023	10:36	1036	8.66		12.2	53.96	6.94	1225.3	1225.3
HEN34	5/31/2023	10:39	1039	8.66		12.3	54.14	6.92	1247.9	1247.9

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN34	5/31/2023	2.92	10.71	-13	
HEN34	5/31/2023	1.98	4.75	-64.2	
HEN34	5/31/2023	1.6	1.79	-82.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN35	5/31/2023	10:03	1003	8.3		13	55.4	6.89	1663.9	1663.9
HEN35	5/31/2023	10:06	1006	8.3		12.9	55.22	6.88	1652.8	1652.8
HEN35	5/31/2023	10:09	1009	8.3		12.9	55.22	6.88	1647.1	1647.1

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN35	5/31/2023	3.18	8.32	107.4	
HEN35	5/31/2023	2.04	3.93	106.1	
HEN35	5/31/2023	1.6	2.18	104.8	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN36	5/30/2023	1528	1528							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN36	5/30/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN40S	6/1/2023	10:28	1028	40.54		17	62.6	7.67	805.5	805.5
HEN40S	6/1/2023	10:31	1031	40.54		16.9	62.42	7.67	804.2	804.2
HEN40S	6/1/2023	10:34	1034	40.54		16.9	62.42	7.68	805.7	805.7

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN40S	6/1/2023	1.94	-2.52	126.4	
HEN40S	6/1/2023	1.55	-2.72	125.1	
HEN40S	6/1/2023	1.34	-2.71	124.2	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN45S	6/1/2023	11:00	1100	20.42		19.9	67.82	6.94	1114.4	1114.4
HEN45S	6/1/2023	11:03	1103	20.42		19.9	67.82	6.94	1113.9	1113.9
HEN45S	6/1/2023	11:06	1106	20.42		19.9	67.82	6.94	1114.4	1114.4

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN45S	6/1/2023	1.53	4.52	136.5	
HEN45S	6/1/2023	1.26	2.67	137.5	
HEN45S	6/1/2023	1.11	2.52	137.8	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN46	5/31/2023	10:54	1054	51.4		16.4	61.52	7.25	818.5	818.5
HEN46	5/31/2023	10:57	1057	51.4		16.2	61.16	7.14	815.9	815.9
HEN46	5/31/2023	11:00	1100	51.4		16.1	60.98	7.1	815.3	815.3

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN46	5/31/2023	5.15	0.24	131.4	
HEN46	5/31/2023	4.91	-0.06	136.5	
HEN46	5/31/2023	4.84	-0.46	139.6	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN47	5/31/2023	9:50	0950	55.66		18.1	64.58	6.94	868.4	868.4
HEN47	5/31/2023	9:53	0953	55.66		18.1	64.58	6.9	867.3	867.3
HEN47	5/31/2023	9:56	0956	55.66		18.1	64.58	6.89	868.3	868.3

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN47	5/31/2023	3.73	-0.04	141.7	
HEN47	5/31/2023	3.63	0.03	143.4	
HEN47	5/31/2023	3.6	-0.83	144.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN49	5/31/2023	12:10	1210	21.54		14.8	58.64	7.16	1082.6	1082.6
HEN49	5/31/2023	12:13	1213	21.54		14.8	58.64	7.07	1080.4	1080.4
HEN49	5/31/2023	12:16	1216	21.54		14.7	58.46	7.05	1079.3	1079.3
HEN49	5/31/2023	12:19	1219	21.54		14.9	58.82	7.04	1078.8	1078.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN49	5/31/2023	5.26	6.14	-68.4	
HEN49	5/31/2023	2.34	20.09	-39.8	
HEN49	5/31/2023	1.65	23.12	-27.3	
HEN49	5/31/2023	1.36	21.09	-19	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN50	5/31/2023	13:31	1331	18.25		15.5	59.9	7.34	1055.5	1055.5
HEN50	5/31/2023	13:34	1334	18.25		15.6	60.08	7.35	1054.7	1054.7
HEN50	5/31/2023	13:37	1337	18.25		15.5	59.9	7.35	1054.6	1054.6

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN50	5/31/2023	1.48	10.75	37.6	
HEN50	5/31/2023	1.29	5.59	35.2	
HEN50	5/31/2023	1.17	1.85	33.5	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN51	5/31/2023	11:28	1128	18.5		13	55.4	7.2	1126.5	1126.5
HEN51	5/31/2023	11:31	1131	18.5		13	55.4	7.22	1126.6	1126.6
HEN51	5/31/2023	11:34	1134	18.5		12.9	55.22	7.23	1127	1127
HEN51	5/31/2023	11:37	1137	18.5		12.9	55.22	7.24	1128.8	1128.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN51	5/31/2023	2.56	9.63	-121.3	
HEN51	5/31/2023	1.96	8.84	-128.8	
HEN51	5/31/2023	1.66	6.89	-133	
HEN51	5/31/2023	1.5	6.08	-135.3	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN52	6/1/2023	10:23	1023	53.89		18.1	64.58	8.37	874.4	874.4
HEN52	6/1/2023	10:26	1026	53.89		17.4	63.32	7.77	820.1	820.1
HEN52	6/1/2023	10:29	1029	53.89		17.3	63.14	7.49	816.8	816.8

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN52	6/1/2023	6.13	3.09	64.1	
HEN52	6/1/2023	3.85	6.07	80.1	
HEN52	6/1/2023	3.71	2.82	92.2	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN54	5/31/2023	10:21	1021	53.23		17.2	62.96	7.23	855.8	855.8
HEN54	5/31/2023	10:24	1024	53.23		17.2	62.96	7.11	828.3	828.3
HEN54	5/31/2023	10:27	1027	53.23		17.1	62.78	7.07	827.9	827.9

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN54	5/31/2023	5.9	1.43	140.7	
HEN54	5/31/2023	5.73	0.45	145.4	
HEN54	5/31/2023	5.71	-0.33	148.6	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN55	5/30/2023	1438	1438							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN55	5/30/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HENXPW01	6/1/2023	8:49	0849	10.25		16.7	62.06	11.01	1109.1	1109.1
HENXPW01	6/1/2023	8:52	0852	10.25		16.7	62.06	10.98	1109.8	1109.8
HENXPW01	6/1/2023	8:55	0855	10.25		16.6	61.88	10.98	1114.3	1114.3
HENXPW01	6/1/2023	8:58	0858	10.25		16.5	61.7	10.99	1116.4	1116.4

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HENXPW01	6/1/2023	1.54	7.68	-123.4	
HENXPW01	6/1/2023	1.29	2.59	-147.2	
HENXPW01	6/1/2023	1.18	2.15	-161.9	
HENXPW01	6/1/2023	1.1	1.99	-172.4	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HENXPW02	6/1/2023	9:19	0919	15.37		16.6	61.88	11.76	3687.5	3687.5
HENXPW02	6/1/2023	9:22	0922	15.37		16.3	61.34	11.8	3686.2	3686.2
HENXPW02	6/1/2023	9:25	0925	15.37		16.3	61.34	11.82	3688	3688

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HENXPW02	6/1/2023	2.1	4.88	-53.1	
HENXPW02	6/1/2023	1.88	3.53	-66.7	
HENXPW02	6/1/2023	1.57	1.35	-74.7	

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HENXPW03	6/1/2023	9:46	0946	6.41		15.3	59.54	11.52	1574.7	1574.7
HENXPW03	6/1/2023	9:49	0949	6.41		15.4	59.72	11.42	1564.2	1564.2
HENXPW03	6/1/2023	9:52	0952	6.41		15.5	59.9	11.4	1573.1	1573.1

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HENXPW03	6/1/2023	1.95	0.56	-30.6	
HENXPW03	6/1/2023	1.5	0	-33.5	
HENXPW03	6/1/2023	1.35	-0.23	-35.9	

Site Sampling Event	HEN-Q2-2023									
LIMS Workorder	23051600									
Technician										
Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HENXSG01	May-23	1403	1403							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HENXSG01	May-23				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HENYSGILRIVER	5/30/2023	1321	1321							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HENYSGILRIVER	5/30/2023				

Site Sampling Event	HEN-Q2-2023									
LIMS Workorder	23051600									
Technician										
Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
FIELD Blank	6/1/2023	822	0822							

Site Sampling Event	HEN-Q2-2023				
LIMS Workorder	23051600				
Technician					
Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
FIELD Blank	6/1/2023				

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	Time	Time (adj)	DTW	Drawdown	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)
HEN08 Dup	6/1/2023	8:48	0848	53.8		13.4	56.12	6.52	1615.4	1615.4
HEN08 Dup	6/1/2023	8:51	0851	53.8		13.3	55.94	6.53	1615.8	1615.8
HEN08 Dup	6/1/2023	8:54	0854	53.8		13.3	55.94	6.53	1616.9	1616.9

Site Sampling Event	HEN-Q2-2023
LIMS Workorder	23051600
Technician	

Well ID	Date	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (gal)
HEN08 Dup	6/1/2023	2.95	-2.93	169.5	
HEN08 Dup	6/1/2023	2.73	-2.96	168.6	
HEN08 Dup	6/1/2023	2.59	-3.01	167.7	

Field Analysis Log

Cross Reference to Sample ID	Date mm/dd/yy	Time	Temp. C	pH Results Reading 1	pH Results Reading 2	pH Results LCSD	Conductivity Range Factor	Conductivity Reading 1	Conductivity Reading 2	Other: DF	Other: Read1/units	Other: DF	Other: Read2/units
LCS	5/31/23	8:40	22.9	7.08				1414					
CCV		15:57	28.7	7.09				1412					

**** Field Meter ID for Temp, pH & Conductivity : Eco Rental

**** Field Meter ID for (_____) : _____

	SW846	Std Methods		Lot #		Lot #		Lot #
Field Temp SOP 1156		2550 B	pH 4.0 Buffer	WC	Conductivity Std. 1412	74610	_____ Std.	_____
pH in the Field SOP 1152	9040B	4500-H B	pH 7.0 Buffer	WC 230210B	Conductivity Std.		_____ Std.	_____
Field Cond. SOP 1155	9050A	2510 B	pH 10.0 Buffer	WC 230126C	Conductivity Std.		_____ Std.	_____
Other: _____			pH LCS/LCSD 7	WC 221117B	Conductivity LCS/LCSD		_____ LCS/LCSD	_____

pH Calibration		Reading
Date: 5/31/23	4.00	4.00
Time: 8:30	7.00	7.01
	10.00	10.02

Conductivity Calibration			Reading	units
	µS	0-199.9		µS
1412	µS	0-1999	1412	µS
	mS	0-19.99		mS

_____ Calibration		Reading
Std_____	Units _____	_____
Std_____	Units _____	_____
Std_____	Units _____	_____

Field Analyst Sig & Date: Jenny Carroll 5/31/23
Reviewed By & Date:
Reviewed By & Date:

Field Analyst Sig & Date: Jenny Carroll 5/31/23
Reviewed By & Date:
Reviewed By & Date:

Field Analyst Sig & Date:
Reviewed By & Date:
Reviewed By & Date:

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Comments:

Field Analysis Log

	Date	Time	Temp	pH									
LCS	5-31-23	0831	24.1	7.09	7.09			1429					
CCV	5-31-23	1536	28.2	7.08	7.08			1418					

****** Field Meter ID for Temp, pH & Conductivity :** _____ ****** Field Meter ID for (_____) :** _____

	SW846	Std Methods		Lot #		Lot #		Lot #
Field Temp SOP 1156		2550 B	pH 4.0 Buffer		Conductivity Std.		Std.	
pH in the Field SOP 1152	9040B	4500-H B	pH 7.0 Buffer		Conductivity Std.		Std.	
Field Cond. SOP 1155	9050A	2510 B	pH 10.0 Buffer		Conductivity Std.		Std.	
Other:			pH LCS/LCSD		Conductivity LCS/LCSD		LCS/LCSD	

pH Calibration		Reading	Conductivity Calibration			Reading	units	_____ Calibration	Reading
Date: 5-31-23	4.00	~~4.05~~ 4.01		µS	0-199.9		µS	Std Units	
Time: 0815	7.00	7.03		µS	0-1999	1416	µS	Std Units	
	10.00	9.98		mS	0-19.99		mS	Std Units	
Field Analyst Sig & Date:		[signature] 5-31-23	Field Analyst Sig & Date:			[signature] 5-31-23		Field Analyst Sig & Date:	
Reviewed By & Date:			Reviewed By & Date:					Reviewed By & Date:	
Reviewed By & Date:			Reviewed By & Date:					Reviewed By & Date:	

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Comments:

TE 6/2/23

230516CD

Field Analysis Log

Cross Reference to Sample ID	Date mm/dd/yy	Time	Temp. C	pH Results Reading 1	pH Results Reading 2	pH Results LCSD	Conductivity Range Factor	Conductivity Reading 1	Conductivity Reading 2	Other: DF	Other: Read1/units	Other: DF	Other: Read2/units
LCS	6/1/23	8:21	24.3	7.10				1414					
CCV		11:15	25.2	7.10				1417					

**** Field Meter ID for Temp, pH & Conductivity : Eco Rental

**** Field Meter ID for (_____) : _____

	SW846	Std Methods		Lot #		Lot #		Lot #
Field Temp SOP 1156		2550 B	pH 4.0 Buffer	WC	Conductivity Std. 1412	74610	Std.	
pH in the Field SOP 1152	9040B	4500-H B	pH 7.0 Buffer	WC 230210B	Conductivity Std.		Std.	
Field Cond. SOP 1155	9050A	2510 B	pH 10.0 Buffer	WC 230126C	Conductivity Std.		Std.	
Other:			pH LCS/LCSD 7	WC 221117B	Conductivity LCS/LCSD		LCS/LCSD	

pH Calibration		Reading
Date: 6/1/23	4.00	4.00
Time: 8:10	7.00	7.01
	10.00	10.01

Field Analyst Sig & Date: Juan Carrola 6/1/23
Reviewed By & Date:
Reviewed By & Date:

Conductivity Calibration			Reading	units
	µS	0-199.9		µS
1412	µS	0-1999	1412	µS
	mS	0-19.99		mS

Field Analyst Sig & Date: Juan Carrola 6/1/23
Reviewed By & Date:
Reviewed By & Date:

	Calibration	Reading
Std	Units	
Std	Units	
Std	Units	

Field Analyst Sig & Date:
Reviewed By & Date:
Reviewed By & Date:

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Comments:

23051600

Field Analysis Log

Cross Reference to Sample ID	Date mm/dd/yy	Time	Temp. C	pH Results Reading 1	pH Results Reading 2	pH Results LCSD	Conductivity Range Factor	Conductivity Reading 1	Conductivity Reading 2	Other: DF	Other: Read1/units	Other: DF	Other: Read2/units
LCS	6-1-23	0825	25.3	7.06	7.07			1413					
CCV	6-1-23	1152	25.3	7.00	7.03			1413					

**** Field Meter ID for Temp, pH & Conductivity : Eco Rental

**** Field Meter ID for (_____) : _____

	SW846	Std Methods		Lot #		Lot #		Lot #
Field Temp SOP 1156		2550 B	pH 4.0 Buffer	WC 230105A	Conductivity Std. 1412	74610	_____ Std.	_____
pH in the Field SOP 1152	9040B	4500-H B	pH 7.0 Buffer	WC 230210B	Conductivity Std.		_____ Std.	
Field Cond. SOP 1155	9050A	2510 B	pH 10.0 Buffer	WC 230126C	Conductivity Std.		_____ Std.	
Other: _____			pH LCS/LCSD 7	WC 221117B	Conductivity LCS/LCSD		_____ LCS/LCSD	

pH Calibration		Reading
Date: 6-1-23	4.00	4.05
Time: 0813	7.00	7.04
	10.00	9.96

Conductivity Calibration			Reading	units
	µS	0-199.9		µS
1412	µS	0-1999	1391	µS
	mS	0-19.99		mS

_____ Calibration		Reading
Std	Units	
Std	Units	
Std	Units	

Field Analyst Sig & Date:
Reviewed By & Date:
Reviewed By & Date:

Field Analyst Sig & Date:
Reviewed By & Date:
Reviewed By & Date:

Field Analyst Sig & Date:
Reviewed By & Date:
Reviewed By & Date:

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eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Voelker
Vistra Energy Corp
133 S 4th, Suite 206
Springfield, Illinois 62701

Generated 11/16/23 10:56:43 Revision 3

JOB DESCRIPTION

HEN-23Q3
HEN_257_804

JOB NUMBER

500-238579-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

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Authorization

Generated
11/16/23 10:56:43
Revision 3

Authorized for release by
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Table of Contents

Case Narrative

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Job ID: 500-238579-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-238579-1

Revision
The report being provided is a revision of the original report sent on 10/29/23. The report (revision 3) is being revised due to: COCs missing signature/date/time. Please remove all "Alkalinity (SM 2320B)" results.

Report revision history
Revision 1 - 11/07/23 - Reason - need to report program report and comprehensive report.

Revision 2 - 11/07/23 - Reason - Report Rev(1) is comprehensive. Rev(2) is for individual program report.

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 735519 was above the upper control limit for Be Sample results were non-detects, and have been reported as qualified data.

Method 6020B: The initial low level calibration verification (ICVL) result for batch 736032 was above the upper control limit for Be. Sample results were non-detects, and have been reported as qualified data.

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

Field Service / Mobile Lab
Method Field Sampling: "Depth to Water (ft from MP)" value reported is the value recorded in the "WL Reading on Transducer (ft)" column on the SAR-4 form for the following samples: HEN_21R (500-238579-1), HEN_22&D (500-238579-2), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), HEN_34 (500-238579-44), HEN_22 (500-238579-46) and HEN_50 (500-238579-47).

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

General Chemistry
Method 300.0: The method blank for analytical batch 500-729898 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 300.0: The method blank for analytical batch 500-731549 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

Method Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	EET CHI
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
Field Sampling	Field Sampling	EPA	EET CHI
200.7	Preparation, Total Recoverable Metals	EPA	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI
FILTRATION	Sample Filtration	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-238579-1	HEN_21R	Water	08/22/23 13:45	08/23/23 10:00
500-238579-2	HEN_22&D	Water	08/22/23 09:10	08/23/23 10:00
500-238579-3	HEN_23	Water	08/22/23 11:20	08/23/23 10:00
500-238579-4	HEN_23_FD	Water	08/22/23 11:20	08/23/23 10:00
500-238579-5	HEN_32	Water	08/22/23 11:15	08/23/23 10:00
500-238579-6	HEN_51	Water	08/22/23 15:56	08/23/23 10:00
500-238579-7	HEN_25	Water	08/22/23 14:30	08/23/23 10:00
500-238579-8	HEN_26	Water	08/22/23 15:35	08/23/23 10:00
500-238579-26	HEN_27	Water	08/24/23 09:00	08/25/23 09:32
500-238579-27	HEN_35	Water	08/24/23 10:10	08/25/23 09:32
500-238579-44	HEN_34	Water	08/25/23 11:25	08/25/23 15:00
500-238579-45	HEN_49	Water	08/25/23 10:05	08/25/23 15:00
500-238579-46	HEN_22	Water	08/25/23 08:50	08/25/23 15:00
500-238579-47	HEN_50	Water	08/25/23 11:25	08/25/23 15:00
500-238579-48	WPCP_FB	Water	08/28/23 07:30	08/28/23 15:00
500-238579-61	HEN_30	Water	08/22/23 10:00	08/28/23 15:00
500-238579-62	HEN_31	Water	08/22/23 09:55	08/28/23 15:00
500-238579-63	HEN_33	Water	08/22/23 10:18	08/28/23 15:00
500-238579-64	HEN_36	Water	08/22/23 09:30	08/28/23 15:00

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_21R

Date Collected: 08/22/23 13:45
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-1

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.026	F1	0.010	0.0040	mg/L		08/25/23 09:24	09/19/23 15:00	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:31	1
Arsenic	0.023		0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:31	1
Barium	0.30		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:31	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:31	1
Boron	1.7		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 22:46	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:31	1
Calcium	120		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:31	1
Chromium	0.0026	J	0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:31	1
Cobalt	0.0014		0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:31	1
Lead	0.0028		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:31	1
Magnesium	39		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:31	1
Molybdenum	0.0097		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:31	1
Potassium	2.8		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:31	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:31	1
Sodium	45		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 22:46	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 06:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	95		5.0	0.58	mg/L			08/28/23 20:55	5
Fluoride (EPA 300.0)	0.23	J	1.0	0.19	mg/L			08/28/23 20:40	1
Sulfate (EPA 300.0)	94		5.0	1.0	mg/L			08/28/23 20:55	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	370		5.0	3.7	mg/L			08/28/23 16:42	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 16:42	1
Total Dissolved Solids (SM 2540C)	730		10	4.3	mg/L			08/28/23 18:38	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.51				SU			08/22/23 13:45	1
Field Temperature	16.6				Degrees C			08/22/23 13:45	1
Oxidation Reduction Potential	-136.3				millivolts			08/22/23 13:45	1
Oxygen, Dissolved	0.21				mg/L			08/22/23 13:45	1
Specific Conductance	762				umhos/cm			08/22/23 13:45	1
Turbidity	34.8				NTU			08/22/23 13:45	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_22&D
Date Collected: 08/22/23 09:10
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-2
Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.017**		0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 15:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:35	1
Arsenic	**0.0013**		0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:35	1
Barium	**0.066**		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:35	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:35	1
Boron	**1.3**		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 22:50	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:35	1
Calcium	**120**		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:35	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:35	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:35	1
Lead	<0.00050		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:35	1
Magnesium	**41**		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:35	1
Molybdenum	**0.0067**		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:35	1
Potassium	**3.1**		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:35	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:35	1
Sodium	**44**		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 22:50	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**97**		5.0	0.58	mg/L			08/28/23 21:25	5
Fluoride (EPA 300.0)	**0.22**	**J**	1.0	0.19	mg/L			08/28/23 21:10	1
Sulfate (EPA 300.0)	**96**		5.0	1.0	mg/L			08/28/23 21:25	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**340**		5.0	3.7	mg/L			08/28/23 16:52	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 16:52	1
Total Dissolved Solids (SM 2540C)	**690**		10	4.3	mg/L			08/28/23 18:41	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.30**				SU			08/22/23 09:10	1
Field Temperature	**18.0**				Degrees C			08/22/23 09:10	1
Oxidation Reduction Potential	**-82.1**				millivolts			08/22/23 09:10	1
Oxygen, Dissolved	**0.91**				mg/L			08/22/23 09:10	1
Specific Conductance	**731**				umhos/cm			08/22/23 09:10	1
Turbidity	**24.8**				NTU			08/22/23 09:10	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_23

Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-3

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0063**		0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 15:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:38	1
Arsenic	**0.00089**	**J**	0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:38	1
Barium	**0.042**		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:38	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:38	1
Boron	**8.1**		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 22:54	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:38	1
Calcium	**110**		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:38	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:38	1
Cobalt	**0.00047**	**J**	0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:38	1
Lead	<0.00050		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:38	1
Magnesium	**78**		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:38	1
Molybdenum	**0.015**		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:38	1
Potassium	**2.9**		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:38	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:38	1
Sodium	**44**		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 22:54	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:38	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**53**		50	5.8	mg/L			08/28/23 21:56	50
Fluoride (EPA 300.0)	**0.23**	**J**	1.0	0.19	mg/L			08/28/23 21:41	1
Sulfate (EPA 300.0)	**460**		50	10	mg/L			08/28/23 21:56	50
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**150**		5.0	3.7	mg/L			08/28/23 17:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 17:04	1
Total Dissolved Solids (SM 2540C)	**950**		10	4.3	mg/L			08/28/23 18:43	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.40**				SU			08/22/23 11:20	1
Field Temperature	**15.0**				Degrees C			08/22/23 11:20	1
Oxidation Reduction Potential	**-124.3**				millivolts			08/22/23 11:20	1
Oxygen, Dissolved	**0.18**				mg/L			08/22/23 11:20	1
Specific Conductance	**832**				umhos/cm			08/22/23 11:20	1
Turbidity	**9.1**				NTU			08/22/23 11:20	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_23_FD

Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-4

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0055		0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:42	1
Arsenic	0.00094	J	0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:42	1
Barium	0.043		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:42	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:42	1
Boron	7.9		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 22:58	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:42	1
Calcium	110		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:42	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:42	1
Cobalt	0.00048	J	0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:42	1
Lead	<0.00050		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:42	1
Magnesium	80		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:42	1
Molybdenum	0.016		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:42	1
Potassium	3.0		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:42	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:42	1
Sodium	42		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 22:58	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:42	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	53		50	5.8	mg/L			08/28/23 22:56	50
Fluoride (EPA 300.0)	0.23	J	1.0	0.19	mg/L			08/28/23 22:41	1
Sulfate (EPA 300.0)	460		50	10	mg/L			08/28/23 22:56	50
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	160		5.0	3.7	mg/L			08/28/23 17:13	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 17:13	1
Total Dissolved Solids (SM 2540C)	950		10	4.3	mg/L			08/28/23 18:46	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.40				SU			08/22/23 11:20	1
Field Temperature	15.0				Degrees C			08/22/23 11:20	1
Oxidation Reduction Potential	-124.3				millivolts			08/22/23 11:20	1
Oxygen, Dissolved	0.18				mg/L			08/22/23 11:20	1
Specific Conductance	832				umhos/cm			08/22/23 11:20	1
Turbidity	9.1				NTU			08/22/23 11:20	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_32

Date Collected: 08/22/23 11:15
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-5

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0048	J	0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 15:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:45	1
Arsenic	0.00049	J	0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:45	1
Barium	0.039		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:45	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:45	1
Boron	0.14		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 23:01	1
Cadmium	0.00021	J	0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:45	1
Calcium	100		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:45	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:45	1
Cobalt	0.0014		0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:45	1
Lead	<0.00050		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:45	1
Magnesium	39		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:45	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:45	1
Potassium	2.1		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:45	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:45	1
Sodium	38		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 23:01	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	68		2.0	0.23	mg/L			08/28/23 23:27	2
Fluoride (EPA 300.0)	0.22	J	1.0	0.19	mg/L			08/28/23 23:12	1
Sulfate (EPA 300.0)	66		2.0	0.41	mg/L			08/28/23 23:27	2
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	320		5.0	3.7	mg/L			08/28/23 17:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 17:22	1
Total Dissolved Solids (SM 2540C)	570		10	4.3	mg/L			08/28/23 18:48	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.09				SU			08/22/23 11:15	1
Field Temperature	13.8				Degrees C			08/22/23 11:15	1
Oxidation Reduction Potential	151.7				millivolts			08/22/23 11:15	1
Oxygen, Dissolved	0.09				mg/L			08/22/23 11:15	1
Specific Conductance	715				umhos/cm			08/22/23 11:15	1
Turbidity	5.33				NTU			08/22/23 11:15	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_51
Date Collected: 08/22/23 15:56
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-6
Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.025		0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 15:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:49	1
Arsenic	0.019		0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:49	1
Barium	0.10		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:49	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:49	1
Boron	1.3		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 23:05	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:49	1
Calcium	110		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:49	1
Chromium	0.0011	J	0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:49	1
Cobalt	0.00086	J	0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:49	1
Lead	0.0012		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:49	1
Magnesium	37		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:49	1
Molybdenum	0.0089		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:49	1
Potassium	5.6		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:49	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:49	1
Sodium	52		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 23:05	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	94		5.0	0.58	mg/L			08/28/23 23:57	5
Fluoride (EPA 300.0)	0.23	J	1.0	0.19	mg/L			08/28/23 23:42	1
Sulfate (EPA 300.0)	90		5.0	1.0	mg/L			08/28/23 23:57	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	340		5.0	3.7	mg/L			08/28/23 17:31	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/28/23 17:31	1
Total Dissolved Solids (SM 2540C)	680		10	4.3	mg/L			08/28/23 18:51	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.37				SU			08/22/23 15:56	1
Field Temperature	17.3				Degrees C			08/22/23 15:56	1
Oxidation Reduction Potential	-128.6				millivolts			08/22/23 15:56	1
Oxygen, Dissolved	0.27				mg/L			08/22/23 15:56	1
Specific Conductance	730				umhos/cm			08/22/23 15:56	1
Turbidity	26.2				NTU			08/22/23 15:56	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_25

Date Collected: 08/22/23 14:30
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-7

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	14.02				ft			08/22/23 14:30	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_26

Date Collected: 08/22/23 15:35
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-8

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	13.26				ft			08/22/23 15:35	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_27

Date Collected: 08/24/23 09:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-26

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.024		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 16:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 16:04	1
Arsenic	0.0010		0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 16:04	1
Barium	0.084		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 16:04	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 16:04	1
Boron	2.0		0.050	0.013	mg/L		08/29/23 08:50	10/05/23 00:28	1
Cadmium	0.00025	J	0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 16:04	1
Calcium	120		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 16:04	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 16:04	1
Cobalt	0.0026		0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 16:04	1
Lead	0.00020	J	0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 16:04	1
Magnesium	37		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 16:04	1
Molybdenum	0.0047	J	0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 16:04	1
Potassium	3.5		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 16:04	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 16:04	1
Sodium	52		0.20	0.077	mg/L		08/29/23 08:50	10/05/23 00:28	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 16:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000090	J	0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	91	B	10	1.2	mg/L			08/29/23 20:04	10
Fluoride (EPA 300.0)	0.22	J	1.0	0.19	mg/L			08/29/23 19:49	1
Sulfate (EPA 300.0)	110		10	2.1	mg/L			08/29/23 20:04	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	340		5.0	3.7	mg/L			08/30/23 16:17	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/30/23 16:17	1
Total Dissolved Solids (SM 2540C)	660		10	4.3	mg/L			08/28/23 21:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.33				SU			08/24/23 09:00	1
Field Temperature	12.5				Degrees C			08/24/23 09:00	1
Oxidation Reduction Potential	-33.7				millivolts			08/24/23 09:00	1
Oxygen, Dissolved	0.07				mg/L			08/24/23 09:00	1
Specific Conductance	816				umhos/cm			08/24/23 09:00	1
Turbidity	48.89				NTU			08/24/23 09:00	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_35

Date Collected: 08/24/23 10:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-27

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.034		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 16:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/05/23 02:37	1
Arsenic	0.00094	J B	0.0010	0.00023	mg/L		09/01/23 08:58	10/05/23 02:37	1
Barium	0.047		0.0025	0.00073	mg/L		09/01/23 08:58	10/05/23 02:37	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/05/23 02:37	1
Boron	12		0.050	0.013	mg/L		09/01/23 08:58	10/05/23 02:37	1
Cadmium	0.00031	J	0.00050	0.00017	mg/L		09/01/23 08:58	10/05/23 02:37	1
Calcium	320	B	0.20	0.044	mg/L		09/01/23 08:58	10/05/23 02:37	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/05/23 02:37	1
Cobalt	0.0012		0.0010	0.00040	mg/L		09/01/23 08:58	10/05/23 02:37	1
Lead	<0.00050		0.00050	0.00019	mg/L		09/01/23 08:58	10/05/23 02:37	1
Magnesium	42		0.20	0.049	mg/L		09/01/23 08:58	10/05/23 02:37	1
Molybdenum	0.076		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 02:37	1
Potassium	14		0.50	0.11	mg/L		09/01/23 08:58	10/05/23 02:37	1
Selenium	<0.0025		0.0025	0.00098	mg/L		09/01/23 08:58	10/06/23 22:48	1
Sodium	30	B	0.20	0.077	mg/L		09/01/23 08:58	10/05/23 02:37	1
Thallium	<0.0020		0.0020	0.00057	mg/L		09/01/23 08:58	10/09/23 12:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 07:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	37	B	1.0	0.12	mg/L			08/29/23 20:19	1
Fluoride (EPA 300.0)	0.20	J	1.0	0.19	mg/L			08/29/23 20:19	1
Sulfate (EPA 300.0)	890		100	21	mg/L			08/29/23 20:35	100
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	210		5.0	3.7	mg/L			08/30/23 16:27	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/30/23 16:27	1
Total Dissolved Solids (SM 2540C)	1600		10	4.3	mg/L			08/28/23 21:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	8.87				ft			08/24/23 10:10	1
Field pH	7.03				SU			08/24/23 10:10	1
Field Temperature	16.2				Degrees C			08/24/23 10:10	1
Oxidation Reduction Potential	161.7				millivolts			08/24/23 10:10	1
Oxygen, Dissolved	1.47				mg/L			08/24/23 10:10	1
Specific Conductance	1358				umhos/cm			08/24/23 10:10	1
Turbidity	2.81				NTU			08/24/23 10:10	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_34
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-44
Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.013**		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 17:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/05/23 03:30	1
Arsenic	**0.00086**	**J B**	0.0010	0.00023	mg/L		09/01/23 08:58	10/05/23 03:30	1
Barium	**0.11**		0.0025	0.00073	mg/L		09/01/23 08:58	10/05/23 03:30	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/05/23 03:30	1
Boron	**0.075**		0.050	0.013	mg/L		09/01/23 08:58	10/05/23 03:30	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		09/01/23 08:58	10/05/23 03:30	1
Calcium	**150**	**B**	0.20	0.044	mg/L		09/01/23 08:58	10/05/23 03:30	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/05/23 03:30	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		09/01/23 08:58	10/05/23 03:30	1
Lead	<0.00050		0.00050	0.00019	mg/L		09/01/23 08:58	10/05/23 03:30	1
Magnesium	**40**		0.20	0.049	mg/L		09/01/23 08:58	10/05/23 03:30	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 03:30	1
Potassium	**0.42**	**J**	0.50	0.11	mg/L		09/01/23 08:58	10/05/23 03:30	1
Selenium	<0.0025		0.0025	0.00098	mg/L		09/01/23 08:58	10/06/23 23:36	1
Sodium	**44**	**B**	0.20	0.077	mg/L		09/01/23 08:58	10/05/23 03:30	1
Thallium	<0.0020		0.0020	0.00057	mg/L		09/01/23 08:58	10/09/23 13:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00015**	**J**	0.00020	0.000079	mg/L		08/31/23 11:45	09/01/23 07:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**69**		5.0	0.58	mg/L			08/30/23 03:39	5
Fluoride (EPA 300.0)	**0.19**	**J**	1.0	0.19	mg/L			08/30/23 03:24	1
Sulfate (EPA 300.0)	**46**		1.0	0.21	mg/L			08/30/23 03:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**570**		5.0	3.7	mg/L			08/31/23 17:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/31/23 17:19	1
Total Dissolved Solids (SM 2540C)	**760**		10	4.3	mg/L			08/30/23 19:57	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	**8.98**				ft			08/25/23 11:25	1
Field pH	**7.08**				SU			08/25/23 11:25	1
Field Temperature	**12.8**				Degrees C			08/25/23 11:25	1
Oxidation Reduction Potential	**-110.7**				millivolts			08/25/23 11:25	1
Oxygen, Dissolved	**0.20**				mg/L			08/25/23 11:25	1
Specific Conductance	**972**				umhos/cm			08/25/23 11:25	1
Turbidity	**4.81**				NTU			08/25/23 11:25	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_49

Date Collected: 08/25/23 10:05
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-45

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.023		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 17:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/06/23 23:40	1
Arsenic	0.00049	J	0.0010	0.00023	mg/L		09/01/23 08:58	10/06/23 23:40	1
Barium	0.062		0.0025	0.00073	mg/L		09/01/23 08:58	10/06/23 23:40	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/06/23 23:40	1
Boron	0.69	B	0.050	0.013	mg/L		10/09/23 18:08	10/11/23 10:15	1
Cadmium	0.0013		0.00050	0.00017	mg/L		09/01/23 08:58	10/06/23 23:40	1
Calcium	99	B	0.20	0.044	mg/L		09/01/23 08:58	10/06/23 23:40	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/06/23 23:40	1
Cobalt	0.0033		0.0010	0.00040	mg/L		09/01/23 08:58	10/06/23 23:40	1
Lead	0.00036	J	0.00050	0.00019	mg/L		09/01/23 08:58	10/06/23 23:40	1
Magnesium	32	F1	0.20	0.049	mg/L		09/01/23 08:58	10/06/23 23:40	1
Molybdenum	0.023		0.0050	0.0025	mg/L		10/09/23 18:08	10/10/23 12:58	1
Potassium	11		0.50	0.11	mg/L		09/01/23 08:58	10/06/23 23:40	1
Selenium	<0.0025		0.0025	0.00098	mg/L		09/01/23 08:58	10/06/23 23:40	1
Sodium	56		0.20	0.077	mg/L		09/01/23 08:58	10/06/23 23:40	1
Thallium	<0.0020		0.0020	0.00057	mg/L		10/09/23 18:08	10/10/23 12:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		09/01/23 12:30	09/05/23 07:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	95	F1	5.0	0.58	mg/L			08/30/23 05:10	5
Fluoride (EPA 300.0)	0.24	J	1.0	0.19	mg/L			08/30/23 03:54	1
Sulfate (EPA 300.0)	78		5.0	1.0	mg/L			08/30/23 05:10	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	330		5.0	3.7	mg/L			08/31/23 17:29	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/31/23 17:29	1
Total Dissolved Solids (SM 2540C)	620		10	4.3	mg/L			08/30/23 20:03	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	19.65				ft			08/25/23 10:05	1
Field pH	7.12				SU			08/25/23 10:05	1
Field Temperature	15.3				Degrees C			08/25/23 10:05	1
Oxidation Reduction Potential	58.2				millivolts			08/25/23 10:05	1
Oxygen, Dissolved	0.11				mg/L			08/25/23 10:05	1
Specific Conductance	698				umhos/cm			08/25/23 10:05	1
Turbidity	123.6				NTU			08/25/23 10:05	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_22

Date Collected: 08/25/23 08:50
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-46

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.049**		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 17:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/05/23 03:45	1
Arsenic	<0.0010		0.0010	0.00023	mg/L		09/01/23 08:58	10/05/23 03:45	1
Barium	**0.013**		0.0025	0.00073	mg/L		09/01/23 08:58	10/05/23 03:45	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/05/23 03:45	1
Boron	**0.13**		0.050	0.013	mg/L		09/01/23 08:58	10/05/23 03:45	1
Cadmium	**0.00029**	**J**	0.00050	0.00017	mg/L		09/01/23 08:58	10/05/23 03:45	1
Calcium	**23**	**B**	0.20	0.044	mg/L		09/01/23 08:58	10/05/23 03:45	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/05/23 03:45	1
Cobalt	**0.00076**	**J**	0.0010	0.00040	mg/L		09/01/23 08:58	10/05/23 03:45	1
Lead	<0.00050		0.00050	0.00019	mg/L		09/01/23 08:58	10/05/23 03:45	1
Magnesium	**7.1**		0.20	0.049	mg/L		09/01/23 08:58	10/05/23 03:45	1
Molybdenum	**0.0050**		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 03:45	1
Potassium	**2.5**		0.50	0.11	mg/L		09/01/23 08:58	10/05/23 03:45	1
Selenium	**0.015**		0.0025	0.00098	mg/L		09/01/23 08:58	10/10/23 12:14	1
Sodium	**12**	**B**	0.20	0.077	mg/L		09/01/23 08:58	10/05/23 03:45	1
Thallium	<0.0020		0.0020	0.00057	mg/L		09/01/23 08:58	10/10/23 12:14	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		09/01/23 12:30	09/05/23 07:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**89**		10	1.2	mg/L			08/30/23 06:11	10
Fluoride (EPA 300.0)	**0.22**	**J**	1.0	0.19	mg/L			08/30/23 05:56	1
Sulfate (EPA 300.0)	**120**		10	2.1	mg/L			08/30/23 06:11	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**240**		5.0	3.7	mg/L			08/31/23 17:39	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/31/23 17:39	1
Total Dissolved Solids (SM 2540C)	**640**		10	4.3	mg/L			08/30/23 20:10	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.67**				SU			08/25/23 08:50	1
Field Temperature	**16.1**				Degrees C			08/25/23 08:50	1
Oxidation Reduction Potential	**77.8**				millivolts			08/25/23 08:50	1
Oxygen, Dissolved	**0.12**				mg/L			08/25/23 08:50	1
Specific Conductance	**653**				umhos/cm			08/25/23 08:50	1
Turbidity	**4.31**				NTU			08/25/23 08:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_50
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-47
Matrix: Water

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.025		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/05/23 03:49	1
Arsenic	0.00072	J B	0.0010	0.00023	mg/L		09/01/23 08:58	10/05/23 03:49	1
Barium	0.064		0.0025	0.00073	mg/L		09/01/23 08:58	10/05/23 03:49	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/05/23 03:49	1
Boron	0.59		0.050	0.013	mg/L		09/01/23 08:58	10/05/23 03:49	1
Cadmium	0.0014		0.00050	0.00017	mg/L		09/01/23 08:58	10/05/23 03:49	1
Calcium	100	B	0.20	0.044	mg/L		09/01/23 08:58	10/05/23 03:49	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/05/23 03:49	1
Cobalt	0.0035		0.0010	0.00040	mg/L		09/01/23 08:58	10/05/23 03:49	1
Lead	0.00040	J	0.00050	0.00019	mg/L		09/01/23 08:58	10/05/23 03:49	1
Magnesium	31		0.20	0.049	mg/L		09/01/23 08:58	10/05/23 03:49	1
Molybdenum	0.025		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 03:49	1
Potassium	11		0.50	0.11	mg/L		09/01/23 08:58	10/05/23 03:49	1
Selenium	<0.0025		0.0025	0.00098	mg/L		09/01/23 08:58	10/10/23 12:19	1
Sodium	54	B	0.20	0.077	mg/L		09/01/23 08:58	10/05/23 03:49	1
Thallium	<0.0020		0.0020	0.00057	mg/L		09/01/23 08:58	10/10/23 12:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		09/01/23 12:30	09/05/23 07:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	87		5.0	0.58	mg/L			08/30/23 06:41	5
Fluoride (EPA 300.0)	0.20	J	1.0	0.19	mg/L			08/30/23 06:26	1
Sulfate (EPA 300.0)	93		5.0	1.0	mg/L			08/30/23 06:41	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	280		5.0	3.7	mg/L			08/31/23 17:48	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/31/23 17:48	1
Total Dissolved Solids (SM 2540C)	610		10	4.3	mg/L			08/30/23 20:13	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.47				SU			08/25/23 11:25	1
Field Temperature	16.7				Degrees C			08/25/23 11:25	1
Oxidation Reduction Potential	88.0				millivolts			08/25/23 11:25	1
Oxygen, Dissolved	0.12				mg/L			08/25/23 11:25	1
Specific Conductance	665				umhos/cm			08/25/23 11:25	1
Turbidity	3.98				NTU			08/25/23 11:25	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: WPCP_FB

Date Collected: 08/28/23 07:30
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-48

Matrix: Water

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved (EPA 300.0)	11		1.0	0.12	mg/L			09/11/23 15:48	1
Fluoride, Dissolved (EPA 300.0)	0.30	J	1.0	0.19	mg/L			09/11/23 15:48	1
Sulfate, Dissolved (EPA 300.0)	23		1.0	0.21	mg/L			09/11/23 15:48	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_30

Date Collected: 08/22/23 10:00
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-61

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	4.85				ft			08/22/23 10:00	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_31

Date Collected: 08/22/23 09:55
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-62

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	4.85				ft			08/22/23 09:55	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_33

Date Collected: 08/22/23 10:18
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-63

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	2.8				ft			08/22/23 10:18	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_36

Date Collected: 08/22/23 09:30
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-64

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	13.58				ft			08/22/23 09:30	1

Definitions/Glossary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Metals

Prep Batch: 729478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total Recoverable	Water	200.7	
500-238579-2	HEN_22&D	Total Recoverable	Water	200.7	
500-238579-3	HEN_23	Total Recoverable	Water	200.7	
500-238579-4	HEN_23_FD	Total Recoverable	Water	200.7	
500-238579-5	HEN_32	Total Recoverable	Water	200.7	
500-238579-6	HEN_51	Total Recoverable	Water	200.7	
MB 500-729478/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 500-729478/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
500-238579-1 MS	HEN_21R	Total Recoverable	Water	200.7	
500-238579-1 DU	HEN_21R	Total Recoverable	Water	200.7	

Prep Batch: 729685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	200.7	

Prep Batch: 729866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total Recoverable	Water	3005A	
500-238579-2	HEN_22&D	Total Recoverable	Water	3005A	
500-238579-3	HEN_23	Total Recoverable	Water	3005A	
500-238579-4	HEN_23_FD	Total Recoverable	Water	3005A	
500-238579-5	HEN_32	Total Recoverable	Water	3005A	
500-238579-6	HEN_51	Total Recoverable	Water	3005A	
500-238579-26	HEN_27	Total Recoverable	Water	3005A	
MB 500-729866/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-729866/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-238579-G-8-G MS	500-238579-G-8-G MS	Total Recoverable	Water	3005A	
500-238579-G-8-H MSD	500-238579-G-8-H MSD	Total Recoverable	Water	3005A	
500-238579-G-8-F DU	500-238579-G-8-F DU	Total Recoverable	Water	3005A	

Prep Batch: 730135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	7470A	
500-238579-2	HEN_22&D	Total/NA	Water	7470A	
500-238579-3	HEN_23	Total/NA	Water	7470A	
500-238579-4	HEN_23_FD	Total/NA	Water	7470A	
500-238579-5	HEN_32	Total/NA	Water	7470A	
500-238579-6	HEN_51	Total/NA	Water	7470A	
500-238579-26	HEN_27	Total/NA	Water	7470A	
500-238579-27	HEN_35	Total/NA	Water	7470A	
MB 500-730135/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-730135/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-238579-G-8-K MS	500-238579-G-8-K MS	Total/NA	Water	7470A	
500-238579-G-8-L MSD	500-238579-G-8-L MSD	Total/NA	Water	7470A	
500-238579-G-8-J DU	500-238579-G-8-J DU	Total/NA	Water	7470A	

Analysis Batch: 730327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	7470A	730135
500-238579-2	HEN_22&D	Total/NA	Water	7470A	730135
500-238579-3	HEN_23	Total/NA	Water	7470A	730135

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Metals (Continued)

Analysis Batch: 730327 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-4	HEN_23_FD	Total/NA	Water	7470A	730135
500-238579-5	HEN_32	Total/NA	Water	7470A	730135
500-238579-6	HEN_51	Total/NA	Water	7470A	730135
500-238579-26	HEN_27	Total/NA	Water	7470A	730135
500-238579-27	HEN_35	Total/NA	Water	7470A	730135
MB 500-730135/12-A	Method Blank	Total/NA	Water	7470A	730135
LCS 500-730135/13-A	Lab Control Sample	Total/NA	Water	7470A	730135
500-238579-G-8-K MS	500-238579-G-8-K MS	Total/NA	Water	7470A	730135
500-238579-G-8-L MSD	500-238579-G-8-L MSD	Total/NA	Water	7470A	730135
500-238579-G-8-J DU	500-238579-G-8-J DU	Total/NA	Water	7470A	730135

Prep Batch: 730358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-44	HEN_34	Total/NA	Water	7470A	
MB 500-730358/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-730358/13-A	Lab Control Sample	Total/NA	Water	7470A	

Filtration Batch: 730368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-730368/1-C	Method Blank	Total/NA	Water	FILTRATION	

Analysis Batch: 730525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 500-730525/21	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 730528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-27	HEN_35	Total Recoverable	Water	3005A	
500-238579-44	HEN_34	Total Recoverable	Water	3005A	
500-238579-45	HEN_49	Total Recoverable	Water	3005A	
500-238579-46	HEN_22	Total Recoverable	Water	3005A	
500-238579-47	HEN_50	Total Recoverable	Water	3005A	
MB 500-730528/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-730528/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	3005A	
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	3005A	
500-238579-45 DU	HEN_49	Total Recoverable	Water	3005A	

Analysis Batch: 730570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-44	HEN_34	Total/NA	Water	7470A	730358
MB 500-730358/12-A	Method Blank	Total/NA	Water	7470A	730358
LCS 500-730358/13-A	Lab Control Sample	Total/NA	Water	7470A	730358

Prep Batch: 730601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45	HEN_49	Total/NA	Water	7470A	
500-238579-46	HEN_22	Total/NA	Water	7470A	
500-238579-47	HEN_50	Total/NA	Water	7470A	
MB 500-730368/1-C	Method Blank	Total/NA	Water	7470A	730368
MB 500-730601/12-A	Method Blank	Total/NA	Water	7470A	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Metals (Continued)

Prep Batch: 730601 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-730601/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	7470A	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	7470A	
500-238579-45 DU	HEN_49	Total/NA	Water	7470A	

Analysis Batch: 730809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45	HEN_49	Total/NA	Water	7470A	730601
500-238579-46	HEN_22	Total/NA	Water	7470A	730601
500-238579-47	HEN_50	Total/NA	Water	7470A	730601
MB 500-730368/1-C	Method Blank	Total/NA	Water	7470A	730601
MB 500-730601/12-A	Method Blank	Total/NA	Water	7470A	730601
LCS 500-730601/13-A	Lab Control Sample	Total/NA	Water	7470A	730601
500-238579-45 MS	HEN_49_MS	Total/NA	Water	7470A	730601
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	7470A	730601
500-238579-45 DU	HEN_49	Total/NA	Water	7470A	730601

Analysis Batch: 731002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total Recoverable	Water	6020B	729866
500-238579-2	HEN_22&D	Total Recoverable	Water	6020B	729866
500-238579-3	HEN_23	Total Recoverable	Water	6020B	729866
500-238579-4	HEN_23_FD	Total Recoverable	Water	6020B	729866
500-238579-5	HEN_32	Total Recoverable	Water	6020B	729866
500-238579-6	HEN_51	Total Recoverable	Water	6020B	729866
500-238579-26	HEN_27	Total Recoverable	Water	6020B	729866
MB 500-729866/1-A	Method Blank	Total Recoverable	Water	6020B	729866
LCS 500-729866/2-A	Lab Control Sample	Total Recoverable	Water	6020B	729866
500-238579-G-8-G MS	500-238579-G-8-G MS	Total Recoverable	Water	6020B	729866
500-238579-G-8-H MSD	500-238579-G-8-H MSD	Total Recoverable	Water	6020B	729866
500-238579-G-8-F DU	500-238579-G-8-F DU	Total Recoverable	Water	6020B	729866

Analysis Batch: 733174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-2	HEN_22&D	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-3	HEN_23	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-4	HEN_23_FD	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-5	HEN_32	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-6	HEN_51	Total Recoverable	Water	200.7 Rev 4.4	729478
MB 500-729478/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	729478
LCS 500-729478/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-1 MS	HEN_21R	Total Recoverable	Water	200.7 Rev 4.4	729478
500-238579-1 DU	HEN_21R	Total Recoverable	Water	200.7 Rev 4.4	729478

Prep Batch: 733472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-26	HEN_27	Total Recoverable	Water	200.7	
500-238579-27	HEN_35	Total Recoverable	Water	200.7	
500-238579-44	HEN_34	Total Recoverable	Water	200.7	
500-238579-45	HEN_49	Total Recoverable	Water	200.7	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Metals (Continued)

Prep Batch: 733472 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-46	HEN_22	Total Recoverable	Water	200.7	
500-238579-47	HEN_50	Total Recoverable	Water	200.7	
MB 500-733472/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 500-733472/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	200.7	
500-238579-47 MS	HEN_50	Total Recoverable	Water	200.7	
500-238579-45 DU	HEN_49	Total Recoverable	Water	200.7	
500-238579-47 DU	HEN_50	Total Recoverable	Water	200.7	

Analysis Batch: 734227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-26	HEN_27	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-27	HEN_35	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-44	HEN_34	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-45	HEN_49	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-46	HEN_22	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-47	HEN_50	Total Recoverable	Water	200.7 Rev 4.4	733472
MB 500-733472/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	733472
LCS 500-733472/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-47 MS	HEN_50	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-45 DU	HEN_49	Total Recoverable	Water	200.7 Rev 4.4	733472
500-238579-47 DU	HEN_50	Total Recoverable	Water	200.7 Rev 4.4	733472

Analysis Batch: 735077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	200.7 Rev 4.4	729685

Analysis Batch: 735519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total Recoverable	Water	6020B	729866
500-238579-2	HEN_22&D	Total Recoverable	Water	6020B	729866
500-238579-3	HEN_23	Total Recoverable	Water	6020B	729866
500-238579-4	HEN_23_FD	Total Recoverable	Water	6020B	729866
500-238579-5	HEN_32	Total Recoverable	Water	6020B	729866
500-238579-6	HEN_51	Total Recoverable	Water	6020B	729866
500-238579-26	HEN_27	Total Recoverable	Water	6020B	729866
500-238579-27	HEN_35	Total Recoverable	Water	6020B	730528
500-238579-44	HEN_34	Total Recoverable	Water	6020B	730528
500-238579-46	HEN_22	Total Recoverable	Water	6020B	730528
500-238579-47	HEN_50	Total Recoverable	Water	6020B	730528
MB 500-729866/1-A	Method Blank	Total Recoverable	Water	6020B	729866
MB 500-730528/1-A	Method Blank	Total Recoverable	Water	6020B	730528
LCS 500-729866/2-A	Lab Control Sample	Total Recoverable	Water	6020B	729866
LCS 500-730528/2-A	Lab Control Sample	Total Recoverable	Water	6020B	730528
500-238579-G-8-G MS	500-238579-G-8-G MS	Total Recoverable	Water	6020B	729866
500-238579-G-8-H MSD	500-238579-G-8-H MSD	Total Recoverable	Water	6020B	729866
500-238579-G-8-F DU	500-238579-G-8-F DU	Total Recoverable	Water	6020B	729866

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Metals

Analysis Batch: 736032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-27	HEN_35	Total Recoverable	Water	6020B	730528
500-238579-44	HEN_34	Total Recoverable	Water	6020B	730528
500-238579-45	HEN_49	Total Recoverable	Water	6020B	730528
MB 500-730528/1-A	Method Blank	Total Recoverable	Water	6020B	730528
LCS 500-730528/2-A	Lab Control Sample	Total Recoverable	Water	6020B	730528
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	6020B	730528
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	6020B	730528
500-238579-45 DU	HEN_49	Total Recoverable	Water	6020B	730528

Prep Batch: 736115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45	HEN_49	Total Recoverable	Water	3005A	
MB 500-736115/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-736115/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	3005A	
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	3005A	
500-238579-45 DU	HEN_49	Total Recoverable	Water	3005A	

Analysis Batch: 736227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-27	HEN_35	Total Recoverable	Water	6020B	730528
500-238579-44	HEN_34	Total Recoverable	Water	6020B	730528
MB 500-730528/1-A	Method Blank	Total Recoverable	Water	6020B	730528
LCS 500-730528/2-A	Lab Control Sample	Total Recoverable	Water	6020B	730528

Analysis Batch: 736355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45	HEN_49	Total Recoverable	Water	6020B	736115
500-238579-46	HEN_22	Total Recoverable	Water	6020B	730528
500-238579-47	HEN_50	Total Recoverable	Water	6020B	730528
MB 500-736115/1-A	Method Blank	Total Recoverable	Water	6020B	736115
LCS 500-736115/2-A	Lab Control Sample	Total Recoverable	Water	6020B	736115
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	6020B	736115
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	6020B	736115
500-238579-45 DU	HEN_49	Total Recoverable	Water	6020B	736115

Analysis Batch: 736513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-45	HEN_49	Total Recoverable	Water	6020B	736115
MB 500-736115/1-A	Method Blank	Total Recoverable	Water	6020B	736115
LCS 500-736115/2-A	Lab Control Sample	Total Recoverable	Water	6020B	736115
500-238579-45 MS	HEN_49_MS	Total Recoverable	Water	6020B	736115
500-238579-45 MSD	HEN_49_MSD	Total Recoverable	Water	6020B	736115
500-238579-45 DU	HEN_49	Total Recoverable	Water	6020B	736115

General Chemistry

Analysis Batch: 729689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	300.0	
500-238579-1	HEN_21R	Total/NA	Water	300.0	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

General Chemistry (Continued)

Analysis Batch: 729689 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-2	HEN_22&D	Total/NA	Water	300.0	
500-238579-2	HEN_22&D	Total/NA	Water	300.0	
500-238579-3	HEN_23	Total/NA	Water	300.0	
500-238579-3	HEN_23	Total/NA	Water	300.0	
500-238579-4	HEN_23_FD	Total/NA	Water	300.0	
500-238579-4	HEN_23_FD	Total/NA	Water	300.0	
500-238579-5	HEN_32	Total/NA	Water	300.0	
500-238579-5	HEN_32	Total/NA	Water	300.0	
500-238579-6	HEN_51	Total/NA	Water	300.0	
500-238579-6	HEN_51	Total/NA	Water	300.0	
MB 500-729689/34	Method Blank	Total/NA	Water	300.0	
LCS 500-729689/35	Lab Control Sample	Total/NA	Water	300.0	
500-238579-I-8 MS	500-238579-I-8 MS	Total/NA	Water	300.0	
500-238579-I-8 MS	500-238579-I-8 MS	Total/NA	Water	300.0	
500-238579-J-8 MSD	500-238579-J-8 MSD	Total/NA	Water	300.0	
500-238579-J-8 MSD	500-238579-J-8 MSD	Total/NA	Water	300.0	

Analysis Batch: 729793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	SM 2540C	
500-238579-2	HEN_22&D	Total/NA	Water	SM 2540C	
500-238579-3	HEN_23	Total/NA	Water	SM 2540C	
500-238579-4	HEN_23_FD	Total/NA	Water	SM 2540C	
500-238579-5	HEN_32	Total/NA	Water	SM 2540C	
500-238579-6	HEN_51	Total/NA	Water	SM 2540C	
MB 500-729793/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-729793/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 729794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-26	HEN_27	Total/NA	Water	SM 2540C	
500-238579-27	HEN_35	Total/NA	Water	SM 2540C	
MB 500-729794/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-729794/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 729808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	SM 2320B	
500-238579-2	HEN_22&D	Total/NA	Water	SM 2320B	
500-238579-3	HEN_23	Total/NA	Water	SM 2320B	
500-238579-4	HEN_23_FD	Total/NA	Water	SM 2320B	
500-238579-5	HEN_32	Total/NA	Water	SM 2320B	
500-238579-6	HEN_51	Total/NA	Water	SM 2320B	
MB 500-729808/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-729808/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 729898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-26	HEN_27	Total/NA	Water	300.0	
500-238579-26	HEN_27	Total/NA	Water	300.0	
500-238579-27	HEN_35	Total/NA	Water	300.0	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

General Chemistry (Continued)

Analysis Batch: 729898 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-27	HEN_35	Total/NA	Water	300.0	
500-238579-44	HEN_34	Total/NA	Water	300.0	
500-238579-44	HEN_34	Total/NA	Water	300.0	
500-238579-45	HEN_49	Total/NA	Water	300.0	
500-238579-45	HEN_49	Total/NA	Water	300.0	
500-238579-46	HEN_22	Total/NA	Water	300.0	
500-238579-46	HEN_22	Total/NA	Water	300.0	
500-238579-47	HEN_50	Total/NA	Water	300.0	
500-238579-47	HEN_50	Total/NA	Water	300.0	
MB 500-729898/3	Method Blank	Total/NA	Water	300.0	
MB 500-729898/44	Method Blank	Total/NA	Water	300.0	
LCS 500-729898/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 500-729898/45	Lab Control Sample	Total/NA	Water	300.0	
500-238579-45 MS	HEN_49	Total/NA	Water	300.0	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	300.0	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	300.0	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	300.0	

Analysis Batch: 730144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-730144/3	Method Blank	Total/NA	Water	300.0	
LCS 500-730144/4	Lab Control Sample	Total/NA	Water	300.0	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	300.0	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	300.0	

Analysis Batch: 730218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-44	HEN_34	Total/NA	Water	SM 2540C	
500-238579-45	HEN_49	Total/NA	Water	SM 2540C	
500-238579-46	HEN_22	Total/NA	Water	SM 2540C	
500-238579-47	HEN_50	Total/NA	Water	SM 2540C	
MB 500-730218/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-730218/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	SM 2540C	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	SM 2540C	
500-238579-44 DU	HEN_34	Total/NA	Water	SM 2540C	

Analysis Batch: 730242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-26	HEN_27	Total/NA	Water	SM 2320B	
500-238579-27	HEN_35	Total/NA	Water	SM 2320B	
MB 500-730242/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-730242/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 730652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-44	HEN_34	Total/NA	Water	SM 2320B	
500-238579-45	HEN_49	Total/NA	Water	SM 2320B	
500-238579-46	HEN_22	Total/NA	Water	SM 2320B	
500-238579-47	HEN_50	Total/NA	Water	SM 2320B	
MB 500-730652/3	Method Blank	Total/NA	Water	SM 2320B	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

General Chemistry (Continued)

Analysis Batch: 730652 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-730652/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 731549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-731549/3	Method Blank	Total/NA	Water	300.0	
LCS 500-731549/4	Lab Control Sample	Total/NA	Water	300.0	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	300.0	
500-238579-L-45 MSD	500-238579-L-45 MSD	Dissolved	Water	300.0	

Filtration Batch: 731713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-48	WPCP_FB	Dissolved	Water	FILTRATION	
MB 500-731713/1-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 500-731713/2-A	Lab Control Sample	Dissolved	Water	FILTRATION	

Analysis Batch: 731812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-48	WPCP_FB	Dissolved	Water	300.0	731713
MB 500-731713/1-A	Method Blank	Dissolved	Water	300.0	731713
LCS 500-731713/2-A	Lab Control Sample	Dissolved	Water	300.0	731713

Field Service / Mobile Lab

Analysis Batch: 731893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	Field Sampling	
500-238579-2	HEN_22&D	Total/NA	Water	Field Sampling	
500-238579-3	HEN_23	Total/NA	Water	Field Sampling	
500-238579-4	HEN_23_FD	Total/NA	Water	Field Sampling	
500-238579-5	HEN_32	Total/NA	Water	Field Sampling	
500-238579-6	HEN_51	Total/NA	Water	Field Sampling	
500-238579-7	HEN_25	Total/NA	Water	Field Sampling	
500-238579-8	HEN_26	Total/NA	Water	Field Sampling	
500-238579-26	HEN_27	Total/NA	Water	Field Sampling	
500-238579-27	HEN_35	Total/NA	Water	Field Sampling	
500-238579-44	HEN_34	Total/NA	Water	Field Sampling	
500-238579-45	HEN_49	Total/NA	Water	Field Sampling	
500-238579-46	HEN_22	Total/NA	Water	Field Sampling	
500-238579-47	HEN_50	Total/NA	Water	Field Sampling	
500-238579-61	HEN_30	Total/NA	Water	Field Sampling	
500-238579-62	HEN_31	Total/NA	Water	Field Sampling	
500-238579-63	HEN_33	Total/NA	Water	Field Sampling	
500-238579-64	HEN_36	Total/NA	Water	Field Sampling	

Surrogate Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-11
SDG: HEN_257_801

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(75-126)	(75-120)	(72-124)	(75-120)
500-238579-13	HEN_18&D	92	89	99	107
500-238579-14	Trip Blank	93	88	99	106
500-238579-21	HEN_02	89	89	97	105
500-238579-22	Trip Blank	91	88	99	108
500-238579-23	HEN_10	92	90	96	106
500-238579-28	HEN_07	90	90	100	105
500-238579-29	Trip Blank	91	89	97	103
500-238579-30	HEN_08	91	90	100	105
500-238579-31	Trip Blank	91	88	96	106
500-238579-32	HEN_08&D	92	92	100	105
500-238579-34	HEN_08_FD	91	88	98	107
500-238579-34 MS	HEN_08_FD	92	89	91	108
500-238579-34 MSD	HEN_08_FD	92	90	90	109
500-238579-48	WPCP_FB	106	87	95	102
500-238579-49	Trip Blank	103	87	97	98
500-238579-51	HEN_18#S	110	84	99	99
500-238579-52	Trip Blank	103	86	95	98
500-238579-53	HEN_03R	113	85	97	104
500-238579-53 MS	HEN_03R_MS	114	83	96	106
500-238579-53 MSD	HEN_03R_MSD	109	84	95	104
500-238579-54	Trip Blank	105	85	95	100
500-238579-56	HEN_45#S	107	85	97	102
LCS 500-730295/5	Lab Control Sample	94	90	90	107
LCS 500-730655/4	Lab Control Sample	101	86	95	100
MB 500-730295/7	Method Blank	91	90	100	107
MB 500-730655/6	Method Blank	104	85	97	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MRL 500-730525/21 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730525

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.0100	0.0106	^1+	mg/L		106	70 - 130

Lab Sample ID: MB 500-729478/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 733174 — **Prep Batch: 729478**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0050		0.0050	0.0020	mg/L		08/25/23 09:24	09/19/23 14:52	1

Lab Sample ID: LCS 500-729478/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 733174 — **Prep Batch: 729478**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.250	0.256		mg/L		103	85 - 115

Lab Sample ID: 500-238579-1 MS — **Client Sample ID: HEN_21R**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 733174 — **Prep Batch: 729478**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.026	F1	0.250	0.290		mg/L		106	70 - 130

Lab Sample ID: 500-238579-1 DU — **Client Sample ID: HEN_21R**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 733174 — **Prep Batch: 729478**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.026	F1	0.0391	F3	mg/L		40	20

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735077 — **Prep Batch: 729685**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	0.023		0.250	0.310		mg/L		115	70 - 130	8	20

Lab Sample ID: MB 500-733472/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0050		0.0050	0.0020	mg/L		09/21/23 19:27	09/26/23 15:55	1

Lab Sample ID: LCS 500-733472/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.250	0.262		mg/L		105	85 - 115

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium	0.023		0.250	0.286		mg/L		105	70 - 130		

Lab Sample ID: 500-238579-47 MS — **Client Sample ID: HEN_50**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium	0.025		0.250	0.286		mg/L		104	70 - 130		

Lab Sample ID: 500-238579-45 DU — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Lithium	0.023			0.0241		mg/L				4	20

Lab Sample ID: 500-238579-47 DU — **Client Sample ID: HEN_50**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 734227 — **Prep Batch: 733472**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Lithium	0.025			0.0252		mg/L				1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-729866/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **Prep Batch: 729866**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		08/29/23 08:50	09/05/23 14:24	1
Arsenic	<0.0010		0.0010	0.00023	mg/L		08/29/23 08:50	09/05/23 14:24	1
Barium	<0.0025		0.0025	0.00073	mg/L		08/29/23 08:50	09/05/23 14:24	1
Beryllium	<0.0010		0.0010	0.00053	mg/L		08/29/23 08:50	09/05/23 14:24	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		08/29/23 08:50	09/05/23 14:24	1
Calcium	<0.20		0.20	0.044	mg/L		08/29/23 08:50	09/05/23 14:24	1
Chromium	<0.0050		0.0050	0.0011	mg/L		08/29/23 08:50	09/05/23 14:24	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		08/29/23 08:50	09/05/23 14:24	1
Lead	<0.00050		0.00050	0.00019	mg/L		08/29/23 08:50	09/05/23 14:24	1
Magnesium	<0.20		0.20	0.049	mg/L		08/29/23 08:50	09/05/23 14:24	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		08/29/23 08:50	09/05/23 14:24	1
Potassium	<0.50		0.50	0.11	mg/L		08/29/23 08:50	09/05/23 14:24	1
Selenium	<0.0025		0.0025	0.00098	mg/L		08/29/23 08:50	09/05/23 14:24	1
Thallium	<0.0020		0.0020	0.00057	mg/L		08/29/23 08:50	09/05/23 14:24	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: MB 500-729866/1-A
Matrix: Water
Analysis Batch: 735519

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 729866

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050	0.013	mg/L		08/29/23 08:50	10/04/23 22:39	1
Sodium	<0.20		0.20	0.077	mg/L		08/29/23 08:50	10/04/23 22:39	1

Lab Sample ID: LCS 500-729866/2-A
Matrix: Water
Analysis Batch: 731002

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 729866

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.522		mg/L		104	80 - 120
Arsenic	0.100	0.0921		mg/L		92	80 - 120
Barium	0.500	0.527		mg/L		105	80 - 120
Beryllium	0.0500	0.0547		mg/L		109	80 - 120
Cadmium	0.0500	0.0515		mg/L		103	80 - 120
Calcium	10.0	10.2		mg/L		102	80 - 120
Chromium	0.200	0.214		mg/L		107	80 - 120
Cobalt	0.500	0.546		mg/L		109	80 - 120
Lead	0.100	0.116		mg/L		116	80 - 120
Magnesium	10.0	10.4		mg/L		104	80 - 120
Molybdenum	1.00	0.986		mg/L		99	80 - 120
Potassium	10.0	9.96		mg/L		100	80 - 120
Selenium	0.100	0.0939		mg/L		94	80 - 120
Thallium	0.100	0.115		mg/L		115	80 - 120

Lab Sample ID: LCS 500-729866/2-A
Matrix: Water
Analysis Batch: 735519

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 729866

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	0.934		mg/L		93	80 - 120
Sodium	10.0	9.62		mg/L		96	80 - 120

Lab Sample ID: 500-238579-G-8-G MS
Matrix: Water
Analysis Batch: 731002

Client Sample ID: 500-238579-G-8-G MS
Prep Type: Total Recoverable
Prep Batch: 729866

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0030	F1	0.500	0.534		mg/L		107	75 - 125
Arsenic	0.00047	J F1 F2	0.100	0.0984		mg/L		98	75 - 125
Barium	0.14	F1 F2	0.500	0.663		mg/L		105	75 - 125
Beryllium	<0.0010	F1	0.0500	0.0492		mg/L		98	75 - 125
Cadmium	0.0015	F1 F2	0.0500	0.0526		mg/L		102	75 - 125
Calcium	100		10.0	108	4	mg/L		59	75 - 125
Chromium	<0.0050	F1	0.200	0.196		mg/L		98	75 - 125
Cobalt	0.0019	F1 F2	0.500	0.475		mg/L		95	75 - 125
Lead	0.00049	J F1 F2	0.100	0.111		mg/L		110	75 - 125
Magnesium	35	F1 F2	10.0	43.4		mg/L		84	75 - 125
Molybdenum	<0.0050	F1	1.00	1.04		mg/L		104	75 - 125
Potassium	8.2	F1 F2	10.0	17.1		mg/L		90	75 - 125
Selenium	<0.0025	F1	0.100	0.0986		mg/L		99	75 - 125

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: 500-238579-G-8-G MS — **Client Sample ID: 500-238579-G-8-G MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Thallium	<0.0020	F1	0.100	0.111		mg/L		111	75 - 125		

Lab Sample ID: 500-238579-G-8-G MS — **Client Sample ID: 500-238579-G-8-G MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	0.60	F1 F2	1.00	1.40		mg/L		80	75 - 125		
Sodium	50		10.0	55.1	4	mg/L		50	75 - 125		

Lab Sample ID: 500-238579-G-8-H MSD — **Client Sample ID: 500-238579-G-8-H MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0030	F1	0.500	<0.0030	F1	mg/L		0	75 - 125	NC	20
Arsenic	0.00047	J F1 F2	0.100	0.000410	J F1 F2	mg/L		-0.06	75 - 125	198	20
Barium	0.14	F1 F2	0.500	0.138	F1 F2	mg/L		0.07	75 - 125	131	20
Beryllium	<0.0010	F1	0.0500	<0.0010	F1	mg/L		0	75 - 125	NC	20
Cadmium	0.0015	F1 F2	0.0500	0.00143	F1 F2	mg/L		-0.07	75 - 125	189	20
Calcium	100		10.0	102	4	mg/L		0.9	75 - 125	6	20
Chromium	<0.0050	F1	0.200	<0.0050	F1	mg/L		0	75 - 125	NC	20
Cobalt	0.0019	F1 F2	0.500	0.00194	F1 F2	mg/L		0.01	75 - 125	198	20
Lead	0.00049	J F1 F2	0.100	0.000502	F1 F2	mg/L		0.01	75 - 125	198	20
Magnesium	35	F1 F2	10.0	35.3	F1 F2	mg/L		4	75 - 125	21	20
Molybdenum	<0.0050	F1	1.00	<0.0050	F1	mg/L		0	75 - 125	NC	20
Potassium	8.2	F1 F2	10.0	8.17	F1 F2	mg/L		0.03	75 - 125	71	20
Selenium	<0.0025	F1	0.100	<0.0025	F1	mg/L		0	75 - 125	NC	20
Thallium	<0.0020	F1	0.100	<0.0020	F1	mg/L		0	75 - 125	NC	20

Lab Sample ID: 500-238579-G-8-H MSD — **Client Sample ID: 500-238579-G-8-H MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.60	F1 F2	1.00	0.607	F1 F2	mg/L		1	75 - 125	79	20
Sodium	50		10.0	50.2	4	mg/L		1	75 - 125	9	20

Lab Sample ID: 500-238579-G-8-F DU — **Client Sample ID: 500-238579-G-8-F DU**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Antimony	<0.0030	F1		<0.0030		mg/L				NC	20
Arsenic	0.00047	J F1 F2		0.000396	J	mg/L				16	20
Barium	0.14	F1 F2		0.139		mg/L				0.8	20
Beryllium	<0.0010	F1		<0.0010		mg/L				NC	20
Cadmium	0.0015	F1 F2		0.00138		mg/L				6	20
Calcium	100			102		mg/L				0.6	20
Chromium	<0.0050	F1		<0.0050		mg/L				NC	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: 500-238579-G-8-F DU — **Client Sample ID: 500-238579-G-8-F DU**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cobalt	0.0019	F1 F2		0.00187		mg/L				0	20
Lead	0.00049	J F1 F2		0.000522		mg/L				6	20
Magnesium	35	F1 F2		35.4		mg/L				2	20
Molybdenum	<0.0050	F1		<0.0050		mg/L				NC	20
Potassium	8.2	F1 F2		8.19		mg/L				0.2	20
Selenium	<0.0025	F1		<0.0025		mg/L				NC	20
Thallium	<0.0020	F1		<0.0020		mg/L				NC	20

Lab Sample ID: 500-238579-G-8-F DU — **Client Sample ID: 500-238579-G-8-F DU**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **Prep Batch: 729866**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Boron	0.60	F1 F2		0.591		mg/L				0.8	20
Sodium	50			49.6		mg/L				1	20

Lab Sample ID: MB 500-730528/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **Prep Batch: 730528**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		09/01/23 08:58	10/05/23 02:29	1
Arsenic	0.000279	J	0.0010	0.00023	mg/L		09/01/23 08:58	10/05/23 02:29	1
Barium	<0.0025		0.0025	0.00073	mg/L		09/01/23 08:58	10/05/23 02:29	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		09/01/23 08:58	10/05/23 02:29	1
Boron	<0.050		0.050	0.013	mg/L		09/01/23 08:58	10/05/23 02:29	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		09/01/23 08:58	10/05/23 02:29	1
Calcium	0.0704	J	0.20	0.044	mg/L		09/01/23 08:58	10/05/23 02:29	1
Chromium	<0.0050		0.0050	0.0011	mg/L		09/01/23 08:58	10/05/23 02:29	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		09/01/23 08:58	10/05/23 02:29	1
Lead	<0.00050		0.00050	0.00019	mg/L		09/01/23 08:58	10/05/23 02:29	1
Magnesium	<0.20		0.20	0.049	mg/L		09/01/23 08:58	10/05/23 02:29	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 02:29	1
Potassium	<0.50		0.50	0.11	mg/L		09/01/23 08:58	10/05/23 02:29	1
Sodium	0.104	J	0.20	0.077	mg/L		09/01/23 08:58	10/05/23 02:29	1

Lab Sample ID: MB 500-730528/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736032 — **Prep Batch: 730528**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.0025		0.0025	0.00098	mg/L		09/01/23 08:58	10/06/23 22:41	1

Lab Sample ID: MB 500-730528/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736227 — **Prep Batch: 730528**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.0020		0.0020	0.00057	mg/L		09/01/23 08:58	10/09/23 12:24	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: LCS 500-730528/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **Prep Batch: 730528**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.507		mg/L		101	80 - 120
Arsenic	0.100	0.0933		mg/L		93	80 - 120
Barium	0.500	0.546		mg/L		109	80 - 120
Beryllium	0.0500	0.0507	^1+	mg/L		101	80 - 120
Boron	1.00	0.920		mg/L		92	80 - 120
Cadmium	0.0500	0.0504		mg/L		101	80 - 120
Calcium	10.0	9.67		mg/L		97	80 - 120
Chromium	0.200	0.207		mg/L		103	80 - 120
Cobalt	0.500	0.519		mg/L		104	80 - 120
Lead	0.100	0.112		mg/L		112	80 - 120
Magnesium	10.0	9.71		mg/L		97	80 - 120
Molybdenum	1.00	0.975		mg/L		97	80 - 120
Potassium	10.0	10.1		mg/L		101	80 - 120
Sodium	10.0	9.79		mg/L		98	80 - 120

Lab Sample ID: LCS 500-730528/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736032 — **Prep Batch: 730528**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	0.100	0.0967		mg/L		97	80 - 120

Lab Sample ID: LCS 500-730528/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736227 — **Prep Batch: 730528**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	0.100	0.111		mg/L		111	80 - 120

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736032 — **Prep Batch: 730528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0030		0.500	0.514		mg/L		103	75 - 125
Arsenic	0.00049	J	0.100	0.0994		mg/L		99	75 - 125
Barium	0.062		0.500	0.590		mg/L		106	75 - 125
Beryllium	<0.0010	^1+	0.0500	0.0439	^1+	mg/L		88	75 - 125
Cadmium	0.0013		0.0500	0.0509		mg/L		99	75 - 125
Calcium	99	B	10.0	102	4	mg/L		31	75 - 125
Chromium	<0.0050		0.200	0.176		mg/L		88	75 - 125
Cobalt	0.0033		0.500	0.439		mg/L		87	75 - 125
Lead	0.00036	J	0.100	0.104		mg/L		104	75 - 125
Magnesium	32	F1	10.0	38.8	F1	mg/L		64	75 - 125
Potassium	11		10.0	18.8		mg/L		79	75 - 125
Selenium	<0.0025		0.100	0.0977		mg/L		98	75 - 125
Sodium	56		10.0	59.7	4	mg/L		42	75 - 125

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736032 — **Prep Batch: 730528**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.517		mg/L		103	75 - 125	1	20
Arsenic	0.00049	J	0.100	0.0996		mg/L		99	75 - 125	0	20
Barium	0.062		0.500	0.587		mg/L		105	75 - 125	0	20
Beryllium	<0.0010	^1+	0.0500	0.0452	^1+	mg/L		90	75 - 125	3	20
Cadmium	0.0013		0.0500	0.0527		mg/L		103	75 - 125	4	20
Calcium	99	B	10.0	101	4	mg/L		25	75 - 125	1	20
Chromium	<0.0050		0.200	0.181		mg/L		90	75 - 125	3	20
Cobalt	0.0033		0.500	0.445		mg/L		88	75 - 125	1	20
Lead	0.00036	J	0.100	0.104		mg/L		104	75 - 125	0	20
Magnesium	32	F1	10.0	39.0	F1	mg/L		67	75 - 125	1	20
Potassium	11		10.0	19.0		mg/L		81	75 - 125	1	20
Selenium	<0.0025		0.100	0.0982		mg/L		98	75 - 125	0	20
Sodium	56		10.0	60.3	4	mg/L		48	75 - 125	1	20

Lab Sample ID: 500-238579-45 DU — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736032 — **Prep Batch: 730528**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.00049	J	0.000470	J	mg/L		4	20
Barium	0.062		0.0613		mg/L		2	20
Beryllium	<0.0010	^1+	<0.0010	^1+	mg/L		NC	20
Cadmium	0.0013		0.00138		mg/L		3	20
Calcium	99	B	99.2		mg/L		0.6	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	0.0033		0.00338		mg/L		1	20
Lead	0.00036	J	0.000410	J	mg/L		14	20
Magnesium	32	F1	32.3		mg/L		0.3	20
Potassium	11		10.9		mg/L		0.09	20
Selenium	<0.0025		<0.0025		mg/L		NC	20
Sodium	56		54.4		mg/L		2	20

Lab Sample ID: MB 500-736115/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736355 — **Prep Batch: 736115**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.0050		0.0050	0.0025	mg/L		10/09/23 18:08	10/10/23 12:50	1
Thallium	<0.0020		0.0020	0.00057	mg/L		10/09/23 18:08	10/10/23 12:50	1

Lab Sample ID: MB 500-736115/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736513 — **Prep Batch: 736115**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0255	J	0.050	0.013	mg/L		10/09/23 18:08	10/11/23 10:08	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: LCS 500-736115/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736355 — **Prep Batch: 736115**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1.00	0.899		mg/L		90	80 - 120
Thallium	0.100	0.113		mg/L		113	80 - 120

Lab Sample ID: LCS 500-736115/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736513 — **Prep Batch: 736115**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736355 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	0.023		1.00	0.938		mg/L		91	75 - 125
Thallium	<0.0020		0.100	0.113		mg/L		113	75 - 125

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736513 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.69	B	1.00	1.57		mg/L		88	75 - 125

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736355 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Molybdenum	0.023		1.00	0.909		mg/L		89	75 - 125	3	20
Thallium	<0.0020		0.100	0.111		mg/L		111	75 - 125	1	20

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736513 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.69	B	1.00	1.60		mg/L		92	75 - 125	2	20

Lab Sample ID: 500-238579-45 DU — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736355 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Molybdenum	0.023		0.0228		mg/L		0.06	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: 500-238579-45 DU — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 736513 — **Prep Batch: 736115**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Boron	0.69	B		0.682		mg/L				0.7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-730135/12-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730327 — **Prep Batch: 730135**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/30/23 11:30	08/31/23 06:53	1

Lab Sample ID: LCS 500-730135/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730327 — **Prep Batch: 730135**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00201	0.00206		mg/L		103	80 - 120		

Lab Sample ID: 500-238579-G-8-K MS — **Client Sample ID: 500-238579-G-8-K MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730327 — **Prep Batch: 730135**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.00020		0.00100	0.00106		mg/L		106	75 - 125		

Lab Sample ID: 500-238579-G-8-L MSD — **Client Sample ID: 500-238579-G-8-L MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730327 — **Prep Batch: 730135**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.00107		mg/L		107	75 - 125	1	20

Lab Sample ID: 500-238579-G-8-J DU — **Client Sample ID: 500-238579-G-8-J DU**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730327 — **Prep Batch: 730135**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	<0.00020			<0.00020		mg/L				NC	20

Lab Sample ID: MB 500-730358/12-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730570 — **Prep Batch: 730358**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		08/31/23 11:45	09/01/23 06:55	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: LCS 500-730358/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730570 — **Prep Batch: 730358**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00201	0.00201		mg/L		100	80 - 120

Lab Sample ID: MB 500-730368/1-C — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		09/01/23 12:30	09/05/23 06:57	1

Lab Sample ID: MB 500-730601/12-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		09/01/23 12:30	09/05/23 06:53	1

Lab Sample ID: LCS 500-730601/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00201	0.00209		mg/L		104	80 - 120

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.00106		mg/L		106	75 - 125

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.00109		mg/L		109	75 - 125	3	20

Lab Sample ID: 500-238579-45 DU — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730809 — **Prep Batch: 730601**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-729689/34 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	0.12	mg/L			08/28/23 18:23	1
Fluoride	<1.0		1.0	0.19	mg/L			08/28/23 18:23	1
Sulfate	<1.0		1.0	0.21	mg/L			08/28/23 18:23	1

Lab Sample ID: LCS 500-729689/35 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.6		mg/L		98	90 - 110
Fluoride	20.0	20.2		mg/L		101	90 - 110
Sulfate	20.0	20.9		mg/L		104	90 - 110

Lab Sample ID: 500-238579-I-8 MS — **Client Sample ID: 500-238579-I-8 MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.22	J	10.0	8.87		mg/L		86	80 - 120

Lab Sample ID: 500-238579-I-8 MS — **Client Sample ID: 500-238579-I-8 MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	93		50.0	144		mg/L		103	80 - 120
Sulfate	77		50.0	130		mg/L		105	80 - 120

Lab Sample ID: 500-238579-J-8 MSD — **Client Sample ID: 500-238579-J-8 MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.22	J	10.0	8.92		mg/L		87	80 - 120	1	20

Lab Sample ID: 500-238579-J-8 MSD — **Client Sample ID: 500-238579-J-8 MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	93		50.0	144		mg/L		102	80 - 120	0	20
Sulfate	77		50.0	130		mg/L		105	80 - 120	0	20

Lab Sample ID: MB 500-729898/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.120	J	1.0	0.12	mg/L			08/29/23 10:28	1
Fluoride	<1.0		1.0	0.19	mg/L			08/29/23 10:28	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-729898/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.0		1.0	0.21	mg/L			08/29/23 10:28	1

Lab Sample ID: MB 500-729898/44 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	0.12	mg/L			08/29/23 20:50	1
Fluoride	<1.0		1.0	0.19	mg/L			08/29/23 20:50	1
Sulfate	<1.0		1.0	0.21	mg/L			08/29/23 20:50	1

Lab Sample ID: LCS 500-729898/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.6		mg/L		98	90 - 110
Fluoride	20.0	20.2		mg/L		101	90 - 110
Sulfate	20.0	20.9		mg/L		104	90 - 110

Lab Sample ID: LCS 500-729898/45 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.7		mg/L		98	90 - 110
Fluoride	20.0	20.4		mg/L		102	90 - 110
Sulfate	20.0	20.9		mg/L		104	90 - 110

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.24	J	10.0	9.02		mg/L		88	80 - 120

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	78		50.0	132		mg/L		108	80 - 120

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.24	J	10.0	8.91		mg/L		87	80 - 120	1	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729898

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	78		50.0	131		mg/L		106	80 - 120	1	20

Lab Sample ID: MB 500-730144/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	0.12	mg/L			08/30/23 13:15	1

Lab Sample ID: LCS 500-730144/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.5		mg/L		97	90 - 110

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730144

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	95	F1	50.0	149		mg/L		108	80 - 120

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730144

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	95	F1	50.0	149		mg/L		106	80 - 120	0	20

Lab Sample ID: MB 500-731549/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 731549

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.158	J	1.0	0.12	mg/L			09/10/23 13:21	1
Fluoride	<1.0		1.0	0.19	mg/L			09/10/23 13:21	1
Sulfate	<1.0		1.0	0.21	mg/L			09/10/23 13:21	1

Lab Sample ID: LCS 500-731549/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 731549

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	18.8		mg/L		94	90 - 110
Fluoride	20.0	18.8		mg/L		94	90 - 110
Sulfate	20.0	20.2		mg/L		101	90 - 110

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 731549

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride	0.24	J	10.0	8.59		mg/L		84	80 - 120		

Lab Sample ID: 500-238579-L-45 MSD — **Client Sample ID: 500-238579-L-45 MSD**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 731549

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.26	J	10.0	8.45		mg/L		82	80 - 120	1	20

Lab Sample ID: MB 500-731713/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 731812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	<1.0		1.0	0.12	mg/L			09/11/23 15:17	1
Fluoride, Dissolved	<1.0		1.0	0.19	mg/L			09/11/23 15:17	1
Sulfate, Dissolved	<1.0		1.0	0.21	mg/L			09/11/23 15:17	1

Lab Sample ID: LCS 500-731713/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 731812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved	20.0	18.7		mg/L		93	90 - 110
Fluoride, Dissolved	20.0	18.7		mg/L		94	90 - 110
Sulfate, Dissolved	20.0	20.2		mg/L		101	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-729808/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729808

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/28/23 15:43	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/28/23 15:43	1

Lab Sample ID: LCS 500-729808/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729808

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	92.6		mg/L		93	90 - 110

Lab Sample ID: MB 500-730242/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/30/23 15:42	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 500-730242/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/30/23 15:42	1

Lab Sample ID: LCS 500-730242/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	90.2		mg/L		90	90 - 110

Lab Sample ID: MB 500-730652/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/31/23 16:08	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/31/23 16:08	1

Lab Sample ID: LCS 500-730652/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	90.8		mg/L		91	90 - 110

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

Lab Sample ID: MB 500-729793/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/28/23 18:23	1

Lab Sample ID: LCS 500-729793/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	248		mg/L		99	80 - 120

Lab Sample ID: MB 500-729794/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/28/23 20:37	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

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

Lab Sample ID: LCS 500-729794/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 729794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			250	232		mg/L		93	80 - 120		

Lab Sample ID: MB 500-730218/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/30/23 19:32	1

Lab Sample ID: LCS 500-730218/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730218

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			250	242		mg/L		97	80 - 120		

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730218

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	620		250	914		mg/L		118	75 - 125		

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730218

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	620		250	922		mg/L		122	75 - 125	1	20

Lab Sample ID: 500-238579-44 DU — **Client Sample ID: HEN_34**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 730218

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	760			756		mg/L				0.3	5

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_21R
Lab Sample ID: 500-238579-1
Date Collected: 08/22/23 13:45
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		2	733174	RB	EET CHI	09/19/23 15:00
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:31
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 22:46
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 [1]
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 06:58
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 20:40
Total/NA	Analysis	300.0		5	729689	W1T	EET CHI	08/28/23 20:55
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 16:42
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:38
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 13:45

Client Sample ID: HEN_22&D
Lab Sample ID: 500-238579-2
Date Collected: 08/22/23 09:10
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	733174	RB	EET CHI	09/19/23 15:12
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:35
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 22:50
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 [1]
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:00
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 21:10
Total/NA	Analysis	300.0		5	729689	W1T	EET CHI	08/28/23 21:25
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 16:52
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:41
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 09:10

Client Sample ID: HEN_23
Lab Sample ID: 500-238579-3
Date Collected: 08/22/23 11:20
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	733174	RB	EET CHI	09/19/23 15:16
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:38
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 22:54

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_23
Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 ¹
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:02
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 21:41
Total/NA	Analysis	300.0		50	729689	W1T	EET CHI	08/28/23 21:56
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 17:04
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:43
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 11:20

Client Sample ID: HEN_23_FD
Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 ¹
Total Recoverable	Analysis	200.7 Rev 4.4		1	733174	RB	EET CHI	09/19/23 15:21
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 ¹
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:42
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 ¹
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 22:58
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 ¹
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:04
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 22:41
Total/NA	Analysis	300.0		50	729689	W1T	EET CHI	08/28/23 22:56
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 17:13
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:46
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 11:20

Client Sample ID: HEN_32
Date Collected: 08/22/23 11:15
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 ¹
Total Recoverable	Analysis	200.7 Rev 4.4		1	733174	RB	EET CHI	09/19/23 15:25
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 ¹
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:45
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 ¹
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 23:01
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 ¹
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:06
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 23:12
Total/NA	Analysis	300.0		2	729689	W1T	EET CHI	08/28/23 23:27
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 17:22

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_32
Date Collected: 08/22/23 11:15
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:48
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 11:15

Client Sample ID: HEN_51
Date Collected: 08/22/23 15:56
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			729478	BDE	EET CHI	08/25/23 09:24 - 08/25/23 09:54 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	733174	RB	EET CHI	09/19/23 15:29
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 14:49
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/04/23 23:05
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 [1]
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:08
Total/NA	Analysis	300.0		1	729689	W1T	EET CHI	08/28/23 23:42
Total/NA	Analysis	300.0		5	729689	W1T	EET CHI	08/28/23 23:57
Total/NA	Analysis	SM 2320B		1	729808	EH	EET CHI	08/28/23 17:31
Total/NA	Analysis	SM 2540C		1	729793	CLB	EET CHI	08/28/23 18:51
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 15:56

Client Sample ID: HEN_25
Date Collected: 08/22/23 14:30
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 14:30

Client Sample ID: HEN_26
Date Collected: 08/22/23 15:35
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 15:35

Client Sample ID: HEN_27
Date Collected: 08/24/23 09:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 16:16
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	731002	EH	EET CHI	09/05/23 16:04

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_27
Date Collected: 08/24/23 09:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			729866	BDE	EET CHI	08/29/23 08:50 - 08/29/23 09:20 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/05/23 00:28
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 [1]
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:44
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/29/23 19:49
Total/NA	Analysis	300.0		10	729898	W1T	EET CHI	08/29/23 20:04
Total/NA	Analysis	SM 2320B		1	730242	EH	EET CHI	08/30/23 16:17
Total/NA	Analysis	SM 2540C		1	729794	CLB	EET CHI	08/28/23 21:33
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/24/23 09:00

Client Sample ID: HEN_35
Date Collected: 08/24/23 10:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 16:20
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/05/23 02:37
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	736032	BJH	EET CHI	10/06/23 22:48
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	736227	JP	EET CHI	10/09/23 12:31
Total/NA	Prep	7470A			730135	MJG	EET CHI	08/30/23 11:30 - 08/30/23 13:30 [1]
Total/NA	Analysis	7470A		1	730327	MJG	EET CHI	08/31/23 07:47
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/29/23 20:19
Total/NA	Analysis	300.0		100	729898	W1T	EET CHI	08/29/23 20:35
Total/NA	Analysis	SM 2320B		1	730242	EH	EET CHI	08/30/23 16:27
Total/NA	Analysis	SM 2540C		1	729794	CLB	EET CHI	08/28/23 21:36
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/24/23 10:10

Client Sample ID: HEN_34
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 17:19
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/05/23 03:30
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	736032	BJH	EET CHI	10/06/23 23:36
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	736227	JP	EET CHI	10/09/23 13:19

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_34
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			730358	MJG	EET CHI	08/31/23 11:45 - 08/31/23 13:45 ¹
Total/NA	Analysis	7470A		1	730570	MJG	EET CHI	09/01/23 07:52
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/30/23 03:24
Total/NA	Analysis	300.0		5	729898	W1T	EET CHI	08/30/23 03:39
Total/NA	Analysis	SM 2320B		1	730652	EH	EET CHI	08/31/23 17:19
Total/NA	Analysis	SM 2540C		1	730218	CLB	EET CHI	08/30/23 19:57
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/25/23 11:25

Client Sample ID: HEN_49
Date Collected: 08/25/23 10:05
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 ¹
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 17:24
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 ¹
Total Recoverable	Analysis	6020B		1	736032	BJH	EET CHI	10/06/23 23:40
Total Recoverable	Prep	3005A			736115	MC	EET CHI	10/09/23 18:08 - 10/09/23 23:08 ¹
Total Recoverable	Analysis	6020B		1	736355	BJH	EET CHI	10/10/23 12:58
Total Recoverable	Prep	3005A			736115	MC	EET CHI	10/09/23 18:08 - 10/09/23 23:08 ¹
Total Recoverable	Analysis	6020B		1	736513	BJH	EET CHI	10/11/23 10:15
Total/NA	Prep	7470A			730601	MJG	EET CHI	09/01/23 12:30 - 09/01/23 14:30 ¹
Total/NA	Analysis	7470A		1	730809	MJG	EET CHI	09/05/23 07:16
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/30/23 03:54
Total/NA	Analysis	300.0		5	729898	W1T	EET CHI	08/30/23 05:10
Total/NA	Analysis	SM 2320B		1	730652	EH	EET CHI	08/31/23 17:29
Total/NA	Analysis	SM 2540C		1	730218	CLB	EET CHI	08/30/23 20:03
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/25/23 10:05

Client Sample ID: HEN_22
Date Collected: 08/25/23 08:50
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-46
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 ¹
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 17:40
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 ¹
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/05/23 03:45
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 ¹
Total Recoverable	Analysis	6020B		1	736355	BJH	EET CHI	10/10/23 12:14
Total/NA	Prep	7470A			730601	MJG	EET CHI	09/01/23 12:30 - 09/01/23 14:30 ¹
Total/NA	Analysis	7470A		1	730809	MJG	EET CHI	09/05/23 07:24
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/30/23 05:56
Total/NA	Analysis	300.0		10	729898	W1T	EET CHI	08/30/23 06:11

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_22
Lab Sample ID: 500-238579-46
Date Collected: 08/25/23 08:50
Matrix: Water
Date Received: 08/25/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2320B		1	730652	EH	EET CHI	08/31/23 17:39
Total/NA	Analysis	SM 2540C		1	730218	CLB	EET CHI	08/30/23 20:10
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/25/23 08:50

Client Sample ID: HEN_50
Lab Sample ID: 500-238579-47
Date Collected: 08/25/23 11:25
Matrix: Water
Date Received: 08/25/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			733472	MC	EET CHI	09/21/23 19:27 - 09/22/23 00:27 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	734227	RN	EET CHI	09/26/23 17:53
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	735519	BJH	EET CHI	10/05/23 03:49
Total Recoverable	Prep	3005A			730528	BDE	EET CHI	09/01/23 08:58 - 09/01/23 09:28 [1]
Total Recoverable	Analysis	6020B		1	736355	BJH	EET CHI	10/10/23 12:19
Total/NA	Prep	7470A			730601	MJG	EET CHI	09/01/23 12:30 - 09/01/23 14:30 [1]
Total/NA	Analysis	7470A		1	730809	MJG	EET CHI	09/05/23 07:27
Total/NA	Analysis	300.0		1	729898	W1T	EET CHI	08/30/23 06:26
Total/NA	Analysis	300.0		5	729898	W1T	EET CHI	08/30/23 06:41
Total/NA	Analysis	SM 2320B		1	730652	EH	EET CHI	08/31/23 17:48
Total/NA	Analysis	SM 2540C		1	730218	CLB	EET CHI	08/30/23 20:13
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/25/23 11:25

Client Sample ID: WPCP_FB
Lab Sample ID: 500-238579-48
Date Collected: 08/28/23 07:30
Matrix: Water
Date Received: 08/28/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Filtration	FILTRATION			731713	EH	EET CHI	09/11/23 14:01
Dissolved	Analysis	300.0		1	731812	EH	EET CHI	09/11/23 15:48

Client Sample ID: HEN_30
Lab Sample ID: 500-238579-61
Date Collected: 08/22/23 10:00
Matrix: Water
Date Received: 08/28/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 10:00

Client Sample ID: HEN_31
Lab Sample ID: 500-238579-62
Date Collected: 08/22/23 09:55
Matrix: Water
Date Received: 08/28/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 09:55

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Client Sample ID: HEN_33
Date Collected: 08/22/23 10:18
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-63
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 10:18

Client Sample ID: HEN_36
Date Collected: 08/22/23 09:30
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-64
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	731893	DN	EET CHI	08/22/23 09:30

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-1
SDG: HEN_257_804

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
200.7 Rev 4.4	200.7	Water	Lithium
Field Sampling		Water	Depth to Water (ft from MP)
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature
Field Sampling		Water	Oxidation Reduction Potential
Field Sampling		Water	Oxygen, Dissolved
Field Sampling		Water	Specific Conductance
Field Sampling		Water	Turbidity
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

500-238579 COC

CHAIN-OF-CUSTODY / Analytical Request Document

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500-238579 8/23/23

Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	3030 Warrenville Rd, Ste 418
	Lisle, IL 60532
Email To:	Brian.Voelker@VistraCorp.com
Phone:	(217) 753-8911
Fax:	
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	
Project Number:	50021987

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_21R			8/22/23	1345															X				X		X	X		X		
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0	Allison Beckett	8/22/23	1700	[illegible]	8/23/23	1000	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: Beckett

DATE Signed (MM/DD/YY): 8/22/23

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5 → 1.2			

500-23A5~~25~~ 79 8/23/23

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A Required Client Information:

Company:	Vistra /A3
Address:	3030 Warrenville Rd, Ste 418
	Lisle, IL 60532
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	
Project Number:	50021987

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_22&D			8/22/23	0910														X				X		X	X		X		
2																														
3																														
4																														
5																														
6																														
7																														
8																														
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12																														
13																														
14																														
15																														
16																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0	[signature]	8/22/23	1700	[signature]	8/23/23	1000	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/22/23

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

1.5 → 1.2

500-238579
8/23/23

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	3030 Warrenville Rd, Ste 418
	Lisle, IL 60532
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	
Project Number:	50021987

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
3 1	HEN_23			8/22/23	1120															X				X		X	X		X		
2																															
3																															
4																															
5																															
6																															
7																															
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13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	8/22/23	1700	Stephanie Hernandez EETA	8/23/23	1000	0.9+0.6	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 8/22/23

500-238579
SS 8/23/2

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
4 1	HEN_23_FDUP			8/22/23	1120															X				X		X	X		X		SHORT HOLDS-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
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12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	8/22/23	1700	Stephanie Hernandez EEIP	8/23/23	1000	09+04	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: Beckett

DATE Signed (MM/DD/YY): 8/22/23

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_32			8/22/23	1115															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
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13																															
14																															
15																															
16																															

5

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	[signature]	8/22/23	1700	Stephanie Hernandez EEIA	8/23/23	1000	1.1+0.8	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CHRIS TREMBLAY

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/22/23

500-238578 8/23/23

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_51			8/22/23	1556															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
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12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beck-Eff	8/22/23	1700	Stephanie Hernandez EEIA	8/23/23	1000	1.1+0.8	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beck-Eff

SIGNATURE of SAMPLER: Beck-Eff

DATE Signed (MM/DD/YY): 8/22/23

500-238576-79

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 8/23/23

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Vistra Corp/A3	Report To:	Brian Voelker	Attention:	Jason Stuckey
Address:	3030 Warrenville , Ste 418	Copy To:	Jason Stuckey	Company Name:	Vistra Corp
	Lisle, IL 60532			Address:	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.:		Quote Reference:	
Phone: (217) 753-8911	Fax:	Project Name:		Project Manager:	
Requested Due Date/TAT:	10 day	Project Number:	50021987	Profile #:	

REGULATORY AGENCY		
NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE:	IL	

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_25			8/22/23	1430															X						X	X				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0		8/22/23	1700		8/23/23	1000	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Trembley

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 8/22/23

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

0.6 → 0.3; 1.0 → 0.2

500-238518 SS 8/23/23

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A Required Client Information:

Company:	Vistra Corp/A3
Address:	
Email To:	Brian.Voelker@VistraCorp.com
Phone:	(217) 753-8911 Fax:
Requested Due Date/TAT:	10 day

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

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_26			8/22/23	1535															X						X	X				SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0		8/22/23	1700		8/23/23	1000	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: GREG TREMBLAY

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/22/23

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

0.6 → 0.3, 1.0 → 0.7

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address:	3030 Warrensville Rd Ste 418
	Lisle IL 60532
Email To:	Brian Voelker@VistraCorp com
Phone	(217) 753-8911
Fax	
Requested Due Date/TAT	10 day

Section B Required Project Information

Report To	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.	
Project Name	
Project Number:	50021987

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

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

SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I D
1	HEN_27			8/24/23	0900															X				X		X	X		X		
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

26

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
HEN-23Q3 Rev 0	[signature]	8/24/23	1700	[signature] EETA	8/25/23	0925
	[signature] EETA	8/25/23	0932	Stephanie Hernandez EETA	8/25/23	0932

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Trembley

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 8/24/23

05+02

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

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Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address	
Email To	Brian.Voelke.@VistraCorp.com
Phone	(217) 753-8911 Fax:
Requested Due Date/TAT	10 day

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	
WATER	
WASTE WATER	W
PRODUCT	
SOIL/SOLID	
OIL	
WIPE	
AIR	A
OTHER	O
TISSUE	

SAMPLE ID (A-Z 0-9 /) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I D
1	HEN_35			8/24/23	1010															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
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13																															
14																															
15																															
16																															

27

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0		8/24/23	1700	R. J. Ellis EETA	8/25/23	0825		Y	Y	Y
	R. J. Ellis EETA	8/25/23	0932	Stephanie Hernandez EETA	8/25/23	0932				

SAMPLER NAME AND SIGNATURE: [signature] Tech 3241

PRINT Name of SAMPLER: 8/24/23

Temp in °C | Received on (Y/N) | Custody Seal Cooler (Y/N) | Samples Intact (Y/N)

0.5+0.2

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page 1 of 1

Section A Required Client Information

Company: Vistra Corp/A3
Address:
Email To: Brian Voelker@VistraCorp com
Phone (217) 753-8911 Fax
Requested Due Date/TAT 10 day

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

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I D
44 1	HEN_34			8/25/23	1115															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
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14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0		8/25/23	1200	Allison Becklett	8/25/23	1200		Y	Y	Y
					8/25/23	1500	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chris Bender
SIGNATURE of SAMPLER
DATE Signed (MM/DD/YY): 8/25/23

1e+13, 3.4+3.0

11/16/23 (Rev. 3)

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

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Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address:	
Email To:	Brian Voelker@VistraCorp.com
Phone:	(217) 753-8911
Fax:	
Requested Due Date/TAT	10 day

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

Requested Analysis Filtered (Y/N)

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)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I D
1	HEN_49			9/25/23	1005															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
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12																															
13																															
14																															
15																															
16																															

45

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	9/25/23	1200		8-25-23	1500		Y	Y	Y
							Temp in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: Beckett

DATE Signed (MM/DD/YY): 9/25/23

0.8→0.5, 2.3→2.0

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address	
Email To.	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax
Requested Due Date/TAT	10 day

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

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

SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I D
1	HEN_49_MS/MSD			8/25/23	1005															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
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16																															

45

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	8/25/23	1200		8-25-23	1900		Y	Y	Y
							Temp in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER Allison Beckett

SIGNATURE of SAMPLER Beckett DATE Signed (MM/DD/YY) 8/25/23

0.8→0.5, 2.3→2.0, 21→17

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page 1 of 1

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	10 day

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OI
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_22			8/25/23	8 50															X				X		X	X		X		SHORT HOLDS-NO2
2																															
3																															
4																															
5																															
6																															
7																															
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14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	8/25/23	1500	Stephanie Hernandez EEA	8/25/23	1500		Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER. Allison Beckett

SIGNATURE of SAMPLER. Allison Beckett DATE Signed (MM/DD/YY) 8/25/2023

16+1.3, 3.4+3.0

Eurofins Chicago
2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

eurofins

Client Information	Sampler	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s)	COC No: 500-115779-47580.1
Client Contact: Brian Voelker	Phone	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Vistra Energy Corp	PWSID			Job #: 500-238579
Address: Zimmer Generating Station 1781 US Rte 52	Due Date Requested			
City: Moscow	TAT Requested (days)			
State, Zip: OH 45153	Compliance Project: ☐ Yes ☐ No			
Phone: 217-412-6605(Tel)	PO #: 2382094			
Email: brian.voelker@vistraenergy.com	WO #:			
Project Name: HEN_22	Project #: 5002198			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0 Standard Target List	904.0 Standard Target List	300.0_28D Local Method	2320B, SM4500_NO2_B	200.7 6020B, 7470A	200.7 6020B	4500_P_E N07_0003 Nitrate_Calc	5310C TOC	SM5310 DOC_C (MOD) Local Method	2320B 2540C, 300.0_28D SM4500_NO2_B				Total Number of containers	Special Instructions/Note
			Preservation Code:		X	X	D	D	N	N	D	D	S	S	S	N				X	
HEN_22	8/25/23	0850		Water																	

Preservation Codes

A HCL
B NaOH
C Zn Acetate
D Nitric Acid
E NaHSO4
F MeOH
G Amchlor
H Ascorbic Acid
I Ice
J DI Water
K EDTA
L EDA
M Hexane
N None
O AsNaO2
P Na2O4S
Q Na2SO3
R Na2S2O3
S H2SO4
T TSP Dodecahydrate
U Acetone
V MCAA
W pH 4-5
Y Trizma
Z other (specify)

Other

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/25/23 1700	[illegible]	[signature]	8.25.23 1500	EETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address	
Email To	Brian.Voelker@VistraCorp.com
Phone.	(217) 753-8911
Fax:	
Requested Due Date/TAT	10 day

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

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	
SOIL/SOLID	SI
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	HEN_257_801	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_CLOSURE_802-805	HEN_CLOSURE_804	HEN_SUP_000	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_50			8/25/23	11:25															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	Allison Beckett	8/25/23	1500	Stephanie Hernandez EETA	8/25/23	1500		Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: Allison Beckett DATE Signed (MM/DD/YY): 8/25/23

2.1+17

Eurofins Chicago
2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

eurofins

Client Information	Sampler	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s)	COC No: 500-115777-47579.1
Client Contact: Brian Voelker	Phone	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin	Page: Page 1 of 1
Company: Vistra Energy Corp	P.W.S.			Job #: 500-238579
Address: Zimmer Generating Station 1781 US Rte 52	Due Date Requested			
City: Moscow	TAT Requested (days)			
State, Zip: OH 45153	Compliance Project: Δ Yes Δ No			
Phone: 217-412-6605(Tel)	PO #: 2382094			
Email: brian.voelker@vistraenergy.com	WO #:			
Project Name: HEN_50	Project #: 50021987			
Site	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0 Standard Target List	904.0 Standard Target List	2320B, 300.0_28D, SM4500_NO2_B	2320B, 2540C, 300.0_28D, SM4500_NO2_B	200.7 6020B, 7470A	200.7 6020B	4500_P_E, N07_0003, Nitrate_Calc	5310C TOC	SM5310_DOC_C (MOD) Local Method	Total Number of containers	Special Instructions/Note
			Preservation Code				D	D	N	N	D	D	S	S	S		
47 HEN_50	8/25/23	1125		Water													

Preservation Codes

A HCL
B NaOH
C Zn Acetate
D Nitric Acid
E NaHSO4
F MeOH
G Amchlor
H Ascorbic Acid
I Ice
J DI Water
K EDTA
L EDA
M Hexane
N None
O AsNaO2
P Na2O4S
Q Na2SO3
R Na2S2O3
S H2SO4
T TSP Dodecahydrate
U Acetone
V MCAA
W pH 4-5
Y Trizma
Z other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/25/23 1200	A3E	[signature]	8-25-23 15:00	ECTA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-238579-1
SDG Number: HEN_257_804

Login Number: 238579
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6,0.7,0.3,1.2,0.8,0.4,0.1,2.9,1.7,3.7,1.0,2.8,0.2, 2.0,2.9,0.1,1.63.0,1.3,0.5,2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: HEN
Event: HEN-23Q3 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
02	HEN_02	8/21/23	1200	41.84		CT
04R	HEN_04R	8/21/23	1035	37.08		CT
05R	HEN_05!R	8/21/23	1105	38.69		CT
05DR	HEN_05&DR	8/21/23	1115	38.73		CT
06	HEN_06	8/21/23	1140	20.8		CT
10	HEN_10	8/21/23	0955	48.28		CT
11	HEN_11	8/21/23	0950	48.33		CT
15	HEN_15	8/21/23	1030	47.19		CT
19S	HEN_19#S	8/21/23	1045	37.2		CT
19D	HEN_19&D	8/21/23	1040	37.34		CT
25	HEN_25	8/22/23	0945	14.02 ~~[illegible]~~	~~[illegible]~~	CT
26	HEN_26	8/22/23	0940	13.26		CT
30	HEN_30	8/22/23	1000	4.85		CT
31	HEN_31	8/22/23	0955	4.85		CT
33	HEN_33	8/22/23	1018	2.8'		CT
36	HEN_36	8/22/23	0930	13.58		CT
40S	HEN_40#S	8/21/23	1050	37.92		CT
45S	HEN_45#S	8/21/23	1125	18.98		CT
48	HEN_48	8/21/23	1055	N/A	* COULD NOT MEASURE DUE TO BLOCK	CT
XPW01	HEN_XPW01_pore	8/21/23	1005	9.45		CT
XPW02	HEN_XPW02_pore	8/21/23	1010	14.19		CT
XPW03	HEN_XPW03_pore	8/21/23	1020	4.86		CT
~~XSG01~~	~~HEN_XSG01~~					
~~SG02~~	~~HEN_YSG_ILRIVER~~					

U:6/21/23 GKJ

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23 @ 1140
Well Number HEN-06

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing		X		
Not corroded				
Not dented				
Not cracked				
Not loose				
2. Inner casing		X		
Not corroded				
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	31.09 ft		
General Condition	Yes	No	NA
18. Concrete pad installed?		X	
19 . Concrete pad			
Slope away form casing?			X
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: 20.80 ft pump installed

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

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23 @ 10:45
Well Number HEN-195

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	39.92 ft		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?		↓	
Not heaved or below surrounding grade?		↓	
20. No surface seal settling?		↓	
21. Well clearly visible and labeled?	X		

Comments:

DTW: 37.2ft pump installed

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

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23 @ 1040
Well Number HEN-19D

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	62.55 ft		

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

Comments:

DTW: 37.34 pump in well

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

Monitoring Well Evaluation Checklist

Site Hennipen, IL
Inspection Date 8/21/23 @ 1035
Well Number HEN-04R

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			
13. No obstructions in well?		X	
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.	42.78 ft		

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

Comments:
PAD IS CRACKED + MAY NEED REPAIRS 37.08 DTW

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

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23
Well Number HEN-15

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	50.3 ft		

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

Comments:
contains pump! DTW: 47.19ft
Top of pump: 50.3ft

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

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23 @ 0950
Well Number 11

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

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

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?			X
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	— ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	66.37 ft		

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

Comments:
DTW: 48.33 ft

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

Monitoring Well Evaluation Checklist

Site Hennepin IL
Inspection Date 8/22/23 @ 0830
Well Number HEN-22 & D

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	app ft		

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

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/22/23
Time: 0800
Field Personnel: Allison Beckett
Finish Date:
Time: 1015

WELL INFORMATION

Well ID: HEN-22D
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

	Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	±10% Temp. (°C)	±0.1 pH (SU)	±0.1 SEC or Cond. (µs/cm)	Dissolved Oxygen ±0.3 (mg/L)	±5% or ±1 Turbidity (NTU)	±1.0 ORP (mV)	Visual Clarity
0		0819				19.1	7.56	0.712	3.04	3.87	-12.6	clear
		0824				17.9	7.35	0.722	1.66	6.12	-68.0	
		0829				17.8	7.29	0.728	1.07	6.02	-66.0	
		0834				17.7	7.29	0.729	0.85	16.3	-72.0	
		0839	2.0			18.2	7.29	0.730	0.84	42.11	-75.7	
		0844				18.6	7.30	0.730	0.87	12.9	-79.6	
30		0849				19.0	7.30	0.731	0.85	26.43	-81.7	
		0854				18.0	7.30	0.729	0.85	27.6	-84.1	
40		0859				17.7	7.30	0.731	0.83	26.2	-83.0	
45		0904	3.5			18.0	7.30	0.731	0.91	24.8	-82.1	

NOTES (continued)

Samples taken @0910

Ferrous iron: under range @0920

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

P 1 of 1

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/22/23 @ 1200
Well Number HEN-23

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition			
18. Concrete pad installed?		X	
19 . Concrete pad			X
Slope away form casing?			
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: in app

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

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/22/23 Time: 1040
Field Personnel: Allison Beckett
Finish Date: Time: 1210

WELL INFORMATION

Well ID: HEC-23
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	1041				15.8	7.39	0.836	2.91	3.61	-94.6	clear
	1046				15.7	7.40	0.836	1.32	3.75	-113.9	
	1051				15.4	7.42	0.838	0.49	3.79	-129.0	
	1056	1.5			15.5	7.37	0.837	0.35	3.80	-128.2	
	1101				15.4	7.37	0.835	0.26	5.81	-128.7	
	1106				15.2	7.39	0.835	0.21	6.69	-126.8	
30	1111				15.4	7.39	0.833	0.20	7.9	-125.8	
	1116	3.0			15.0	7.40	0.832	0.18	9.1	-124.3	

NOTES (continued)

Samples taken @ 1120
Ferrous iron: Under range @ 1145

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

P 1 of 1

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/22/23 @ 1308
Well Number HEN-21R

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

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: Hennepin, IL
Client: Rambol
Project Number:
Task #:
Start Date: 8/22/23
Time: 1300
Field Personnel: Allison Beckett
Finish Date:
Time: 1430

WELL INFORMATION

Well ID: HEN-21R
Casing ID: 2 inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	1311				17.8	7.56	0.758	1.17	59.8	-129.4	Clear
	1316				17.3	7.54	0.764	1.22	58.5	-139.8	↓
	1321				17.2	7.54	0.705	1.06	41.69	-138.9	Brownish
	1326				17.1	7.53	0.768	1.16	33.94	-134.1	
	1331	2.5			17.0	7.52	0.765	0.95	34.3	-137.2	
	1336				17.1	7.53	0.763	0.30	32.3	-134.9	
30	1341	3.0			16.6	7.51	0.742	0.21	34.8	-136.3	

NOTES (continued)

Samples taken @ 1345

Ferrous iron: 0.916 ppm

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

P 1 of 1

Monitoring Well Evaluation Checklist

Site Hennepin IL
Inspection Date 8/22/23 @ 1315
Well Number HEN-51

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft ← app		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:
DTW on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Rambo
Project Number:
Task #:
Start Date: 8/22/23
Time: 1500
Field Personnel: Allison Beckett
Finish Date:
Time:

WELL INFORMATION

Well ID: HEN-51
Casing ID: 2 inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	1506				18.9	7.45	0.725	5.56	10.51	21.3	Clear
	511				17.3	7.30	0.734	2.38	12.19	-88.3	
	1516				16.8	7.32	0.736	1.26	11.17	-105.3	
	1521	1.0			17.1	7.34	0.737	0.92	31.84	-115.5	
	1526				17.1	7.35	0.735	0.73	88.26	-122.1	
	1531				16.6	7.35	0.737	0.63	200.2	-124.5	
30	1536	2.0			17.3	7.36	0.738	0.38	22.5	-126.7	
	1541				17.2	7.37	0.734	0.33	24.2	-127.4	
	1546				17.1	7.37	0.733	0.30	25.7	-127.7	
	1551	3.0			17.3	7.37	0.730	0.27	26.2	-128.6	

NOTES (continued)

Samples taken @ 1556
Ferrous iron: 1.744 ppm @ 1618

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

P 1 of 1

Monitoring Well Evaluation Checklist

Site Hennepin, IL
Inspection Date 8/21/23 @1580
Well Number HEC-22

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft	← on app	
General Condition			
18. Concrete pad installed?		X	
19 . Concrete pad			
Slope away form casing?			X
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:
DTW = on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL [redacted] Client: Ramboll
Project Number: Task #: Start Date: 8/25/23 Time: 08[redacted]15
Field Personnel: Allison Beckett Finish Date: 8/25/23 Time: 09[redacted]20

WELL INFORMATION

Well ID: HEN-22
Casing ID: 2 inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	0821				16.2	7.68	0.656	1.47	4.00	113.9	Clear
	0826				16.1	7.68	0.653	0.27	4.10	92.6	
	0831	2.5			16.1	7.69	0.653	0.18	4.14	87.2	
	0836				16.1	7.68	0.653	0.14	4.20	78.8	
	0841	5			16.1	7.68	0.653	0.13	4.24	77.6	
	0846	5.5			16.1	7.67	0.653	0.12	4.31	77.8	

NOTES (continued)

Samples taken @0850

Fervous iron sample @0920: Underrange

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
Inspection Date 8/22/23
Well Number HEN 32

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition		X	
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.	ft		

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

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: HENNEPIN
Client:
Project Number: 2023 0711
Task #:
Start Date: 8/22/23
Time: 1035
Field Personnel: C. TREMBLAY
Finish Date:
Time: 1135

WELL INFORMATION

Well ID: HEN-32
Casing ID: inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	10% <10 Turbidity (NTU)	ORP (mV)	Visual Clarity
PRE	1040	1			3%	+1	3%	10%	~~[illegible]~~	+10	CLEAR
SAMPLE	1048				14.0	7.10	0.718	0.45	41.69	173.6	
	1053				13.9	7.11	0.716	0.21	20.60	165.2	
	1058				13.8	7.10	0.715	0.12	13.02	160.1	
	1103	3			13.8	7.10	0.715	0.09	8.77	156.9	
	1108				13.8	7.10	0.716	0.09	7.30	153.9	
	1113	3.25			13.8	7.09	0.715	0.08	5.33	151.7	
	~~1118~~										

NOTES (continued)

SAMPLED 1115

FI UNDERRUN

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 HENNEPIN
Inspection Date 8/22/23
Well Number 33 @ 1018

Major wells repairs* required to maintain well integrity?	Yes	No	NA

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	36.12 ft		
General Condition			
18. Concrete pad installed?			X
19 . Concrete pad			
Slope away form casing?			
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?		X	
21. Well clearly visible and labeled?		X	

Comments: OVERGROWN WEEDS

DTW 7.81
Pump in Well

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

Monitoring Well Evaluation Checklist

Site
Inspection Date 8/22/23 @1600
Well Number 3D

Major wells repairs* required to maintain well integrity?	Yes	No	NA

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

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

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

Comments:
DTGW 4.85
MNS PUMP

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

Monitoring Well Evaluation Checklist

Site
Inspection Date 2/22/23@0955
Well Number 30

Major wells repairs* required to maintain well integrity?

Yes	No	NA

Stick-up Monitoring Wells

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

Flushmount Monitoring Wells

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

All Monitoring Wells

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

Comments:
DTW 4.85

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

Monitoring Well Evaluation Checklist

Site	HENNPW	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/22 0945				
Well Number	HEN 25				

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	15.71 ft	w/o pump 25.21	

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

Comments:

WELL HAS PUMP * WELL SET UP TO SMOOTH NOTICED BRASS
DTW 14.02 FITTING MAD CRACK

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

DTW w/o pump 13.5

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD LOG

PROJECT INFORMATION

Site: _____ Client: _____
Project Number: _____ Task #: _____ Start Date: 8/22/23 Time: 1335
Field Personnel: C. TREMBLY Finish Date: 8/22/23 Time: 1455

WELL INFORMATION

Well ID: 25
Casing ID: _____ inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	1342		13.51								CLOUDY
PURGE	1348	0.25	13.51						~~65.57~~		CLEAR
SAMPLE	1350		13.51	Ø	17.0	7.25	0.519	1.52	65.57	171.1	
	1355				16.6	7.25	0.519	1.46	42.11	171.7	
	1400				16.6	7.24	0.517	1.46	26.88	172.4	
	1405		13.51	Ø	16.6	7.24	0.516	1.48	17.97	173.8	
	1410				16.5	7.23	0.516	1.51	13.11	174.6	
	1415	3			16.6	7.23	0.516	1.52	9.47	175.2	
	1420				16.5	7.22	0.514	1.56	8.29	175.9	
	1425	4	13.51	Ø	16.6	7.22	0.514	1.59	6.43	176.5	
	1430										

NOTES (continued)

*Ø GEOTECH PUMP
F2 - UNDERRING
SAMPLE @ 1430

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 HENNEPIN
Inspection Date 8-22-23 0940
Well Number HEN 26

Major wells repairs* required to maintain well integrity?

Yes	No	NA

Stick-up Monitoring Wells

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

Flushmount Monitoring Wells

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

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	29.1 ft		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?		↑	
Not heaved or below surrounding grade?		↓	
20. No surface seal settling?		X	
21. Well clearly visible and labeled?	X		

Comments:
WELL HAS pump
DTW 13.26

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING

PROJECT INFORMATION

Site:
Client:
Project Number:
Task #:
Start Date: 8/22/23
Time: 1455
Field Personnel: TREVOR LAY
Finish Date:
Time:

WELL INFORMATION

Well ID: 26
Casing ID: inches

EVENT TYPE

- [ ] Well Development
- [ ] Low-Flow / Low Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PURGE	1500	0.1	13.8								CLEAR
SAMPLE	1506		13.8		17.3	7.09	.784	0.51	2.31	186.1	
	1511				17.2	7.09	.784	0.18	2.37	183.6	
	1516	1.5			17.1	7.09	0.784	0.16	2.40	181.8	
	1521				17.0	7.09	0.785	0.04	2.41	179.9	
	1526				17.0	7.09	0.784	0.02	2.44	178.6	
	1531	3.0	13.9	- 0.1	16.9	7.09	0.784	0.02	2.50	177.0	

NOTES (continued)

FT UNDERRUN
SAMPLE @ 1535

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 Hennepin, IL
Inspection Date 8/23/23 @ 1350
Well Number HEN-47

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		

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

Comments:
DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client:
Project Number:
Task #:
Start Date: 8/23/23 Time: 1455
Field Personnel: Allison Beckett
Finish Date: 8/23/23 Time: 1607

WELL INFORMATION

Well ID: HEN-47
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	1501				22.9	4.96	0.404	6.05	3.85	113.7	clear
	1506				21.6	7.03	0.640	2.36	3.18	148.2	
	1511	1.0			21.6	7.03	0.640	2.05	3.12	152.0	
	1516				21.6	7.03	0.639	1.79	3.02	154.6	
	1521				21.5	7.03	0.641	1.68	3.01	156.2	
	1526	2.5			21.5	7.04	0.639	1.52	3.20	155.3	

NOTES (continued)

Samples taken @ 1530

Ferrous iron @ 1600 : Under range

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 Hennepin IL
Inspection Date 8/23/23 @1105
Well Number HEN-12

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	X
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.	ft		
General Condition			
18. Concrete pad installed?		X	
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?	X		

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/23/23 Time: 0930
Field Personnel: Allison Bennett
Finish Date: Time: 1040

WELL INFORMATION

Well ID: HEN-12
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0		1038			21.3	7.81	0.551	9.73	3.92	149.6	clear
		1043			19.7	7.39	0.559	2.45	3.25	159.4	
		1048	1.5		19.6	7.35	0.559	2.01	3.10	157.1	
		1053			19.6	7.33	0.559	1.94	3.10	155.7	
		1058	2.5		19.5	7.31	0.559	1.91	3.11	155.1	
		1103			19.5	7.30	0.559	1.89	3.05	154.8	
30		1108	4.0		19.5	7.30	0.558	1.88	3.0	154.1	

NOTES (continued)

Samples taken @ 1010

Fervous iron @ 1019: under range

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 Hennepin, IL
Inspection Date 8/23/23 @0825
Well Number HEN-416

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
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.	— ft		

General Condition	Yes	No	NA
18. Concrete pad installed?	X		
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?	X		

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Rambull
Project Number:
Task #:
Start Date: 8/23/23
Time: 0910
Field Personnel: Allison Beckett
Finish Date: 8/23/23
Time: 0930

WELL INFORMATION

Well ID: HEN-46
Casing ID: 2 inches

EVENT TYPE

- ☐ Well Development
- ☒ Low-Flow / Low Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	0819				20.9	7.40	0.559	3.37	6.58	127.4	Clear
	0824				20.8	7.35	0.560	2.44	4.01	142.5	
	0829				20.8	7.35	0.560	2.34	5.82	144.1	
	0834	1.5			20.8	7.34	0.560	2.19	9.41	144.5	
	0839				20.8	7.34	0.558	2.06	14.58	144.3	
	0844				20.8	7.33	0.558	1.99	17.95	143.7	
30	0849	3.0			20.8	7.33	0.559	1.91	18.25	143.2	
					20.9	7.33	0.559	1.85	18.98	142.2	

NOTES (continued)

Samples taken @ 0855

Ferrous iron: Under range @ 0910

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 Hennepin, IL
Inspection Date 8/23/23 @ 1334
Well Number HEN-54

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/23/23
Time: 1300
Field Personnel: Allison Beckett
Finish Date:
Time: 1455

WELL INFORMATION

Well ID: HEN-54
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
13	14				22.7	7.36	0.5605	6.16	5.99	113.9	clear
13	19				23.0	7.32	0.574	3.58	24.10	128.2	
13	24	1.0			22.7	7.31	0.577	3.06	23.14	133.1	
13	29				22.4	7.31	0.576	2.71	19.6	136.4	
13	34				22.3	7.31	0.577	2.49	18.41	139.0	
13	39				22.4	7.30	0.577	2.40	14.50	140.2	
	1344				22.3	7.31	0.577	2.39	14.88	140.1	
	1349	2.5			22.6	7.30	0.576	2.31	13.82	141.0	

NOTES (continued)

Samples taken @ 1350

Ferrous iron sample @ 1450: 5.371

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

			Yes	No	NA
Site	Hennepin IL	Major wells repairs* required to maintain well integrity?		X	
Inspection Date	8/23/23 @ 1110				
Well Number	HEN-13				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded	X			Oxidized & rusty
Not dented		X		
Not cracked				
Not loose				
2. Inner casing	Yes	No	NA	
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		

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

Comments:

DTW - on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/23/23 Time: 1055
Field Personnel: Allison Bickett
Finish Date: Time: 1255

WELL INFORMATION

Well ID: HEN-13
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	1057				21.5	7.33	0.552	11.36	3.19	152.0	Clear
	1102				21.6	7.37	0.562	3.67	3.18	152.7	↓
	1107	1.0			21.6	7.38	0.563	3.43	3.19	151.1	
	1112				21.6	7.38	0.563	2.33	3.20	149.9	
	1117				21.6	7.39	0.563	2.23	3.21	149.9	
25	1122	2.0			21.4	7.39	0.563	2.10	3.05	150.2	↓

NOTES (continued)

samples taken @ 1125

Ferrous iron @ 1145 : underrange

dupe @ 1125

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
Inspection Date 8/23/23
Well Number 18D

Major wells repairs* required to maintain well integrity?

Yes	No	NA
	✓	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		✓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		✓		

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

Flushmount Monitoring Wells

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

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	
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?		✓	
16. Installed as total depth.	ft		
17. Measured total depth of well.	ft		
	ft		

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

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:
Client:
Project Number: 2023-024
Task #:
Start Date: 8/23/23 Time: 1318
Field Personnel: TREMBLAY
Finish Date: Time: 1435

WELL INFORMATION

Well ID: 18D
Casing ID: inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [ ] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE											
PURGE	1330	0.1									CLEAR
	1333				21.3	7.22	0.692	2.84	15.81	169.2	
	1338				21.3	7.17	0.688	0.78	6.81	79.1	
	1343	1.5			21.2	7.17	0.684	0.33	10.95	72.2	
	1348				21.2	7.17	0.684	0.18	11.18	71.7	
	1353				21.1	7.18	0.684	0.17	10.44	68.3	
	1358	2			21.2	7.18	0.685	0.17	10.26	68.2	

NOTES (continued)

SAMPLED @ 1405
FI - UNDER

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 Hennepin, IL
Inspection Date 8/21/23 @ 1115
Well Number HEN - 05DR

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	68.07 ft		

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

Comments:

DTW: 38.73 pump installed

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN
Client:
Project Number: 2023 0711
Task #:
Start Date: 8/23/23
Time: 1155
Field Personnel: C TREMBLAY
Finish Date:
Time: 1305

WELL INFORMATION

Well ID: 05 DR
Casing ID: inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	1155	~~[illegible]~~	38.73	Ø							
PURGE	1205	~~[illegible]~~	38.73	Ø							CLEAR
	1210	0.75	38.73	Ø	21.2	7.41	0.632	0.77	2.81	169.5	
	1215		38.73	Ø	20.6	7.41	0.631	0.28	2.54	162.7	
	1220		38.73	Ø	20.6	7.42	0.631	0.20	2.67	165.1	
	1225	1.25	38.73		20.8	7.41	0.631	0.18	2.23	163.5	
	1230		38.73		20.8	7.41	0.631	0.16	2.35	161.7	
	1235		38.73		20.8	7.41	0.631	0.15	2.51	160.2	
	1240		38.73		20.9	7.41	0.631	0.15	2.12	158.8	

NOTES (continued)

SAMPLE @ - 1145
FI - UNDERRUN

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 Hennepin, IL
Inspection Date 8/21/23 @1105
Well Number HEN-05R

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	46.05 ft		

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

Comments:

DTW: 38.00 pump installed

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN
Client:
Project Number: 2023-0711
Task #:
Start Date: 8/23/23
Time: 1036
Field Personnel: C. TREMBLAY
Finish Date:
Time: 1150

WELL INFORMATION

Well ID: 05R
Casing ID: inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	3% Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen 10% (mg/L)	Turbidity (NTU)	+10 ORP (mV)	Visual Clarity
PRE	1036		38.69								
PURGE	1042	0.1	38.69	Ø			~~0.646~~	~~1.60~~	~~27.51~~	~~118.9~~	CLEAR
SAMPLE	1048	0.5	38.69	Ø	20.6	7.61	0.646	1.60	27.51	118.9	
	1053		38.69	Ø	20.6	7.61	0.644	0.36	18.70	136.8	
	1058		38.69	Ø	20.5	7.61	0.643	0.23	12.41	141.0	
	1103	1.25	38.69	Ø	20.8	7.61	0.643	0.19	8.77	142.8	
	1108		38.69	Ø	20.6	7.61	0.644	0.17	7.00	143.7	
	1113		38.69	Ø	20.8	7.61	0.643	0.15	5.15	144.0	
	1118	2.5	38.69	Ø	20.6	7.61	0.645	0.14	4.41	144.2	
	1123				20.3	7.62	0.644	0.14	3.55	144.2	

NOTES (continued)

SAMPLE @ - 1130
FI - 0.806 ppm

ABBREVIATIONS

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

Monitoring Well Evaluation Checklist

Site Hennepin IL
Inspection Date 8/21/23 @ 1055
Well Number HEN-48

Major wells repairs* required to maintain well integrity?

Yes	No	NA
X		

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented	X			SMALL DENT
Not cracked		X		
Not loose	X			WELL IS LOOSE

	Yes	No	NA	
2. Inner casing				
Not corroded		X		
Not dented		X		
Not cracked	X			INNER CASE CRACKED
Not loose	X			

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

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?				
12. Is there a lock present?				

All Monitoring Wells

	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?			X	
13. No obstructions in well?	X			CRACKED WELL
14. No plant roots or vegetation in well?		X		
15. No sediment in bottom of well?			X	
If present, how much sediment?	ft			
16. Installed as total depth.	ft			
17. Measured total depth of well.	ft			

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

Comments:
COULD NOT TAKE WATER LEVEL READING due to blockage

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN
Client:
Project Number: 2023 024
Task #:
Start Date: 8/23/23
Time: 0931
Field Personnel: TRUMBY
Finish Date:
Time: 1030

WELL INFORMATION

Well ID: 48
Casing ID: inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
~~[illegible]~~											
PURGE	0937	0.1			~~20.8~~	~~7.63~~	~~0.601~~	~~1.93~~	~~5.23~~	~~163.4~~	CLEAR
SAMPLE	0943	0.75			20.9	7.63	0.601	1.93	5.23	163.4	
	0948				20.8	7.62	0.590	0.50	4.37	160.2	
	0953				20.7	7.62	0.589	0.24	3.28	157.6	
	0958				20.5	7.62	0.589	0.18	2.71	154.3	
	1003	2.25			20.7	7.62	0.589	0.15	2.22	152.0	
	1008				20.7	7.62	0.589	0.13	2.30	150.3	
	1013				20.7	7.62	0.589	0.12	2.09	148.7	
	1018	3			20.8	7.62	0.589	0.11	2.01	147.4	

NOTES (continued)

* WELL HAS OBSTRUCTION INSIDE CASING. COULD NOT MEASURE WATER
SAMPLE @ - 1020
FI - UNDERRUN

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 Hennepin, IL
Inspection Date 8/21/23 @ 1050
Well Number HEN-405

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	39.92 ft		

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

Comments:
DTW: 37.92' ~~[illegible]~~ pump installed

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEP 2
Client:
Project Number: 2023 0711
Task #:
Start Date: 8/23/23
Time: 0820
Field Personnel: C TREMBLAY
Finish Date:
Time: 0928

WELL INFORMATION

Well ID: 405
Casing ID: inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	0832		37.92	Ø							
PURGE	0836	0.1	37.92	Ø							CLEAR
SAMPLE	0841		37.92	Ø	19.0	7.89	0.581	2.20	4.25	149.6	
	0846	1.5	37.92	Ø	18.8	7.89	0.579	0.41	3.29	143.4	
	0851		37.92	Ø	18.7	7.88	0.579	0.44	2.58	139.1	
	0856		37.92	Ø	18.7	7.88	0.579	0.37	2.16	135.7	
	0901	2.75	37.92	Ø	18.8	7.88	0.579	0.37	2.13	133.5	

NOTES (continued)

SAMPLE @ 0905
FE - MUD PUNG

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 HENNEPIN
Inspection Date 8/24/23
Well Number HGW 35

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

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

Flushmount Monitoring Wells

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

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?		X	
16. Installed as total depth.	ft		
17. Measured total depth of well.	ft		
	ft		

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

Comments:

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD LOG

PROJECT INFORMATION

Site: _____ Client: _____
Project Number: _____ Task #: _____ Start Date: 8/24 Time: 0930
Field Personnel: TREMBLAY Finish Date: _____ Time: 1038

WELL INFORMATION

Well ID: HEN 35
Casing ID: _____ inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PURGE	0940	0.1			±3%	±1	3%	10%	10%	±10	CLEAR
SAMPLE	0946				16.5	7.10	0.926	8.28	14.30	159.9	
	0951				16.2	7.04	0.918	6.78	15.97	169.8	
	0956	1.0			16.3	7.03	1.369	2.16	2.72	163.8	
	1001				16.2	7.03	1.378	1.87	2.67	162.0	
	1006	2.0			16.2	7.03	1.358	1.47	2.81	161.7	
	~~1011~~										

NOTES (continued)

F1 - ~~[illegible]~~ UNDR
SAMPLE @ 1010

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	~~[illegible]~~ Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/24/23			X	
Well Number	HEN-52				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?				
10. No water in the flushmount?				
11. Is the well cap lockable?				
12. Is there a lock present?				

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?			X	
13. No obstructions in well?		X		
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.	— ft			
General Condition	Yes	No	NA	
18. Concrete pad installed?	X			
19 . Concrete pad				
Slope away form casing?		X		
Not deteriorated?				
Not heaved or below surrounding grade?				
20. No surface seal settling?				
21. Well clearly visible and labeled?	X			

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/23
Time: 0905
Field Personnel: Allison Beckett
Finish Date:
Time: 1020

WELL INFORMATION

Well ID: HEN-S2
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	0909				21.5	7.10	0.635	7.57	5.56	147.1	Clear
	0914				23.6	7.01	0.605	2.0	5.95	152.3	↓
	0919	1.0			23.8	7.06	0.609	1.34	4.68	149.7	
	0924				23.9	7.05	0.612	1.21	4.27	147.2	
	0929	2.0			23.9	7.04	0.613	1.03	4.25	146.5	
25	0934				24.0	7.04	0.614	1.96	4.08	145.8	

NOTES (continued)

Samples taken @0940

Ferrous iron @1011: Under range

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 HENNEPIN, IL
Inspection Date 8/24/23 @ 1400
Well Number HEN-8D

Major wells repairs* required to maintain well integrity?	Yes	No	NA

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition	Yes	No	NA
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/23
Time: 1140
Field Personnel: Allison Beckett
Finish Date:
Time: 1311

WELL INFORMATION

Well ID: HEN-8D
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
0	1154				18.7	7.03	1.336	0.45	4.29	182.5	Clear
	1159				17.7	6.104	1.426	2.00	0.88	193.7	
	1204				17.7	6.58	1.433	0.98	5.34	194.0	
	1209	1.0			17.4	6.58	1.436	0.76	4.00	193.0	
	1214				17.5	6.58	1.432	0.75	4.57	192.4	
25	1219	2.0			17.3	6.59	1.435	0.03	4.32	192.0	

NOTES (continued)

Samples taken @1225

Ferrous iron sample @1232: underrange

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

			Yes	No	NA
Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?		X	
Inspection Date	3/24/23 1355				
Well Number	HEN-07				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition	Yes	No	NA
18. Concrete pad installed?		X	
19 . Concrete pad			
Slope away form casing?			X
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: on app

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

PROJECT INFORMATION

Site: Hennepin, IL
Client:
Project Number:
Task #:
Start Date: 8/24/23 Time: 1320
Field Personnel: Allison Beckett
Finish Date: 8/24/23 Time: 1430

WELL INFORMATION

Well ID: HEN-07
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	1332				14.4	6.98	0.727	5.73	5.16	144.3	clear
	1337				14.0	6.97	0.698	4.25	4.45	174.5	
	1342	2.0			13.9	6.96	0.701	4.20	4.09	174.6	
	1347				13.9	6.94	0.700	4.16	3.85	178.7	
	1352	3.0			13.8	6.93	0.699	4.16	3.57	179.6	
	1357				13.8	6.91	0.697	4.15	3.55	179.9	

NOTES (continued)

Samples taken @1400

Ferrous ironsample @1420: Under range

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 Hennepin, IL
Inspection Date 8/24/23 @ 1452
Well Number HEN-03

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition			
18. Concrete pad installed?		X	
19 . Concrete pad			
Slope away form casing?			X
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			
21. Well clearly visible and labeled?	X		

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/21/24
Time: 1435
Field Personnel: Allison Belcher
Finish Date:
Time: 1620

WELL INFORMATION

Well ID: 08
Casing ID: inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	1443				14.7	6.62	1.228	1.54	3.85	194.1	clear
	1448				14.6	6.58	1.239	1.30	3.61	194.1	↓
	1453	2.5			14.7	6.69	1.239	1.22	3.53	188.9	↓
	1458				14.6	6.69	1.243	1.19	3.50	188.1	↓
	1503				14.6	6.72	1.244	1.17	3.49	188.6	↓
	1508				14.7	6.72	1.241	1.16	3.49	188.6	↓

NOTES (continued)

Samples taken @ 1510

Ferrous iron sampled @ 1530: under range

dupe @ 1510

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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date 8/24/23			✓	
Well Number 27				

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	
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.	ft		
General Condition	Yes	No	NA
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	
Not deteriorated?		X	
Not heaved or below surrounding grade?		X	
20. No surface seal settling?		X	
21. Well clearly visible and labeled?	X		

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:
Client:
Project Number:
Task #:
Start Date: 8/24 Time: 0820
Field Personnel: TRUMBLAY
Finish Date: Time: 0921

WELL INFORMATION

Well ID: HEN 27
Casing ID: inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
~~0824~~											
PURGE	0824	0.1									CLEAR
SAMPLE	0828				12.9	7.21	0.819	0.50	13.75	0.1	
	0833	1			13.0	7.22	0.817	0.09	23.15	-20.3	
	0838				13.5	7.24	0.813	0.04	46.33	-29.8	
	0843				12.8	7.32	0.816	0.04	46.72	-31.5	
	0848	2.75			12.4	7.33	0.816	0.06	47.09	-32.9	
	0853	3.0			12.5	7.33	0.816	0.07	48.82	-33.7	
	0854										

NOTES (continued)

FOUNDER
SAMPLE @ 0900

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 Hennepin, IL
Inspection Date 8/21/23 @ 1200
Well Number HEN-02

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	47.09 ft		

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

Comments:

DTW: 41.84ft pump installed

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/2023
Time: 1025
Field Personnel: Allison Beckett
Finish Date:
Time: 1120

WELL INFORMATION

Well ID: HEN-02
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	1032		41.17		15.4	7.12	0.1079	5.70	5.80	156.5	Clear
	1037		41.17		14.2	6.81	0.1087	0.63	5.08	172.7	↓
	1042	2.0	41.17		14.0	6.78	0.1085	0.38	5.12	174.3	↓
	1047		41.16		14.1	6.81	0.1084	0.31	4.36	172.3	↓
	1052	3.0	41.15		14.0	6.83	0.1084	0.27	3.99	170.8	↓
	1057				14.0	6.83	0.1086	0.27	4.17	170.1	↓
	1102	4.0			14.0	6.83	0.1085	0.24	3.85	169.1	↓

NOTES (continued)

Samples taken @ 1105

NO FERROUS IRON SAMPLE

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 Hennepin, IL
Inspection Date 9/21/23 @ 1010
Well Number HEN-XPW02-Pore

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells

	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	A ft		

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

Comments:

DTW: 14.39 ft

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: _____ Client: _____
Project Number: _____ Task #: _____ Start Date: 8/24/23 Time: 1252
Field Personnel: TREMBLAY Finish Date: _____ Time: 1450

WELL INFORMATION

Well ID: XPW02
Casing ID: _____ inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	1256	4	14.03								
PURGE	1304	0.1	14.19	-0.16							CLEAR
SAMPLE	1308	1.0	14.58	-0.39	19.4	12.03	3.071	0.91	89.87	-116.0	
	1313		14.92	-0.36	19.2	12.13	3.111	0.21	59.77	-155.7	
	1318		15.0	-0.18	19.4	12.14	3.109	0.14	40.43	-165.2	
	1323	2.5	15.1	-0.1	19.3	12.16	3.129	0.10	28.61	-168.5	
	1328		15.13	-0.03	19.8	12.16	3.146	0.12	29.94	-157.5	
	1333		15.15	-0.02	19.7	12.17	3.163	0.12	22.84	-152.3	
	1338	3.25	15.15	0	19.7	12.17	3.191	0.12	23.05	-148.4	

NOTES (continued)

FI - 0.109

Sample - 1345
EB - 1345

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 Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date 8/21/23 @ 1005			X	
Well Number ~~HenxPW~~ 01 - pore				

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	[redacted] ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	17.13 ft		

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

Comments:

DTW: 9.45 ft Bottom of casing: 17.13 ft

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: _____ Client: _____
Project Number: _____ Task #: _____ Start Date: 8/24/23 Time: 1125
Field Personnel: CKenney Finish Date: _____ Time: 1250

WELL INFORMATION

Well ID: XPW01
Casing ID: _____ inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☑ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	1125		9.45								
PURGE	1130	0.1	9.45	Ø							CLEAR
SAMPLE	1135	0.75	9.45	Ø	19.5	11.30	0.783	0.37	9.22	-241.6	
	1140		9.45	Ø	19.5	11.31	0.795	0.22	10.51	-242.4	
	1145	1.0	9.45	Ø	18.8	11.33	0.801	0.17	13.54	-244.1	
	1150		9.45	Ø	19.0	11.33	0.804	0.11	17.05	-248.5	
	1155		9.45	Ø	19.2	11.34	0.808	0.11	21.53	-259.5	
	1200	2.25	9.45	Ø	17.6	11.39	0.815	0.11	54.09	-271.9	
	1205		9.45	Ø	17.7	11.39	0.817	0.10	57.11	-278.6	
	1210	3.5	9.45	Ø	17.7	11.39	0.818	0.10	55.97	-279.1	

NOTES (continued)

Sample @ 1215
FT - Under
Equipment Blank @ 1215

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	Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23 @ 1020			✓	
Well Number	HEN-XPW03-pore				

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?			✓
9. Does the lid have a gasket that seals?			↓
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			✓

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.	19.11 ft		
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:

DTW: 9.86 ft.

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site:
Client:
Project Number:
Task #:
Start Date: 8/22 & 23
Time: 1455
Field Personnel: [illegible]
Finish Date:
Time:

WELL INFORMATION

Well ID: XPW03
Casing ID: inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PRE	1457		4.86								
	1500	1.0	5.16	-0.3	~~16.7~~	~~11.71~~	~~1.141~~	~~0.82~~	~~5.~~		
	1506		5.16	Ø	16.7	11.71	1.141	0.82	5.92	-3.2	
	1511		5.16	Ø	16.6	11.79	1.144	0.11	13.62	-22.1	
	1516	2	5.16	Ø	16.7	11.79	1.146	0.11	9.31	-30.8	
	1521		5.16	Ø	16.8	11.78	1.149	0.10	9.28	-37.3	
	1526	2.5	5.16	Ø	16.7	11.79	1.149	0.11	9.97	-41.9	
	1531										
	1536										

NOTES (continued)

FT UNDR
SAMPLE — 1530
EB —

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 Hennepin
Inspection Date 8/21/23 @ 0955
Well Number 10

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

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

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?			X
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	— ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	48.15 ft		

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

Comments:
DTW: 48.28 ft Bottom of casing/top of pump 48.15

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/23 Time: 0810
Field Personnel: Allison Beckett
Finish Date: 8/24/23 Time: 0900

WELL INFORMATION

Well ID: HEN-10
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

	Sampling Stage	Time (military)	Volume Removed (gallons)	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
0		0810		48.15		22.8	7.15	0.019	1.52	4.08	138.6	Clear
		0821		48.12		23.1	7.06	0.022	0.73	4.50	144.6	↓
		0826	2.0	48.12		23.1	7.05	0.024	0.67	7.00	144.2	↓
		0831		48.12		23.1	7.04	0.025	0.55	6.15	142.8	↓
		0836	3.0	48.11		23.2	7.04	0.025	0.53	4.50	141.8	↓
2.5		0841	3.5	48.11		23.2	7.04	0.025	0.52	3.90	140.9	↓

NOTES (continued)

Samples taken @ 0845

NO FERROUS IRON SAMPLE

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

			Yes	No	NA
Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?		X	
Inspection Date	8/21/23 @ 0930				
Well Number	50				

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?			X
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?		X	
16. Installed as total depth.	ft		
17. Measured total depth of well.	ft		
18. Concrete pad installed?	ft		
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: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/25/23 Time: 1055
Field Personnel: Alison Beckett
Finish Date: Time: 1200

WELL INFORMATION

Well ID: HEN-50
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
10	958				16.8	7.53	0.064	0.61	364.79	81.2	clear
11	03				16.7	7.50	0.063	0.59	384.0	112.5	↓
11	08	2.0			16.8	7.49	0.064	0.17	4.33	109.3	
11	13				16.9	7.49	0.065	0.14	4.31	98.5	
11	18	4.0			16.7	7.48	0.065	0.12	4.06	87.2	
11	23				16.7	7.47	0.065	0.12	3.98	88.0	

NOTES (continued)

Samples taken @ 1125
Ferrous iron sample @ 1140: underrange

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
Inspection Date 8/25/23
Well Number HEN 34

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

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

Flushmount Monitoring Wells

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

All Monitoring Wells

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

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: _____ Client: _____

Project Number: _____ Task #: _____ Start Date: 8/25/23 Time: 1053

Field Personnel: TREMBLEY Finish Date: 8/25/23 Time: 1145

WELL INFORMATION

Well ID: HEN 34

Casing ID: _____ inches

EVENT TYPE

☐ Well Development ☐ Low-Flow / Low Stress Sampling

☐ Well Volume Approach Sampling ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PURGE	~~1055~~	0-1			~~13.2~~	~~7.21~~	~~0.948~~	~~2.06~~	~~14.02~~	~~-116.2~~	CLEAR
	1100				13.2	7.21	0.948	2.06	14.02	-116.2	CLEAR
	1105				12.8	7.09	0.966	0.25	7.80	-108.6	↓
	1110	2.5			12.8	7.08	0.969	0.21	6.54	-110.4	↓
	1115				12.9	7.08	0.971	0.22	5.51	-111.2	↓
	1120				12.8	7.08	0.972	0.20	4.81	-110.7	↓
	1125										↓
	1130										↓

NOTES (continued)

FI - UNDERRUN

SAMPLE @ 1125

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
Inspection Date 8/25/23
Well Number HEN 49

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

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

Flushmount Monitoring Wells

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

All Monitoring Wells

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

Comments:

BATTERY WAS REPLACED + WOULD NOT CONNECT. WELL WAS GAUGED MANUALLY

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/25/23 Time: 0925
Field Personnel: Allison Bellwald
Finish Date: 8/25/23 Time: 1055

WELL INFORMATION

Well ID: HEN-49
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [x] Low-Flow / Low Stress Sampling
- [ ] Well Volume Approach Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
09	1032		19.65		15.5	7.21	0.700	1.40	72.1	-1.5	Clear
09	1037		19.65		15.3	7.13	0.698	0.22	92.38	38.0	Brownish cloudy
09	1042	2.0	19.65		15.4	7.12	0.1098	0.17	110.79	48.6	
09	1047		19.64		15.4	7.12	0.1098	0.15	122.4	57.7	
09	1052		19.65		15.4	7.12	0.697	0.13	121.9	58.8	
09	1057	5.0	19.64		15.4	7.12	0.698	0.12	122.9	59.1	
10	1102		19.65		15.3	7.12	0.698	0.11	123.6	58.2	

NOTES (continued)

Samples taken @ 1105

Ferrous iron sample @ 1030: underrange

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 Hennepin I2
Inspection Date 8/28/23 0815
Well Number #EN-10

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	— ft		
General Condition			
18. Concrete pad installed?		X	
19 . Concrete pad			
Slope away form casing?			X
Not deteriorated?			
Not heaved or below surrounding grade?			
20. No surface seal settling?			X
21. Well clearly visible and labeled?	X		

Comments:

DTW: 53.90, dead batteries/transducer is fried

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

WELL DEVELOPMENT AND LOW-FLOW GROUNDWATER SAMPLING FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/28/23 Time: 0800
Field Personnel: Allison Beckett
Finish Date: Time: 0915

WELL INFORMATION

Well ID: HEN-16
Casing ID: 2 inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	0808		53.90		19.9	7.47	0.550	8.13	4.40	114.5	clear
	0813		53.90		22.5	7.23	0.553	1.41	3.88	131.4	↓
	0818		53.90		22.7	7.23	0.554	1.21	3.92	131.1	↓
	0823	1.0	53.90		22.8	7.23	0.556	0.53	3.85	126.8	↓
	0828		53.90		22.8	7.23	0.556	0.41	3.89	123.5	↓
	0833	2.0	53.90		22.8	7.23	0.556	0.37	3.99	122.7	↓

NOTES (continued)

Samples taken @ 0835

Ferrous iron sample @0850 : Under range

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

			Yes	No	NA
Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?		X	
Inspection Date	8/28/23 @ 0915				
Well Number	~~HEN-17~~				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded		X		
Not dented				
Not cracked				
Not loose				
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?				
10. No water in the flushmount?				
11. Is the well cap lockable?				
12. Is there a lock present?				

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?			X	
13. No obstructions in well?		X		
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.	— ft			

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

Comments:

DTW: on app

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/28/23
Time: 0905
Field Personnel: Allison Beckett
Finish Date:
Time: 1030

WELL INFORMATION

Well ID: HEN-17
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	0911				22.6	7.15	0.565	5.91	5.06	137.9	clear
	0916				22.7	7.35	0.514	4.13	3.97	140.7	↓
	0921				22.5	7.35	0.508	4.06	4.08	144.3	
	0926	1.0			22.5	7.35	0.508	4.00	3.96	146.5	
	0931				22.4	7.34	0.507	5.88	3.99	147.6	
	0936	2.0			22.4	7.34	0.506	5.76	4.02	148.2	↓

NOTES (continued)

Samples taken @ 0940

Ferrous iron sample @ 0945: under range

QVPE @ 0940

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
Inspection Date 8/28
Well Number 03R

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

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

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

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?		X	
13. No obstructions in well?		X	
14. No plant roots or vegetation in well?		X	
15. No sediment in bottom of well?		X	
If present, how much sediment?	ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	ft		

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

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: _____ Client: _____

Project Number: _____ Task #: _____ Start Date: 8/28 Time: 0906

Field Personnel: TREMBLAY Finish Date: 8/28 Time: 1121

WELL INFORMATION

Well ID: 03R

Casing ID: _____ inches

EVENT TYPE

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

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
PURGE	0915	0.1							~~[illegible]~~		CLEAR
SAMPLE	0920				18.2	7.22	0.655	0.81	10.85	~~[illegible]~~	
	0925	1.0			18.2	7.21	0.653	0.32	5.46	137.8	
	0930				18.2	7.21	0.653	0.22	3.81	132.9	
	0935				18.3	7.21	0.653	0.22	2.99	129.4	
	0940	2.25			18.3	7.20	0.652	0.21	2.54	126.9	
	0945										
	0950										
	0955										

NOTES (continued)

F1 - UNDER SAMPLED 0945

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
Inspection Date 8/28/23
Well Number 18S

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells

	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			
9. Does the lid have a gasket that seals?			
10. No water in the flushmount?			
11. Is the well cap lockable?			
12. Is there a lock present?			

All Monitoring Wells

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

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:
Client:
Project Number:
Task #:
Start Date: 8/28/23 Time: 0800
Field Personnel: TRANSLY
Finish Date: Time: 0905

WELL INFORMATION

Well ID: 185
Casing ID: inches

EVENT TYPE

- ☐ Well Development
- ☐ Well Volume Approach Sampling
- ☒ Low-Flow / Low Stress Sampling
- ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
purge	0810	0.25									CLEAR
	0811				16.8	7.52	0.666	2.30	5.45	104.0	
	0816				16.7	7.39	0.661	0.42	3.20	103.2	
	0821				16.8	7.39	0.661	0.26	2.61	98.1	
	0826	2.25			16.8	7.38	0.661	0.22	2.49	95.5	
	0831	2.5			16.8	7.38	0.661	0.20	2.46	94.1	
	0836										
	0841										
	0846										

NOTES (continued)

FI-UNDR
0835
SAMPLE

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 Hennepin, IL
Inspection Date 8/21/23 @1125
Well Number HEN-45S

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

Stick-up Monitoring Wells	Yes	No	NA	Comments
1. Outer protective Casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
2. Inner casing				
Not corroded		X		
Not dented		↓		
Not cracked		↓		
Not loose		↓		
	Yes	No	NA	
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
5. Is there a lockable cap present?	X			
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?			↓
10. No water in the flushmount?			↓
11. Is the well cap lockable?			↓
12. Is there a lock present?			↓

All Monitoring Wells	Yes	No	NA
Downhole Condition			
12. Water level measuring point clearly marked?			X
13. No obstructions in well?		X	
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.	30.19 ft		

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

Comments:

DTW: 18.78 pump installed

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING MONITORING AND CORRECTIVE ACTION REPORT

PROJECT INFORMATION

Site: Hennepin, IL
Client: Rambol
Project Number:
Task #:
Start Date: 8/28/23
Time: 1040
Field Personnel: Allison Beckett
Finish Date:
Time: 1140

WELL INFORMATION

Well ID: HEN-455
Casing ID: 2 inches

EVENT TYPE

- [ ] Well Development
- [ ] Well Volume Approach Sampling
- [x] Low-Flow / Low Stress Sampling
- [ ] Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	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
	1044		18.98		19.3	7.32	0.706	3.27	9.13	57.9	clear
	1049		18.97		19.1	7.17	0.641	0.25	148.24	108.9	Brown/mucky
	1054	2.5	18.98		19.1	7.16	0.640	0.22	130.16	111.7	↓
	1059		18.98		19.1	7.16	0.640	0.19	89.9	116.1	
	1104		18.98		19.1	7.16	0.640	0.18	87.30	118.6	
	1109	5.0	18.98		19.1	7.16	0.640	0.17	54.30	119.2	
	1114		18.98		19.1	7.16	0.640	0.17	55.06	120.2	

NOTES (continued)

Samples taken @ 1115

Ferrous iron sample @1130: underrange

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads
All DTWs on SAR-4 form may be collected at anytime during the sampling event.
Plant: HEN
Event: HEN-23Q3 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
					Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L)		
03R	HEN_03R	8/28/2023	9:06	See transducer reading	21615140	y	448.07	y	h		CT
07	HEN_07	8/24/2023	13:20	See transducer reading	21615139	y	450.45	y	h		AB
08	HEN_08	8/24/2023	14:35	See transducer reading	21615138	y	448.33	y	h		AB
08D	HEN_08&D	8/24/2023	11:40	See transducer reading	21615598	y	448.09	y	h		AB
12	HEN_12	8/23/2023	9:30	See transducer reading	21615520	y	448.17	y	h		AB
13	HEN_13	8/23/2023	10:55	See transducer reading	21615515	y	448.22	y	h		AB
16	HEN_16	8/28/2023	8:00	53.9	21615137	y	N/A	n	h	Replaced battery, issues connecting to hobo link, manually gauged well.	AB
17	HEN_17	8/28/2023	9:05	See transducer reading	21615500	y	449.15	y	h		AB
18S	HEN_18#S	8/28/2023	8:00	See transducer reading	21615482	y	448.12	y	h		CT
18D	HEN_18&D	8/23/2023	13:18	See transducer reading	21615609	y	448.08	y	h		CT
21R	HEN_21R	8/22/2023	13:00	See transducer reading	21615613	y	447.73	y	h		AB
22	HEN_22	8/25/2023	8:15	See transducer reading	21615497	y	447.26	y	h		AB
22D	HEN_22&D	8/22/2023	8:00	See transducer reading	21564134	y	447.57	y	h		AB
23	HEN_23	8/22/2023	10:40	See transducer reading	21615600	y	447.92	y	h		AB
27	HEN_27	8/24/2023	8:20	See transducer reading	21615576	y	447.77	y	h		CT
32	HEN_32	8/22/2023	10:35	See transducer reading	21615487	y	447.64	y	h		CT

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads
All DTWs on SAR-4 form may be collected at anytime during the sampling event.
Plant: HEN
Event: HEN-23Q3 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
					Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L)		
34	HEN_34	8/25/2023	10:53	See transducer reading	21615509	y	440.58	y	h	Replaced battery 8/25/23	CT
35	HEN_35	8/24/2023	9:30	See transducer reading	21615510	y	447.64	y	h		CT
46	HEN_46	8/23/2023	8:10	See transducer reading	21615491	y	448.28	y	h		AB
47	HEN_47	8/23/2023	14:55	See transducer reading	21615505	y	447.94	y	h		AB
49	HEN_49	8/25/2023	9:25	19.65	21615490	y	N/A	n	h	Replaced battery, issues connecting to hobo link, manually gauged well.	AB
50	HEN_50	8/25/2023	10:55	See transducer reading	21615489	y	-0.03	y	h		AB
51	HEN_51	8/22/2023	15:00	See transducer reading	21615608	y	447.74	y	h		AB
52	HEN_52	8/24/2023	9:05	See transducer reading	21615145	y	448.12	y	h		AB
54	HEN_54	8/23/2023	13:00	See transducer reading	21615143	y	448.03	y	h		AB
55	HEN_55	8/23/2023	12:55	See transducer reading	21615612	y	corrupted file	y	h	Data was downloaded, data did not save correctly/ corrupt	AB

U: 6/21/23 GKJ

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ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Voelker
Vistra Energy Corp
133 S 4th, Suite 206
Springfield, Illinois 62701

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JOB DESCRIPTION

HEN-23Q3
SDG NUMBER HEN_SUP_000_0 RAD

JOB NUMBER

500-238579-10

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Eurofins Chicago

Job Notes

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Authorized for release by
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Table of Contents

Job ID: 500-238579-10

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-238579-10

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626172:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_25 (500-238579-7), HEN_26 (500-238579-8), HEN_26_MS (500-238579-8[MS]), HEN_26_MSD (500-238579-8[MSD]), (LCS 160-626172/2-A) and (MB 160-626172/1-A).

Method 903.0: Radium-226 batch 626178:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_XPW01_pore (500-238579-36), HEN_XPW01_pore_EB (500-238579-37), HEN_XPW02_pore (500-238579-38), HEN_XPW02_pore_EB (500-238579-39), HEN_XPW03_pore (500-238579-40), HEN_XPW03_pore_EB (500-238579-41), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD).

Method 904.0: Radium-228 prep batch 160-626179:
The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative.
HEN_XPW01_pore (500-238579-36).

Method 904.0: Radium-228 prep batch 160-626179:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_XPW01_pore (500-238579-36), HEN_XPW01_pore_EB (500-238579-37), HEN_XPW02_pore (500-238579-38), HEN_XPW02_pore_EB (500-238579-39), HEN_XPW03_pore (500-238579-40), HEN_XPW03_pore_EB (500-238579-41), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD) .

Method 904.0: Radium-228 prep batch 160-626177:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_25 (500-238579-7), HEN_26 (500-238579-8), HEN_26_MS (500-238579-8[MS]), HEN_26_MSD (500-238579-8[MSD]), (LCS 160-626177/2-A) and (MB 160-626177/1-A).

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

Narrative

Job Narrative
500-238579-14

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

RAD

Method 903.0: Radium-226 batch 626180:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626180/2-A) and (MB 160-626180/1-A).

Method 903.0: Radium-226 batch 626172:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD).

Method 903.0: Radium-226 batch 626178:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_257_FB (500-238579-42), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD).

Method 904.0: Radium-228 prep batch 160-626182:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626182/2-A) and (MB 160-626182/1-A).

Method 904.0: Radium-228 prep batch 160-626179:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_257_FB (500-238579-42), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD).

Method 904.0: Radium-228 prep batch 160-626177:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD).

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

Narrative

Job Narrative
500-238579-16

Receipt

The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

Method 903.0: Radium-226 batch 626180:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626180/2-A) and (MB 160-626180/1-A).

Method 903.0: Radium-226 batch 626172:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD).

Method 903.0: Radium-226 batch 626178:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD).

Method 904.0: Radium-228 prep batch 160-626182:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626182/2-A) and (MB 160-626182/1-A).

Method 904.0: Radium-228 prep batch 160-626179:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD).

Method 904.0: Radium-228 prep batch 160-626177:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD).

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

Narrative

Job Narrative
500-238579-18

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626180:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

applied as the Activity Reference Date.
HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626180/2-A) and (MB 160-626180/1-A).

Method 903.0: Radium-226 batch 626172:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD).

Method 903.0: Radium-226 batch 626178:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD).

Method 904.0: Radium-228 prep batch 160-626182:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_03R (500-238579-53), HEN_03R_MS (500-238579-53[MS]), HEN_03R_MSD (500-238579-53[MSD]), (LCS 160-626182/2-A) and (MB 160-626182/1-A).

Method 904.0: Radium-228 prep batch 160-626179:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_18#S (500-238579-51), HEN_45#S (500-238579-56), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD).

Method 904.0: Radium-228 prep batch 160-626177:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_18&D (500-238579-13), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD).

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

Narrative

Job Narrative
500-238579-2

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626172
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_21R (500-238579-1), HEN_22&D (500-238579-2), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD)

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

Method 903.0: Radium-226 batch 626178
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626178/2-A) and (MB 160-626178/1-A)

Method 904.0: Radium-228 prep batch 160-626179:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626179/2-A) and (MB 160-626179/1-A)

Method 904.0: Radium-228 prep batch 160-626177:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_21R (500-238579-1), HEN_22&D (500-238579-2), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD)

Method PrecSep_0:

Method PrecSep-21:

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

Narrative

Job Narrative
500-238579-21

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626180
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_17-FD (500-238579-60), (LCS 160-626180/2-A), (MB 160-626180/1-A), (500-238579-T-53-A), (500-238579-T-53-B MS) and (500-238579-T-53-C MSD)

Method 903.0: Radium-226 batch 626172
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_12 (500-238579-15), HEN_13 (500-238579-16), HEN_46 (500-238579-18), HEN_47 (500-238579-19), HEN_54 (500-238579-20), HEN_52 (500-238579-25), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD)

Method 903.0: Radium-226 batch 626178

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_16 (500-238579-58), HEN_17 (500-238579-59), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD)

Method 904.0: Radium-228 prep batch 160-626182:

The detection goal was not met for the following sample(s). The samples and batch QC were prepped at full volume. Matrix interferences are suspected because the method blank achieved the detection goal demonstrating acceptable sample preparation and instrument performance. Analytical results are reported with the detection limit achieved.HEN_17-FD (500-238579-60)

Method 904.0: Radium-228 prep batch 160-626182:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_17-FD (500-238579-60), (LCS 160-626182/2-A), (MB 160-626182/1-A), (500-238579-T-53-D), (500-238579-T-53-E MS) and (500-238579-T-53-F MSD)

Method 904.0: Radium-228 prep batch 160-626179:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), HEN_16 (500-238579-58), HEN_17 (500-238579-59), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD)

Method 904.0: Radium-228 prep batch 160-626177:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_12 (500-238579-15), HEN_13 (500-238579-16), HEN_46 (500-238579-18), HEN_47 (500-238579-19), HEN_54 (500-238579-20), HEN_52 (500-238579-25), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD)

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

Narrative

Job Narrative
500-238579-23

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626180
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_17-FD (500-238579-60), (LCS 160-626180/2-A), (MB 160-626180/1-A), (500-238579-T-53-A), (500-238579-T-53-B MS) and (500-238579-T-53-C MSD)

Method 903.0: Radium-226 batch 626172
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_12 (500-238579-15), HEN_13 (500-238579-16), HEN_46 (500-238579-18), HEN_47 (500-238579-19), HEN_54 (500-238579-20), HEN_52 (500-238579-25), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD)

Method 903.0: Radium-226 batch 626178
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), 845_803_FB (500-238579-50), HEN_16 (500-238579-58), HEN_17 (500-238579-59), (LCS 160-626178/2-A), (MB 160-626178/1-A), (500-238579-N-45-A), (500-238579-N-45-B MS) and (500-238579-N-45-C MSD)

Method 904.0: Radium-228 prep batch 160-626182:

The detection goal was not met for the following sample(s). The samples and batch QC were prepped at full volume. Matrix interferences are suspected because the method blank achieved the detection goal demonstrating acceptable sample preparation and instrument performance. Analytical results are reported with the detection limit achieved.HEN_17-FD (500-238579-60)

Method 904.0: Radium-228 prep batch 160-626182:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_17-FD (500-238579-60), (LCS 160-626182/2-A), (MB 160-626182/1-A), (500-238579-T-53-D), (500-238579-T-53-E MS) and (500-238579-T-53-F MSD)

Method 904.0: Radium-228 prep batch 160-626179:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_08&D (500-238579-32), HEN_08_FD (500-238579-34), 845_803_FB (500-238579-50), HEN_16 (500-238579-58), HEN_17 (500-238579-59), (LCS 160-626179/2-A), (MB 160-626179/1-A), (500-238579-N-45-D), (500-238579-N-45-E MS) and (500-238579-N-45-F MSD)

Method 904.0: Radium-228 prep batch 160-626177:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_12 (500-238579-15), HEN_13 (500-238579-16), HEN_46 (500-238579-18), HEN_47 (500-238579-19), HEN_54 (500-238579-20), HEN_52 (500-238579-25), HEN_07 (500-238579-28), HEN_08 (500-238579-30), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD)

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

Narrative

Job Narrative
500-238579-4

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626172

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_21R (500-238579-1), HEN_22&D (500-238579-2), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD)

Method 903.0: Radium-226 batch 626178
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626178/2-A) and (MB 160-626178/1-A)

Method 904.0: Radium-228 prep batch 160-626179:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626179/2-A) and (MB 160-626179/1-A)

Method 904.0: Radium-228 prep batch 160-626177:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_21R (500-238579-1), HEN_22&D (500-238579-2), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD)

Method PrecSep_0:

Method PrecSep-21:

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

Narrative

Job Narrative
500-238579-6

Receipt
The samples were received on 8/23/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 28 coolers at receipt time were 0.1º C, 0.1º C, 0.2º C, 0.3º C, 0.4º C, 0.5º C, 0.6º C, 0.7º C, 0.8º C, 1.0º C, 1.2º C, 1.2º C, 1.3º C, 1.3º C, 1.3º C, 1.6º C, 1.7º C, 1.7º C, 1.7º C, 1.7º C, 2.0º C, 2.0º C, 2.0º C, 2.8º C, 2.9º C, 2.9º C, 3.0º C and 3.7º C.

RAD
Method 903.0: Radium-226 batch 626172
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_21R (500-238579-1), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626172/2-A), (MB 160-626172/1-A), (500-238579-N-8-A), (500-238579-N-8-B MS) and (500-238579-N-8-C MSD)

Method 903.0: Radium-226 batch 626178
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is

Job ID: 500-238579-10 (Continued)

Laboratory: Eurofins Chicago (Continued)

sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626178/2-A) and (MB 160-626178/1-A)

Method 904.0: Radium-228 prep batch 160-626179:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_34 (500-238579-44), HEN_49 (500-238579-45), HEN_49_MS (500-238579-45[MS]), HEN_49_MSD (500-238579-45[MSD]), HEN_22 (500-238579-46), HEN_50 (500-238579-47), (LCS 160-626179/2-A) and (MB 160-626179/1-A)

Method 904.0: Radium-228 prep batch 160-626177:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. HEN_21R (500-238579-1), HEN_23 (500-238579-3), HEN_23_FD (500-238579-4), HEN_32 (500-238579-5), HEN_51 (500-238579-6), HEN_27 (500-238579-26), HEN_35 (500-238579-27), (LCS 160-626177/2-A), (MB 160-626177/1-A), (500-238579-N-8-D), (500-238579-N-8-E MS) and (500-238579-N-8-F MSD)

Method PrecSep_0:

Method PrecSep-21:

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

Method Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

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

Protocol References:

EPA = US Environmental Protection Agency

None = None

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

Laboratory References:

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

Sample Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-238579-1	HEN_21R	Water	08/22/23 13:45	08/23/23 10:00
500-238579-2	HEN_22&D	Water	08/22/23 09:10	08/23/23 10:00
500-238579-3	HEN_23	Water	08/22/23 11:20	08/23/23 10:00
500-238579-4	HEN_23_FD	Water	08/22/23 11:20	08/23/23 10:00
500-238579-5	HEN_32	Water	08/22/23 11:15	08/23/23 10:00
500-238579-6	HEN_51	Water	08/22/23 15:56	08/23/23 10:00
500-238579-7	HEN_25	Water	08/22/23 14:30	08/23/23 10:00
500-238579-8	HEN_26	Water	08/22/23 15:35	08/23/23 10:00
500-238579-13	HEN_18&D	Water	08/23/23 14:05	08/24/23 09:38
500-238579-15	HEN_12	Water	08/23/23 10:10	08/24/23 09:38
500-238579-16	HEN_13	Water	08/23/23 11:25	08/24/23 09:38
500-238579-18	HEN_46	Water	08/23/23 08:55	08/24/23 09:38
500-238579-19	HEN_47	Water	08/23/23 15:30	08/24/23 09:38
500-238579-20	HEN_54	Water	08/23/23 13:50	08/24/23 09:38
500-238579-25	HEN_52	Water	08/24/23 09:40	08/25/23 09:32
500-238579-26	HEN_27	Water	08/24/23 09:00	08/25/23 09:32
500-238579-27	HEN_35	Water	08/24/23 10:10	08/25/23 09:32
500-238579-28	HEN_07	Water	08/24/23 14:00	08/25/23 09:32
500-238579-30	HEN_08	Water	08/24/23 15:10	08/25/23 09:32
500-238579-32	HEN_08&D	Water	08/24/23 12:25	08/25/23 09:32
500-238579-34	HEN_08_FD	Water	08/24/23 15:10	08/25/23 09:32
500-238579-36	HEN_XPW01_pore	Water	08/24/23 12:15	08/25/23 09:32
500-238579-37	HEN_XPW01_pore_EB	Water	08/24/23 12:15	08/25/23 09:32
500-238579-38	HEN_XPW02_pore	Water	08/24/23 13:45	08/25/23 09:32
500-238579-39	HEN_XPW02_pore_EB	Water	08/24/23 13:45	08/25/23 09:32
500-238579-40	HEN_XPW03_pore	Water	08/24/23 15:30	08/25/23 09:32
500-238579-41	HEN_XPW03_pore_EB	Water	08/24/23 15:30	08/25/23 09:32
500-238579-42	HEN_257_FB	Water	08/25/23 12:00	08/25/23 15:00
500-238579-44	HEN_34	Water	08/25/23 11:25	08/25/23 15:00
500-238579-45	HEN_49	Water	08/25/23 10:05	08/25/23 15:00
500-238579-46	HEN_22	Water	08/25/23 08:50	08/25/23 15:00
500-238579-47	HEN_50	Water	08/25/23 11:25	08/25/23 15:00
500-238579-50	845_803_FB	Water	08/28/23 12:00	08/28/23 15:00
500-238579-51	HEN_18#S	Water	08/28/23 08:35	08/28/23 15:00
500-238579-53	HEN_03R	Water	08/28/23 09:45	08/28/23 15:00
500-238579-56	HEN_45#S	Water	08/28/23 11:15	08/28/23 15:00
500-238579-58	HEN_16	Water	08/28/23 08:35	08/28/23 15:00
500-238579-59	HEN_17	Water	08/28/23 09:40	08/28/23 15:00
500-238579-60	HEN_17-FD	Water	08/28/23 09:40	08/28/23 15:00

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_21R

Date Collected: 08/22/23 13:45
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-1

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.614**		0.187	0.195	1.00	0.167	pCi/L	08/31/23 10:39	09/25/23 09:27	1
Radium-226	**0.614**		0.187	0.195	1.00	0.167	pCi/L	08/31/23 10:39	09/25/23 09:27	1
Radium-226	**0.614**		0.187	0.195	1.00	0.167	pCi/L	08/31/23 10:39	09/25/23 09:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:27*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:27*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:27*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.209	U	0.489	0.489	1.00	0.855	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.209	U	0.489	0.489	1.00	0.855	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.209	U	0.489	0.489	1.00	0.855	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.823	U	0.524	0.526	5.00	0.855	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.823	U	0.524	0.526	5.00	0.855	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.823	U	0.524	0.526	5.00	0.855	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_22&D

Date Collected: 08/22/23 09:10
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-2

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.710**		0.165	0.177	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:28	1
Radium-226	**0.710**		0.165	0.177	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:28*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:28*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.548	U	0.400	0.404	1.00	0.611	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.548	U	0.400	0.404	1.00	0.611	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**1.26**		0.433	0.441	5.00	0.611	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**1.26**		0.433	0.441	5.00	0.611	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_23

Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-3

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0778	U	0.0660	0.0664	1.00	0.0940	pCi/L	08/31/23 10:39	09/25/23 09:28	1
Radium-226	0.0778	U	0.0660	0.0664	1.00	0.0940	pCi/L	08/31/23 10:39	09/25/23 09:28	1
Radium-226	0.0778	U	0.0660	0.0664	1.00	0.0940	pCi/L	08/31/23 10:39	09/25/23 09:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:28*	*1*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:28*	*1*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:28*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.177	U	0.379	0.379	1.00	0.658	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.177	U	0.379	0.379	1.00	0.658	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.177	U	0.379	0.379	1.00	0.658	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*96.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.255	U	0.385	0.385	5.00	0.658	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.255	U	0.385	0.385	5.00	0.658	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.255	U	0.385	0.385	5.00	0.658	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_23_FD

Date Collected: 08/22/23 11:20
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-4

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0729	U	0.0738	0.0741	1.00	0.115	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	0.0729	U	0.0738	0.0741	1.00	0.115	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	0.0729	U	0.0738	0.0741	1.00	0.115	pCi/L	08/31/23 10:39	09/25/23 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.118	U	0.314	0.314	1.00	0.558	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.118	U	0.314	0.314	1.00	0.558	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.118	U	0.314	0.314	1.00	0.558	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*94.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*80.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*80.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*80.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.191	U	0.323	0.323	5.00	0.558	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.191	U	0.323	0.323	5.00	0.558	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.191	U	0.323	0.323	5.00	0.558	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_32

Date Collected: 08/22/23 11:15
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-5

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0898	U	0.0943	0.0947	1.00	0.151	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	0.0898	U	0.0943	0.0947	1.00	0.151	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	0.0898	U	0.0943	0.0947	1.00	0.151	pCi/L	08/31/23 10:39	09/25/23 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.225	U	0.373	0.373	1.00	0.636	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.225	U	0.373	0.373	1.00	0.636	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.225	U	0.373	0.373	1.00	0.636	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*78.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.315	U	0.385	0.385	5.00	0.636	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.315	U	0.385	0.385	5.00	0.636	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.315	U	0.385	0.385	5.00	0.636	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_51

Date Collected: 08/22/23 15:56
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-6

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.712**		0.206	0.216	1.00	0.192	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	**0.712**		0.206	0.216	1.00	0.192	pCi/L	08/31/23 10:39	09/25/23 09:34	1
Radium-226	**0.712**		0.206	0.216	1.00	0.192	pCi/L	08/31/23 10:39	09/25/23 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.445	0.446	1.00	0.746	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.323	U	0.445	0.446	1.00	0.746	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.323	U	0.445	0.446	1.00	0.746	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**1.03**		0.490	0.496	5.00	0.746	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**1.03**		0.490	0.496	5.00	0.746	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**1.03**		0.490	0.496	5.00	0.746	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_25

Date Collected: 08/22/23 14:30
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-7

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124	U	0.0917	0.0924	1.00	0.132	pCi/L	08/31/23 10:39	09/25/23 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0383	U	0.333	0.333	1.00	0.610	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*79.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.162	U	0.345	0.346	5.00	0.610	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_26

Date Collected: 08/22/23 15:35
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-8

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.306**		0.132	0.134	1.00	0.159	pCi/L	08/31/23 10:39	09/25/23 09:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:34*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.320	U	0.304	0.306	1.00	0.654	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.306	U	0.331	0.334	5.00	0.654	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_18&D

Date Collected: 08/23/23 14:05
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-13

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.141**		0.0860	0.0870	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:35	1
Radium-226	**0.141**		0.0860	0.0870	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:35	1
Radium-226	**0.141**		0.0860	0.0870	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.208	U	0.357	0.357	1.00	0.611	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.208	U	0.357	0.357	1.00	0.611	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.208	U	0.357	0.357	1.00	0.611	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*80.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*80.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*80.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.349	U	0.367	0.367	5.00	0.611	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.349	U	0.367	0.367	5.00	0.611	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.349	U	0.367	0.367	5.00	0.611	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_12

Date Collected: 08/23/23 10:10
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-15

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0183	U	0.0574	0.0574	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:35	1
Radium-226	0.0183	U	0.0574	0.0574	1.00	0.110	pCi/L	08/31/23 10:39	09/25/23 09:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*
Ba Carrier	*95.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.273	U	0.439	0.440	1.00	0.743	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.273	U	0.439	0.440	1.00	0.743	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*95.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*80.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*80.0*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.291	U	0.443	0.444	5.00	0.743	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.291	U	0.443	0.444	5.00	0.743	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_13

Date Collected: 08/23/23 11:25
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-16

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0389	U	0.0708	0.0709	1.00	0.126	pCi/L	08/31/23 10:39	09/25/23 09:35	1
Radium-226	0.0389	U	0.0708	0.0709	1.00	0.126	pCi/L	08/31/23 10:39	09/25/23 09:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.4*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*
Ba Carrier	*85.4*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0984	U	0.357	0.357	1.00	0.643	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.0984	U	0.357	0.357	1.00	0.643	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*85.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.137	U	0.364	0.364	5.00	0.643	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.137	U	0.364	0.364	5.00	0.643	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_46

Date Collected: 08/23/23 08:55
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-18

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0922	U	0.0796	0.0800	1.00	0.118	pCi/L	08/31/23 10:39	09/25/23 09:35	1
Radium-226	0.0922	U	0.0796	0.0800	1.00	0.118	pCi/L	08/31/23 10:39	09/25/23 09:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:35*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.462	U	0.366	0.368	1.00	0.563	pCi/L	08/31/23 10:56	09/19/23 12:23	1
Radium-228	0.462	U	0.366	0.368	1.00	0.563	pCi/L	08/31/23 10:56	09/19/23 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Ba Carrier	*90.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*80.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*
Y Carrier	*80.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:23*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.554	U	0.375	0.377	5.00	0.563	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.554	U	0.375	0.377	5.00	0.563	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_47

Date Collected: 08/23/23 15:30
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-19

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.125	U	0.0906	0.0913	1.00	0.129	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	0.125	U	0.0906	0.0913	1.00	0.129	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0500	U	0.314	0.314	1.00	0.578	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.0500	U	0.314	0.314	1.00	0.578	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.175	U	0.327	0.327	5.00	0.578	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.175	U	0.327	0.327	5.00	0.578	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_54

Date Collected: 08/23/23 13:50
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-20

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.161**		0.112	0.113	1.00	0.160	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.161**		0.112	0.113	1.00	0.160	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*91.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0451	U	0.356	0.356	1.00	0.649	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.0451	U	0.356	0.356	1.00	0.649	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*91.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.206	U	0.373	0.374	5.00	0.649	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.206	U	0.373	0.374	5.00	0.649	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_52

Date Collected: 08/24/23 09:40
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-25

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.143**		0.0996	0.100	1.00	0.143	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.143**		0.0996	0.100	1.00	0.143	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.336	U	0.377	0.379	1.00	0.616	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.336	U	0.377	0.379	1.00	0.616	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*89.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*74.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*74.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.479	U	0.390	0.392	5.00	0.616	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.479	U	0.390	0.392	5.00	0.616	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_27

Date Collected: 08/24/23 09:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-26

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131	U	0.0948	0.0956	1.00	0.137	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	0.131	U	0.0948	0.0956	1.00	0.137	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	0.131	U	0.0948	0.0956	1.00	0.137	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0486	U	0.306	0.306	1.00	0.589	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.0486	U	0.306	0.306	1.00	0.589	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.0486	U	0.306	0.306	1.00	0.589	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*95.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*79.3*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.131	U	0.320	0.321	5.00	0.589	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.131	U	0.320	0.321	5.00	0.589	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.131	U	0.320	0.321	5.00	0.589	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_35

Date Collected: 08/24/23 10:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-27

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0626	U	0.0710	0.0712	1.00	0.114	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	0.0626	U	0.0710	0.0712	1.00	0.114	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	0.0626	U	0.0710	0.0712	1.00	0.114	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.369	0.370	1.00	0.626	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.235	U	0.369	0.370	1.00	0.626	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.235	U	0.369	0.370	1.00	0.626	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.297	U	0.376	0.377	5.00	0.626	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.297	U	0.376	0.377	5.00	0.626	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.297	U	0.376	0.377	5.00	0.626	pCi/L		09/27/23 15:51	1

Client Sample Results

Client Sample ID: HEN_07

Lab Sample ID: 500-238579-28

Date Collected: 08/24/23 14:00
Date Received: 08/25/23 09:32
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.311**		0.119	0.122	1.00	0.121	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.311**		0.119	0.122	1.00	0.121	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.311**		0.119	0.122	1.00	0.121	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.311**		0.119	0.122	1.00	0.121	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.311**		0.119	0.122	1.00	0.121	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.170	U	0.371	0.371	1.00	0.647	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.170	U	0.371	0.371	1.00	0.647	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.170	U	0.371	0.371	1.00	0.647	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.170	U	0.371	0.371	1.00	0.647	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	0.170	U	0.371	0.371	1.00	0.647	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*88.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*77.4*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.481	U	0.390	0.391	5.00	0.647	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.481	U	0.390	0.391	5.00	0.647	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.481	U	0.390	0.391	5.00	0.647	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.481	U	0.390	0.391	5.00	0.647	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.481	U	0.390	0.391	5.00	0.647	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_08

Date Collected: 08/24/23 15:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-30
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.241**		0.108	0.110	1.00	0.125	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.241**		0.108	0.110	1.00	0.125	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.241**		0.108	0.110	1.00	0.125	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.241**		0.108	0.110	1.00	0.125	pCi/L	08/31/23 10:39	09/25/23 09:36	1
Radium-226	**0.241**		0.108	0.110	1.00	0.125	pCi/L	08/31/23 10:39	09/25/23 09:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:36*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.128	U	0.280	0.280	1.00	0.572	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.128	U	0.280	0.280	1.00	0.572	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.128	U	0.280	0.280	1.00	0.572	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.128	U	0.280	0.280	1.00	0.572	pCi/L	08/31/23 10:56	09/19/23 12:24	1
Radium-228	-0.128	U	0.280	0.280	1.00	0.572	pCi/L	08/31/23 10:56	09/19/23 12:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.241	U	0.300	0.301	5.00	0.572	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.241	U	0.300	0.301	5.00	0.572	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.241	U	0.300	0.301	5.00	0.572	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.241	U	0.300	0.301	5.00	0.572	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.241	U	0.300	0.301	5.00	0.572	pCi/L		09/27/23 15:51	1

Client Sample ID: HEN_08&D

Date Collected: 08/24/23 12:25
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-32

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.162**		0.107	0.108	1.00	0.145	pCi/L	08/31/23 10:58	09/22/23 18:49	1
Radium-226	**0.162**		0.107	0.108	1.00	0.145	pCi/L	08/31/23 10:58	09/22/23 18:49	1
Radium-226	**0.162**		0.107	0.108	1.00	0.145	pCi/L	08/31/23 10:58	09/22/23 18:49	1
Radium-226	**0.162**		0.107	0.108	1.00	0.145	pCi/L	08/31/23 10:58	09/22/23 18:49	1
Radium-226	**0.162**		0.107	0.108	1.00	0.145	pCi/L	08/31/23 10:58	09/22/23 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:49*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:49*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:49*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:49*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:49*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.411	U	0.348	0.350	1.00	0.543	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.411	U	0.348	0.350	1.00	0.543	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.411	U	0.348	0.350	1.00	0.543	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.411	U	0.348	0.350	1.00	0.543	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.411	U	0.348	0.350	1.00	0.543	pCi/L	08/31/23 11:08	09/19/23 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**0.573**		0.364	0.366	5.00	0.543	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.573**		0.364	0.366	5.00	0.543	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.573**		0.364	0.366	5.00	0.543	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.573**		0.364	0.366	5.00	0.543	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.573**		0.364	0.366	5.00	0.543	pCi/L		09/27/23 15:51	1

Client Sample ID: HEN_08_FD

Lab Sample ID: 500-238579-34

Date Collected: 08/24/23 15:10

Matrix: Water

Date Received: 08/25/23 09:32

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.434**		0.153	0.158	1.00	0.148	pCi/L	08/31/23 10:58	09/22/23 18:50	1
Radium-226	**0.434**		0.153	0.158	1.00	0.148	pCi/L	08/31/23 10:58	09/22/23 18:50	1
Radium-226	**0.434**		0.153	0.158	1.00	0.148	pCi/L	08/31/23 10:58	09/22/23 18:50	1
Radium-226	**0.434**		0.153	0.158	1.00	0.148	pCi/L	08/31/23 10:58	09/22/23 18:50	1
Radium-226	**0.434**		0.153	0.158	1.00	0.148	pCi/L	08/31/23 10:58	09/22/23 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.470	U	0.399	0.401	1.00	0.629	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.470	U	0.399	0.401	1.00	0.629	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.470	U	0.399	0.401	1.00	0.629	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.470	U	0.399	0.401	1.00	0.629	pCi/L	08/31/23 11:08	09/19/23 12:11	1
Radium-228	0.470	U	0.399	0.401	1.00	0.629	pCi/L	08/31/23 11:08	09/19/23 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Ba Carrier	*91.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**0.904**		0.427	0.431	5.00	0.629	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.904**		0.427	0.431	5.00	0.629	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.904**		0.427	0.431	5.00	0.629	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.904**		0.427	0.431	5.00	0.629	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.904**		0.427	0.431	5.00	0.629	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW01_pore

Lab Sample ID: 500-238579-36

Date Collected: 08/24/23 12:15
Date Received: 08/25/23 09:32

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.104	U	0.299	0.299	1.00	0.558	pCi/L	08/31/23 10:58	09/22/23 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*30.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.40	U G	1.38	1.39	1.00	2.22	pCi/L	08/31/23 11:08	09/19/23 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*30.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*85.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.51	U	1.41	1.42	5.00	2.22	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW01_pore_EB

Lab Sample ID: 500-238579-37

Date Collected: 08/24/23 12:15
Matrix: Water
Date Received: 08/25/23 09:32

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00189	U	0.0740	0.0740	1.00	0.149	pCi/L	08/31/23 10:58	09/22/23 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00858	U	0.262	0.262	1.00	0.498	pCi/L	08/31/23 11:08	09/19/23 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*
Y Carrier	*87.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:11*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.00189	U	0.272	0.272	5.00	0.498	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW02_pore

Lab Sample ID: 500-238579-38

Date Collected: 08/24/23 13:45
Matrix: Water
Date Received: 08/25/23 09:32

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131	U	0.144	0.144	1.00	0.232	pCi/L	08/31/23 10:58	09/22/23 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.293	U	0.399	0.400	1.00	0.670	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*83.7*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.424	U	0.424	0.425	5.00	0.670	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW02_pore_EB

Lab Sample ID: 500-238579-39

Date Collected: 08/24/23 13:45
Matrix: Water
Date Received: 08/25/23 09:32

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.188		0.119	0.120	1.00	0.161	pCi/L	08/31/23 10:58	09/22/23 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 10:58*	*09/22/23 18:50*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.257	U	0.283	0.284	1.00	0.600	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.188	U	0.307	0.308	5.00	0.600	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW03_pore

Lab Sample ID: 500-238579-40

Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0406	U	0.0691	0.0692	1.00	0.119	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.376	U	0.399	0.401	1.00	0.650	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*81.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.417	U	0.405	0.407	5.00	0.650	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW03_pore_EB

Lab Sample ID: 500-238579-41

Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32
Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0195	U	0.0635	0.0636	1.00	0.114	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.5*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.187	U	0.374	0.375	1.00	0.645	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*81.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.207	U	0.379	0.380	5.00	0.645	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_257_FB

Lab Sample ID: 500-238579-42

Date Collected: 08/25/23 12:00
Date Received: 08/25/23 15:00

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0356	U	0.0546	0.0547	1.00	0.0932	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.202	U	0.296	0.297	1.00	0.501	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.238	U	0.301	0.302	5.00	0.501	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_34

Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-44

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.324**		0.0935	0.0980	1.00	0.0946	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	**0.324**		0.0935	0.0980	1.00	0.0946	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	**0.324**		0.0935	0.0980	1.00	0.0946	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.499	U	0.371	0.374	1.00	0.569	pCi/L	08/31/23 11:08	09/19/23 12:13	1
Radium-228	0.499	U	0.371	0.374	1.00	0.569	pCi/L	08/31/23 11:08	09/19/23 12:13	1
Radium-228	0.499	U	0.371	0.374	1.00	0.569	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Ba Carrier	*99.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*82.6*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**0.823**		0.383	0.387	5.00	0.569	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.823**		0.383	0.387	5.00	0.569	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.823**		0.383	0.387	5.00	0.569	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_49

Date Collected: 08/25/23 10:05
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-45

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.235		0.0893	0.0918	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	0.235		0.0893	0.0918	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	0.235		0.0893	0.0918	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.558		0.363	0.366	1.00	0.535	pCi/L	08/31/23 11:08	09/19/23 12:13	1
Radium-228	0.558		0.363	0.366	1.00	0.535	pCi/L	08/31/23 11:08	09/19/23 12:13	1
Radium-228	0.558		0.363	0.366	1.00	0.535	pCi/L	08/31/23 11:08	09/19/23 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Ba Carrier	*91.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*84.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*84.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*
Y Carrier	*84.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:13*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.793		0.374	0.377	5.00	0.535	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.793		0.374	0.377	5.00	0.535	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.793		0.374	0.377	5.00	0.535	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_22

Date Collected: 08/25/23 08:50
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-46

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0944	U	0.0710	0.0715	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	0.0944	U	0.0710	0.0715	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1
Radium-226	0.0944	U	0.0710	0.0715	1.00	0.107	pCi/L	08/31/23 10:58	09/22/23 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 10:58*	*09/22/23 21:06*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.238	U	0.297	0.297	1.00	0.492	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.238	U	0.297	0.297	1.00	0.492	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.238	U	0.297	0.297	1.00	0.492	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*96.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*86.7*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*86.7*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*86.7*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.333	U	0.305	0.305	5.00	0.492	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.333	U	0.305	0.305	5.00	0.492	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.333	U	0.305	0.305	5.00	0.492	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_50

Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-47

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.289**		0.107	0.110	1.00	0.100	pCi/L	08/31/23 10:58	09/25/23 09:25	1
Radium-226	**0.289**		0.107	0.110	1.00	0.100	pCi/L	08/31/23 10:58	09/25/23 09:25	1
Radium-226	**0.289**		0.107	0.110	1.00	0.100	pCi/L	08/31/23 10:58	09/25/23 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.463	U	0.355	0.357	1.00	0.545	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.463	U	0.355	0.357	1.00	0.545	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.463	U	0.355	0.357	1.00	0.545	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*95.0*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*84.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*84.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*84.1*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	**0.752**		0.371	0.374	5.00	0.545	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.752**		0.371	0.374	5.00	0.545	pCi/L		09/27/23 15:51	1
Radium 226 and 228	**0.752**		0.371	0.374	5.00	0.545	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: 845_803_FB

Date Collected: 08/28/23 12:00
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-50

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00967	U	0.0532	0.0532	1.00	0.107	pCi/L	08/31/23 10:58	09/25/23 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0520	U	0.256	0.256	1.00	0.504	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*83.7*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.00967	U	0.261	0.261	5.00	0.504	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_18#S

Date Collected: 08/28/23 08:35
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-51

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000	U	0.0558	0.0558	1.00	0.117	pCi/L	08/31/23 10:58	09/25/23 09:25	1
Radium-226	0.000	U	0.0558	0.0558	1.00	0.117	pCi/L	08/31/23 10:58	09/25/23 09:25	1
Radium-226	0.000	U	0.0558	0.0558	1.00	0.117	pCi/L	08/31/23 10:58	09/25/23 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:25*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.245	U	0.311	0.312	1.00	0.517	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.245	U	0.311	0.312	1.00	0.517	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.245	U	0.311	0.312	1.00	0.517	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*93.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.245	U	0.316	0.317	5.00	0.517	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.245	U	0.316	0.317	5.00	0.517	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.245	U	0.316	0.317	5.00	0.517	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_03R

Date Collected: 08/28/23 09:45
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-53

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0552	U	0.0678	0.0680	1.00	0.111	pCi/L	08/31/23 11:10	09/25/23 09:22	1
Radium-226	0.0552	U	0.0678	0.0680	1.00	0.111	pCi/L	08/31/23 11:10	09/25/23 09:22	1
Radium-226	0.0552	U	0.0678	0.0680	1.00	0.111	pCi/L	08/31/23 11:10	09/25/23 09:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:10*	*09/25/23 09:22*	*1*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:10*	*09/25/23 09:22*	*1*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:10*	*09/25/23 09:22*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.414	U	0.360	0.362	1.00	0.821	pCi/L	08/31/23 11:15	09/18/23 15:35	1
Radium-228	-0.414	U	0.360	0.362	1.00	0.821	pCi/L	08/31/23 11:15	09/18/23 15:35	1
Radium-228	-0.414	U	0.360	0.362	1.00	0.821	pCi/L	08/31/23 11:15	09/18/23 15:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Ba Carrier	*89.3*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Y Carrier	*84.5*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Y Carrier	*84.5*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Y Carrier	*84.5*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.0552	U	0.366	0.368	5.00	0.821	pCi/L		09/26/23 15:38	1
Radium 226 and 228	0.0552	U	0.366	0.368	5.00	0.821	pCi/L		09/26/23 15:38	1
Radium 226 and 228	0.0552	U	0.366	0.368	5.00	0.821	pCi/L		09/26/23 15:38	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_45#S

Date Collected: 08/28/23 11:15
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-56

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.226**		0.117	0.119	1.00	0.133	pCi/L	08/31/23 10:58	09/25/23 09:28	1
Radium-226	**0.226**		0.117	0.119	1.00	0.133	pCi/L	08/31/23 10:58	09/25/23 09:28	1
Radium-226	**0.226**		0.117	0.119	1.00	0.133	pCi/L	08/31/23 10:58	09/25/23 09:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.297	U	0.409	0.410	1.00	0.687	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.297	U	0.409	0.410	1.00	0.687	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.297	U	0.409	0.410	1.00	0.687	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*81.9*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.522	U	0.425	0.427	5.00	0.687	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.522	U	0.425	0.427	5.00	0.687	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.522	U	0.425	0.427	5.00	0.687	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_16

Date Collected: 08/28/23 08:35
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-58

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0461	U	0.0589	0.0591	1.00	0.0975	pCi/L	08/31/23 10:58	09/25/23 09:28	1
Radium-226	0.0461	U	0.0589	0.0591	1.00	0.0975	pCi/L	08/31/23 10:58	09/25/23 09:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.460	U	0.343	0.345	1.00	0.522	pCi/L	08/31/23 11:08	09/19/23 12:17	1
Radium-228	0.460	U	0.343	0.345	1.00	0.522	pCi/L	08/31/23 11:08	09/19/23 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:17*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.506	U	0.348	0.350	5.00	0.522	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.506	U	0.348	0.350	5.00	0.522	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_17

Date Collected: 08/28/23 09:40
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-59

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0741	U	0.0682	0.0685	1.00	0.101	pCi/L	08/31/23 10:58	09/25/23 09:28	1
Radium-226	0.0741	U	0.0682	0.0685	1.00	0.101	pCi/L	08/31/23 10:58	09/25/23 09:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 10:58*	*09/25/23 09:28*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.136	U	0.327	0.327	1.00	0.574	pCi/L	08/31/23 11:08	09/19/23 12:18	1
Radium-228	0.136	U	0.327	0.327	1.00	0.574	pCi/L	08/31/23 11:08	09/19/23 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:18*	*1*
Ba Carrier	*93.5*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:18*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:18*	*1*
Y Carrier	*83.4*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:18*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.210	U	0.334	0.334	5.00	0.574	pCi/L		09/27/23 15:51	1
Radium 226 and 228	0.210	U	0.334	0.334	5.00	0.574	pCi/L		09/27/23 15:51	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_17-FD

Date Collected: 08/28/23 09:40
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-60

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0774	U	0.0770	0.0773	1.00	0.121	pCi/L	08/31/23 11:10	09/25/23 09:22	1
Radium-226	0.0774	U	0.0770	0.0773	1.00	0.121	pCi/L	08/31/23 11:10	09/25/23 09:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.1*		*30 - 110*	*08/31/23 11:10*	*09/25/23 09:22*	*1*
Ba Carrier	*91.1*		*30 - 110*	*08/31/23 11:10*	*09/25/23 09:22*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.809	U G	0.691	0.695	1.00	1.09	pCi/L	08/31/23 11:15	09/18/23 15:35	1
Radium-228	0.809	U G	0.691	0.695	1.00	1.09	pCi/L	08/31/23 11:15	09/18/23 15:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.1*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Ba Carrier	*91.1*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Y Carrier	*77.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*
Y Carrier	*77.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 15:35*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.886	U	0.695	0.699	5.00	1.09	pCi/L		09/26/23 15:38	1
Radium 226 and 228	0.886	U	0.695	0.699	5.00	1.09	pCi/L		09/26/23 15:38	1

Definitions/Glossary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Rad

Prep Batch: 626172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	PrecSep-21	
500-238579-2	HEN_22&D	Total/NA	Water	PrecSep-21	
500-238579-3	HEN_23	Total/NA	Water	PrecSep-21	
500-238579-4	HEN_23_FD	Total/NA	Water	PrecSep-21	
500-238579-5	HEN_32	Total/NA	Water	PrecSep-21	
500-238579-6	HEN_51	Total/NA	Water	PrecSep-21	
500-238579-7	HEN_25	Total/NA	Water	PrecSep-21	
500-238579-8	HEN_26	Total/NA	Water	PrecSep-21	
500-238579-13	HEN_18&D	Total/NA	Water	PrecSep-21	
500-238579-15	HEN_12	Total/NA	Water	PrecSep-21	
500-238579-16	HEN_13	Total/NA	Water	PrecSep-21	
500-238579-18	HEN_46	Total/NA	Water	PrecSep-21	
500-238579-19	HEN_47	Total/NA	Water	PrecSep-21	
500-238579-20	HEN_54	Total/NA	Water	PrecSep-21	
500-238579-25	HEN_52	Total/NA	Water	PrecSep-21	
500-238579-26	HEN_27	Total/NA	Water	PrecSep-21	
500-238579-27	HEN_35	Total/NA	Water	PrecSep-21	
500-238579-28	HEN_07	Total/NA	Water	PrecSep-21	
500-238579-30	HEN_08	Total/NA	Water	PrecSep-21	
MB 160-626172/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-626172/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-238579-8 MS	HEN_26_MS	Total/NA	Water	PrecSep-21	
500-238579-8 MSD	HEN_26_MSD	Total/NA	Water	PrecSep-21	

Prep Batch: 626177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-1	HEN_21R	Total/NA	Water	PrecSep_0	
500-238579-2	HEN_22&D	Total/NA	Water	PrecSep_0	
500-238579-3	HEN_23	Total/NA	Water	PrecSep_0	
500-238579-4	HEN_23_FD	Total/NA	Water	PrecSep_0	
500-238579-5	HEN_32	Total/NA	Water	PrecSep_0	
500-238579-6	HEN_51	Total/NA	Water	PrecSep_0	
500-238579-7	HEN_25	Total/NA	Water	PrecSep_0	
500-238579-8	HEN_26	Total/NA	Water	PrecSep_0	
500-238579-13	HEN_18&D	Total/NA	Water	PrecSep_0	
500-238579-15	HEN_12	Total/NA	Water	PrecSep_0	
500-238579-16	HEN_13	Total/NA	Water	PrecSep_0	
500-238579-18	HEN_46	Total/NA	Water	PrecSep_0	
500-238579-19	HEN_47	Total/NA	Water	PrecSep_0	
500-238579-20	HEN_54	Total/NA	Water	PrecSep_0	
500-238579-25	HEN_52	Total/NA	Water	PrecSep_0	
500-238579-26	HEN_27	Total/NA	Water	PrecSep_0	
500-238579-27	HEN_35	Total/NA	Water	PrecSep_0	
500-238579-28	HEN_07	Total/NA	Water	PrecSep_0	
500-238579-30	HEN_08	Total/NA	Water	PrecSep_0	
MB 160-626177/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-626177/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-238579-8 MS	HEN_26_MS	Total/NA	Water	PrecSep_0	
500-238579-8 MSD	HEN_26_MSD	Total/NA	Water	PrecSep_0	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Rad

Prep Batch: 626178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-32	HEN_08&D	Total/NA	Water	PrecSep-21	
500-238579-34	HEN_08_FD	Total/NA	Water	PrecSep-21	
500-238579-36	HEN_XPW01_pore	Total/NA	Water	PrecSep-21	
500-238579-37	HEN_XPW01_pore_EB	Total/NA	Water	PrecSep-21	
500-238579-38	HEN_XPW02_pore	Total/NA	Water	PrecSep-21	
500-238579-39	HEN_XPW02_pore_EB	Total/NA	Water	PrecSep-21	
500-238579-40	HEN_XPW03_pore	Total/NA	Water	PrecSep-21	
500-238579-41	HEN_XPW03_pore_EB	Total/NA	Water	PrecSep-21	
500-238579-42	HEN_257_FB	Total/NA	Water	PrecSep-21	
500-238579-44	HEN_34	Total/NA	Water	PrecSep-21	
500-238579-45	HEN_49	Total/NA	Water	PrecSep-21	
500-238579-46	HEN_22	Total/NA	Water	PrecSep-21	
500-238579-47	HEN_50	Total/NA	Water	PrecSep-21	
500-238579-50	845_803_FB	Total/NA	Water	PrecSep-21	
500-238579-51	HEN_18#S	Total/NA	Water	PrecSep-21	
500-238579-56	HEN_45#S	Total/NA	Water	PrecSep-21	
500-238579-58	HEN_16	Total/NA	Water	PrecSep-21	
500-238579-59	HEN_17	Total/NA	Water	PrecSep-21	
MB 160-626178/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-626178/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	PrecSep-21	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	PrecSep-21	

Prep Batch: 626179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-32	HEN_08&D	Total/NA	Water	PrecSep_0	
500-238579-34	HEN_08_FD	Total/NA	Water	PrecSep_0	
500-238579-36	HEN_XPW01_pore	Total/NA	Water	PrecSep_0	
500-238579-37	HEN_XPW01_pore_EB	Total/NA	Water	PrecSep_0	
500-238579-38	HEN_XPW02_pore	Total/NA	Water	PrecSep_0	
500-238579-39	HEN_XPW02_pore_EB	Total/NA	Water	PrecSep_0	
500-238579-40	HEN_XPW03_pore	Total/NA	Water	PrecSep_0	
500-238579-41	HEN_XPW03_pore_EB	Total/NA	Water	PrecSep_0	
500-238579-42	HEN_257_FB	Total/NA	Water	PrecSep_0	
500-238579-44	HEN_34	Total/NA	Water	PrecSep_0	
500-238579-45	HEN_49	Total/NA	Water	PrecSep_0	
500-238579-46	HEN_22	Total/NA	Water	PrecSep_0	
500-238579-47	HEN_50	Total/NA	Water	PrecSep_0	
500-238579-50	845_803_FB	Total/NA	Water	PrecSep_0	
500-238579-51	HEN_18#S	Total/NA	Water	PrecSep_0	
500-238579-56	HEN_45#S	Total/NA	Water	PrecSep_0	
500-238579-58	HEN_16	Total/NA	Water	PrecSep_0	
500-238579-59	HEN_17	Total/NA	Water	PrecSep_0	
MB 160-626179/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-626179/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-238579-45 MS	HEN_49_MS	Total/NA	Water	PrecSep_0	
500-238579-45 MSD	HEN_49_MSD	Total/NA	Water	PrecSep_0	

Prep Batch: 626180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-53	HEN_03R	Total/NA	Water	PrecSep-21	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Rad (Continued)

Prep Batch: 626180 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-60	HEN_17-FD	Total/NA	Water	PrecSep-21	
MB 160-626180/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-626180/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-238579-53 MS	HEN_03R_MS	Total/NA	Water	PrecSep-21	
500-238579-53 MSD	HEN_03R_MSD	Total/NA	Water	PrecSep-21	

Prep Batch: 626182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-53	HEN_03R	Total/NA	Water	PrecSep_0	
500-238579-60	HEN_17-FD	Total/NA	Water	PrecSep_0	
MB 160-626182/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-626182/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-238579-53 MS	HEN_03R_MS	Total/NA	Water	PrecSep_0	
500-238579-53 MSD	HEN_03R_MSD	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-626172/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629490 — **Prep Batch: 626172**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03516	U	0.0558	0.0559	1.00	0.0976	pCi/L	08/31/23 10:39	09/25/23 09:27	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.8*		*30 - 110*	*08/31/23 10:39*	*09/25/23 09:27*	*1*

Lab Sample ID: LCS 160-626172/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629490 — **Prep Batch: 626172**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.33		1.10	1.00	0.102	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*93.1*		*30 - 110*

Lab Sample ID: 500-238579-8 MS — **Client Sample ID: HEN_26_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629491 — **Prep Batch: 626172**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.306		11.3	10.96		1.17	1.00	0.112	pCi/L	95	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*84.4*		*30 - 110*

Lab Sample ID: 500-238579-8 MSD — **Client Sample ID: HEN_26_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629491 — **Prep Batch: 626172**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.306		11.4	10.84		1.16	1.00	0.121	pCi/L	92	60 - 140	0.05	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*88.3*		*30 - 110*

Lab Sample ID: MB 160-626178/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629278 — **Prep Batch: 626178**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01063	U	0.0857	0.0857	1.00	0.166	pCi/L	08/31/23 10:58	09/22/23 18:49	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-626178/1-A
Matrix: Water
Analysis Batch: 629278

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 626178

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.3		30 - 110	08/31/23 10:58	09/22/23 18:49	1

Lab Sample ID: LCS 160-626178/2-A
Matrix: Water
Analysis Batch: 629278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 626178

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.95		1.19	1.00	0.166	pCi/L	97	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		30 - 110

Lab Sample ID: 500-238579-45 MS
Matrix: Water
Analysis Batch: 629278

Client Sample ID: HEN_49_MS
Prep Type: Total/NA
Prep Batch: 626178

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.235		11.4	11.42		1.13	1.00	0.107	pCi/L	99	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	90.6		30 - 110

Lab Sample ID: 500-238579-45 MSD
Matrix: Water
Analysis Batch: 629278

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA
Prep Batch: 626178

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.235		11.4	10.73		1.08	1.00	0.133	pCi/L	92	60 - 140	0.31	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	87.1		30 - 110

Lab Sample ID: MB 160-626180/1-A
Matrix: Water
Analysis Batch: 629275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 626180

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02184	U	0.0535	0.0535	1.00	0.128	pCi/L	08/31/23 11:10	09/22/23 14:34	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		30 - 110	08/31/23 11:10	09/22/23 14:34	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-626180/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629275 — **Prep Batch: 626180**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.99		1.18	1.00	0.129	pCi/L	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.0*		*30 - 110*

Lab Sample ID: 500-238579-53 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629490 — **Prep Batch: 626180**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.0552	U	11.4	10.03		1.07	1.00	0.110	pCi/L	88	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.3*		*30 - 110*

Lab Sample ID: 500-238579-53 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 629490 — **Prep Batch: 626180**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.0552	U	11.4	10.90		1.15	1.00	0.147	pCi/L	95	60 - 140	0.39	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*94.8*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-626177/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628708 — **Prep Batch: 626177**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5950	U	0.421	0.425	1.00	0.643	pCi/L	08/31/23 10:56	09/19/23 12:22	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.8*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:22*	*1*
Y Carrier	*85.2*		*30 - 110*	*08/31/23 10:56*	*09/19/23 12:22*	*1*

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-626177/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628708 — **Prep Batch: 626177**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.86	8.916		1.27	1.00	0.622	pCi/L	113	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*93.1*		*30 - 110*
Y Carrier	*84.1*		*30 - 110*

Lab Sample ID: 500-238579-8 MS — **Client Sample ID: HEN_26_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628708 — **Prep Batch: 626177**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	-0.320	U	7.81	9.721		1.43	1.00	0.665	pCi/L	124	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*84.4*		*30 - 110*
Y Carrier	*77.0*		*30 - 110*

Lab Sample ID: 500-238579-8 MSD — **Client Sample ID: HEN_26_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628708 — **Prep Batch: 626177**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	-0.320	U	7.91	9.754		1.42	1.00	0.783	pCi/L	123	60 - 140	0.01	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*88.3*		*30 - 110*
Y Carrier	*81.9*		*30 - 110*

Lab Sample ID: MB 160-626179/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628698 — **Prep Batch: 626179**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.09226	U	0.278	0.278	1.00	0.547	pCi/L	08/31/23 11:08	09/19/23 12:10	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:10*	*1*
Y Carrier	*82.2*		*30 - 110*	*08/31/23 11:08*	*09/19/23 12:10*	*1*

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-626179/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628698 — **Prep Batch: 626179**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.86	8.022		1.13	1.00	0.476	pCi/L	102	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*100*		*30 - 110*
Y Carrier	*87.5*		*30 - 110*

Lab Sample ID: 500-238579-45 MS — **Client Sample ID: HEN_49_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628698 — **Prep Batch: 626179**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.558		7.88	8.928		1.30	1.00	0.617	pCi/L	106	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.6*		*30 - 110*
Y Carrier	*79.6*		*30 - 110*

Lab Sample ID: 500-238579-45 MSD — **Client Sample ID: HEN_49_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628698 — **Prep Batch: 626179**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.558		7.91	8.905		1.29	1.00	0.616	pCi/L	105	60 - 140	0.01	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*87.1*		*30 - 110*
Y Carrier	*84.1*		*30 - 110*

Lab Sample ID: MB 160-626182/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628632 — **Prep Batch: 626182**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08319	U	0.303	0.304	1.00	0.545	pCi/L	08/31/23 11:15	09/18/23 12:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:29*	*1*
Y Carrier	*90.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:29*	*1*

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-626182/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628632 — **Prep Batch: 626182**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.87	8.699		1.26	1.00	0.571	pCi/L	111	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.0*		*30 - 110*
Y Carrier	*81.5*		*30 - 110*

Lab Sample ID: 500-238579-53 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628632 — **Prep Batch: 626182**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	-0.414	U	7.89	8.647		1.46	1.00	0.860	pCi/L	110	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.3*		*30 - 110*
Y Carrier	*80.0*		*30 - 110*

Lab Sample ID: 500-238579-53 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 628632 — **Prep Batch: 626182**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	-0.414	U	7.91	8.231		1.33	1.00	0.739	pCi/L	104	60 - 140	0.15	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*94.8*		*30 - 110*
Y Carrier	*89.3*		*30 - 110*

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_21R
Lab Sample ID: 500-238579-1
Date Collected: 08/22/23 13:45
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:27
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_22&D
Lab Sample ID: 500-238579-2
Date Collected: 08/22/23 09:10
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:28
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_23
Lab Sample ID: 500-238579-3
Date Collected: 08/22/23 11:20
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:28
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_23_FD
Lab Sample ID: 500-238579-4
Date Collected: 08/22/23 11:20
Matrix: Water
Date Received: 08/23/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:34
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_32
Date Collected: 08/22/23 11:15
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:34
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_51
Date Collected: 08/22/23 15:56
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:34
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_25
Date Collected: 08/22/23 14:30
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:34
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_26
Date Collected: 08/22/23 15:35
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:34
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_18&D
Lab Sample ID: 500-238579-13
Date Collected: 08/23/23 14:05
Matrix: Water
Date Received: 08/24/23 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:35
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_12
Lab Sample ID: 500-238579-15
Date Collected: 08/23/23 10:10
Matrix: Water
Date Received: 08/24/23 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:35
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_13
Lab Sample ID: 500-238579-16
Date Collected: 08/23/23 11:25
Matrix: Water
Date Received: 08/24/23 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:35
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_46
Lab Sample ID: 500-238579-18
Date Collected: 08/23/23 08:55
Matrix: Water
Date Received: 08/24/23 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:35
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:23
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_47
Date Collected: 08/23/23 15:30
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-19
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_54
Date Collected: 08/23/23 13:50
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-20
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629491	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_52
Date Collected: 08/24/23 09:40
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629493	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_27
Date Collected: 08/24/23 09:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629493	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_35
Date Collected: 08/24/23 10:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629493	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_07
Date Collected: 08/24/23 14:00
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-28
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629493	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_08
Date Collected: 08/24/23 15:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626172	KAC	EET SL	08/31/23 10:39
Total/NA	Analysis	903.0		1	629493	FLC	EET SL	09/25/23 09:36
Total/NA	Prep	PrecSep_0			626177	KAC	EET SL	08/31/23 10:56
Total/NA	Analysis	904.0		1	628709	SCB	EET SL	09/19/23 12:24
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_08&D
Date Collected: 08/24/23 12:25
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-32
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:49
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:11
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_08_FD
Lab Sample ID: 500-238579-34
Date Collected: 08/24/23 15:10
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:50
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:11
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_XPW01_pore
Lab Sample ID: 500-238579-36
Date Collected: 08/24/23 12:15
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:50
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:11
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_XPW01_pore_EB
Lab Sample ID: 500-238579-37
Date Collected: 08/24/23 12:15
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:50
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:11
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_XPW02_pore
Lab Sample ID: 500-238579-38
Date Collected: 08/24/23 13:45
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:50
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_XPW02_pore_EB
Lab Sample ID: 500-238579-39
Date Collected: 08/24/23 13:45
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 18:50
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_XPW03_pore
Lab Sample ID: 500-238579-40
Date Collected: 08/24/23 15:30
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_XPW03_pore_EB
Lab Sample ID: 500-238579-41
Date Collected: 08/24/23 15:30
Matrix: Water
Date Received: 08/25/23 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_257_FB
Lab Sample ID: 500-238579-42
Date Collected: 08/25/23 12:00
Matrix: Water
Date Received: 08/25/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_34
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_49
Date Collected: 08/25/23 10:05
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:13
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_22
Date Collected: 08/25/23 08:50
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-46
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629278	SCB	EET SL	09/22/23 21:06
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_50
Date Collected: 08/25/23 11:25
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-47
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:25
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: 845_803_FB
Date Collected: 08/28/23 12:00
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-50
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:25
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_18#S
Date Collected: 08/28/23 08:35
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-51
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:25
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_03R
Date Collected: 08/28/23 09:45
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-53
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626180	KAC	EET SL	08/31/23 11:10
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:22
Total/NA	Prep	PrecSep_0			626182	KAC	EET SL	08/31/23 11:15
Total/NA	Analysis	904.0		1	628632	SCB	EET SL	09/18/23 15:35
Total/NA	Analysis	Ra226_Ra228 Pos		1	629684	SCB	EET SL	09/26/23 15:38

Client Sample ID: HEN_45#S
Date Collected: 08/28/23 11:15
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-56
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:28
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Client Sample ID: HEN_16
Date Collected: 08/28/23 08:35
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-58
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:28
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628698	FLC	EET SL	09/19/23 12:17
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_17
Date Collected: 08/28/23 09:40
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-59
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626178	KAC	EET SL	08/31/23 10:58
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:28
Total/NA	Prep	PrecSep_0			626179	KAC	EET SL	08/31/23 11:08
Total/NA	Analysis	904.0		1	628708	SCB	EET SL	09/19/23 12:18
Total/NA	Analysis	Ra226_Ra228 Pos		1	629874	EMH	EET SL	09/27/23 15:51

Client Sample ID: HEN_17-FD
Date Collected: 08/28/23 09:40
Date Received: 08/28/23 15:00

Lab Sample ID: 500-238579-60
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			626180	KAC	EET SL	08/31/23 11:10
Total/NA	Analysis	903.0		1	629490	SCB	EET SL	09/25/23 09:22
Total/NA	Prep	PrecSep_0			626182	KAC	EET SL	08/31/23 11:15
Total/NA	Analysis	904.0		1	628632	SCB	EET SL	09/18/23 15:35
Total/NA	Analysis	Ra226_Ra228 Pos		1	629684	SCB	EET SL	09/26/23 15:38

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

Accreditation/Certification Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200023	11-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
903.0	PrecSep-21	Water	Radium-226
904.0	PrecSep_0	Water	Radium-228
Ra226_Ra228 Pos		Water	Radium 226 and 228

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-21
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/25/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Z	904.0/PrecSep_0 Z	Ra226_228GFPC_P/ Z	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_12 (500-238579-15)	8/23/23	10:10 Central		Water			X	X	X	2	
HEN_13 (500-238579-16)	8/23/23	11:25 Central		Water			X	X	X	2	
HEN_46 (500-238579-18)	8/23/23	08:55 Central		Water			X	X	X	2	
HEN_47 (500-238579-19)	8/23/23	15:30 Central		Water			X	X	X	2	
HEN_54 (500-238579-20)	8/23/23	13:50 Central		Water			X	X	X	2	
HEN_52 (500-238579-25)	8/24/23	09:40 Central		Water			X	X	X	2	
HEN_07 (500-238579-28)	8/24/23	14:00 Central		Water			X	X	X	2	
HEN_08 (500-238579-30)	8/24/23	15:10 Central		Water			X	X	X	2	
HEN_08&D (500-238579-32)	8/24/23	12:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company: EEIA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey - Handler	Date/Time: 8/30/23 0900	Company: ETAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-21
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/25/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Z	904.0/PrecSep_0 Z	Ra226_228GFPC_P/ Z	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_08_FD (500-238579-34)	8/24/23	15:10 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Stephanie Hemandez	Date/Time: 8/29/23 1500	Company EETA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Brian Sharkey - Stanzaky	Date/Time: 8/30/23 0900	Company ETASTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT, OLD WEST ASH POND
HEN-257804

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-6
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AF	904.0/PrecSep_0 AF	Ra226_228GFPC_P/ AF	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_21R (500-238579-1)	8/22/23	13:45 Central		Water			X	X	X	2	
HEN_23 (500-238579-3)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_23_FD (500-238579-4)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_32 (500-238579-5)	8/22/23	11:15 Central		Water			X	X	X	2	
HEN_51 (500-238579-6)	8/22/23	15:56 Central		Water			X	X	X	2	
HEN_27 (500-238579-26)	8/24/23	09:00 Central		Water			X	X	X	2	
HEN_35 (500-238579-27)	8/24/23	10:10 Central		Water			X	X	X	2	
HEN_34 (500-238579-44)	8/25/23	11:25 Central		Water			X	X	X	2	
HEN_49 (500-238579-45)	8/25/23	10:05 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
FED EX			Brianna Sharkey-Gonzalez	8/30/23 0900	ERASTL

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No		

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-6
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AF	904.0/PrecSep_0 AF	Ra226_228GFPC_P/ AF	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_49_MS (500-238579-45MS)	8/25/23	10:05 Central	MS	Water			X	X	X	3	
HEN_49_MSD (500-238579-45MSD)	8/25/23	10:05 Central	MSD	Water			X	X	X	3	
HEN_22 (500-238579-46)	8/25/23	08:50 Central		Water			X	X	X	2	
HEN_50 (500-238579-47)	8/25/23	11:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company EETA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Brianna Sharkey-Hampton	Date/Time: 8/30/23 0900	Company ETASTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT - OLD WEST ASH POND
HEN-257804
APPENDIX A.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-4
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AD	904.0/PrecSep_0 AD	Ra226_228GFPC_P/ AD	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_21R (500-238579-1)	8/22/23	13:45 Central		Water			X	X	X	2	
HEN_22&D (500-238579-2)	8/22/23	09:10 Central		Water			X	X	X	2	
HEN_23 (500-238579-3)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_23_FD (500-238579-4)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_32 (500-238579-5)	8/22/23	11:15 Central		Water			X	X	X	2	
HEN_51 (500-238579-6)	8/22/23	15:56 Central		Water			X	X	X	2	
HEN_27 (500-238579-26)	8/24/23	09:00 Central		Water			X	X	X	2	
HEN_35 (500-238579-27)	8/24/23	10:10 Central		Water			X	X	X	2	
HEN_34 (500-238579-44)	8/25/23	11:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date:	Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephanie Hernandez	8/29/23 1700	EEIA	FED EX		
FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	EASTL

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No		

ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT, OLD WESTASH POND
HEN-257-804
APPENDIX A.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-4
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AD	904.0/PrecSep_0 AD	Ra226_228GFPC_P/ AD	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_49 (500-238579-45)	8/25/23	10:05 Central		Water			X	X	X	2	
HEN_49_MS (500-238579-45MS)	8/25/23	10:05 Central	MS	Water			X	X	X	3	
HEN_49_MSD (500-238579-45MSD)	8/25/23	10:05 Central	MSD	Water			X	X	X	3	
HEN_22 (500-238579-46)	8/25/23	08:50 Central		Water			X	X	X	2	
HEN_50 (500-238579-47)	8/25/23	11:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez	8/29/23 1600	~~EEIA~~	FED EX		
FED EX			Brenda Sharkey-Gonzalez	8/30/23 0500	ETASL

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-23
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AC	904.0/PrecSep_0 AC	Ra226_228GFPC_P/ AC	903.0/PrecSep_21 AC-23	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_12 (500-238579-15)	8/23/23	10:10 Central		Water			X	X	X		2	
HEN_13 (500-238579-16)	8/23/23	11:25 Central		Water			X	X	X		2	
HEN_46 (500-238579-18)	8/23/23	08:55 Central		Water			X	X	X		2	
HEN_47 (500-238579-19)	8/23/23	15:30 Central		Water			X	X	X		2	
HEN_54 (500-238579-20)	8/23/23	13:50 Central		Water			X	X	X		2	
HEN_52 (500-238579-25)	8/24/23	09:40 Central		Water			X	X	X		2	
HEN_07 (500-238579-28)	8/24/23	14:00 Central		Water			X	X	X		2	
HEN_08 (500-238579-30)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_08&D (500-238579-32)	8/24/23	12:25 Central		Water			X	X	X		2	

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

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company: EETAB	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Shashee Hazazi	Date/Time: 8/30/29 900	Company: ETAFC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-23
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AC	904.0/PrecSep_0 AC	Ra226_228GFPC_P/ AC	903.0/PrecSep_21 AC-23	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_08_FD (500-238579-34)	8/24/23	15:10 Central		Water			X	X	X		2	
845_803_FB (500-238579-50)	8/28/23	12:00 Central		Water				X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company EEIA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company ETGJC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT - OLD WEST ASH POND
HEN-257804
APPENDIX A

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AA	904.0/PrecSep_0 AA	Ra226_228GFPC_P/ AA	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_21R (500-238579-1)	8/22/23	13:45 Central		Water			X	X	X	2	
HEN_22&D (500-238579-2)	8/22/23	09:10 Central		Water			X	X	X	2	
HEN_23 (500-238579-3)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_23_FD (500-238579-4)	8/22/23	11:20 Central		Water			X	X	X	2	
HEN_32 (500-238579-5)	8/22/23	11:15 Central		Water			X	X	X	2	
HEN_51 (500-238579-6)	8/22/23	15:56 Central		Water			X	X	X	2	
HEN_27 (500-238579-26)	8/24/23	09:00 Central		Water			X	X	X	2	
HEN_35 (500-238579-27)	8/24/23	10:10 Central		Water			X	X	X	2	
HEN_34 (500-238579-44)	8/25/23	11:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez FED EX	8/29/23 1500	EETA	Briana Sharkey-Hernandez FED EX	8/30/23 0900	EEASTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North, ,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: HEN-23Q3
Site:

Sampler:
Phone:

Due Date Requested: 9/14/2023
TAT Requested (days):
PO #:
WO #:
Project #: 50021987
SSOW#:

Lab PM: McCutcheon, Carlene
E-Mail: Carlene.McCutcheon@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin: Illinois
Accreditations Required (See note): NELAP - Illinois

COC No: 500-178415.2
Page: Page 2 of 2
Job #: 500-238579-2

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AA	904.0/PrecSep_0 AA	Ra226_228GFPC_P/ AA	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_49 (500-238579-45)	8/25/23	10:05 Central		Water			X	X	X	2	
HEN_49_MS (500-238579-45MS)	8/25/23	10:05 Central	MS	Water			X	X	X	3	
HEN_49_MSD (500-238579-45MSD)	8/25/23	10:05 Central	MSD	Water			X	X	X	3	
HEN_22 (500-238579-46)	8/25/23	08:50 Central		Water			X	X	X	2	
HEN_50 (500-238579-47)	8/25/23	11:25 Central		Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
FED EX			Briana Sharkey-Hazaley	8/30/23 0900	EMVR

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-18
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AE	904.0/PrecSep_0 AE	Ra226_228GFPC_P/ AE	903.0/PrecSep_21 AE-18	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_18&D (500-238579-13)	8/23/23	14:05 Central		Water			X	X	X		2	
HEN_07 (500-238579-28)	8/24/23	14:00 Central		Water			X	X	X		2	
HEN_08 (500-238579-30)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_08&D (500-238579-32)	8/24/23	12:25 Central		Water			X	X	X		2	
HEN_08_FD (500-238579-34)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_18#S (500-238579-51)	8/28/23	08:35 Central		Water				X	X	X	2	
HEN_03R (500-238579-53)	8/28/23	09:45 Central		Water				X	X	X	2	
HEN_03R (500-238579-53MS)	8/28/23	09:45 Central	MS	Water				X	X	X	3	
HEN_03R (500-238579-53MSD)	8/28/23	09:45 Central	MSD	Water				X	X	X	3	

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

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez	8/29/23 1500	EETA	FED EX		
FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	EETA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-16
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AB	904.0/PrecSep_0 AB	Ra226_228GFPC_P/ AB	903.0/PrecSep_21 AB-16	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_18&D (500-238579-13)	8/23/23	14:05 Central		Water			X	X	X		2	
HEN_07 (500-238579-28)	8/24/23	14:00 Central		Water			X	X	X		2	
HEN_08 (500-238579-30)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_08&D (500-238579-32)	8/24/23	12:25 Central		Water			X	X	X		2	
HEN_08_FD (500-238579-34)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_18#S (500-238579-51)	8/28/23	08:35 Central		Water				X	X	X	2	
HEN_03R (500-238579-53)	8/28/23	09:45 Central		Water				X	X	X	2	
HEN_03R (500-238579-53MS)	8/28/23	09:45 Central	MS	Water				X	X	X	3	
HEN_03R (500-238579-53MSD)	8/28/23	09:45 Central	MSD	Water				X	X	X	3	

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

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Stephanie Hemomdey FED EX	Date/Time: 8/29/23 1500	Company EEHA	Received by: FED EX	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company ETAST
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-14
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Y	904.0/PrecSep_0 Y	Ra226_228GFPC_P/ Y	903.0/PrecSep_21 Y-14	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_18&D (500-238579-13)	8/23/23	14:05 Central		Water			X	X	X		2	
HEN_07 (500-238579-28)	8/24/23	14:00 Central		Water			X	X	X		2	
HEN_08 (500-238579-30)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_08&D (500-238579-32)	8/24/23	12:25 Central		Water			X	X	X		2	
HEN_08_FD (500-238579-34)	8/24/23	15:10 Central		Water			X	X	X		2	
HEN_257_FB (500-238579-42)	8/25/23	12:00 Central		Water			X	X	X		2	
HEN_18#S (500-238579-51)	8/28/23	08:35 Central		Water				X	X	X	2	
HEN_03R (500-238579-53)	8/28/23	09:45 Central		Water				X	X	X	2	
HEN_03R (500-238579-53MS)	8/28/23	09:45 Central	MS	Water				X	X	X	3	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hemmandy	8/29/23 1500	EETA	FED EX		
FED EX			Briana Sharkey - Hampton	8/30/23 0900	ETASTL

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-14
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Y	904.0/PrecSep_0 Y	Ra226_228GFPC_P/ Y	903.0/PrecSep_21 Y-14	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HEN_03R (500-238579-53MSD)	8/28/23	09:45 Central	MSD	Water				X	X	X	3	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company EEIA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company EEIA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-10
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AG	904.0/PrecSep_0 AG	Ra226_228GFPC_P/ AG	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_25 (500-238579-7)	8/22/23	14:30 Central		Water			X	X	X	2	
HEN_26 (500-238579-8)	8/22/23	15:35 Central		Water			X	X	X	2	
HEN_26_MS (500-238579-8MS)	8/22/23	15:35 Central	MS	Water			X	X	X	2	
HEN_26_MSD (500-238579-8MSD)	8/22/23	15:35 Central	MSD	Water			X	X	X	2	
HEN_XPW01_pore (500-238579-36)	8/24/23	12:15 Central		Water			X	X	X	2	
HEN_XPW01_pore_EB (500-238579-37)	8/24/23	12:15 Central		Water			X	X	X	2	
HEN_XPW02_pore (500-238579-38)	8/24/23	13:45 Central		Water			X	X	X	2	
HEN_XPW02_pore_EB (500-238579-39)	8/24/23	13:45 Central		Water			X	X	X	4	
HEN_XPW03_pore (500-238579-40)	8/24/23	15:30 Central		Water			X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company EETA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company EETC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: HEN-23Q3
Site:

Sampler:
Phone:
Due Date Requested: 9/14/2023
TAT Requested (days):
PO #:
WO #:
Project #: 50021987
SSOW#:

Lab PM: McCutcheon, Carlene
E-Mail: Carlene.McCutcheon@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin: Illinois
Accreditations Required (See note): NELAP - Illinois

COC No: 500-178415.2
Page: Page 2 of 2
Job #: 500-238579-10

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 AG	904.0/PrecSep_0 AG	Ra226_228GFPC_P/ AG	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_XPW03_pore_EB (500-238579-41)	8/24/23	15:30 Central		Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hernandez	8/29/23 1500	EETA	FED EX		
FED EX			Briana Sharkey - Manager	8/30/23 09:00	EEASL

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/25/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Tnzma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Y-14	904.0/PrecSep_0 Y	Ra226_228GFPC_P/ Y	903.0/PrecSep_21 AB-16	904.0/PrecSep_0 AB	Ra226_228GFPC_P/ AB	903.0/PrecSep_21 AE-18	904.0/PrecSep_0 AE	Ra226_228GFPC_P/ AE	903.0/PrecSep_21 Z-21	904.0/PrecSep_0 Z	Ra226_228GFPC_P/ Z	903.0/PrecSep_21 AC-23	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
HEN_45#S (500-238579-56)	8/28/23	11:15 Central		Water			X	X	X	X	X	X	X	X	X					2	
HEN_16 (500-238579-58)	8/28/23	08:35 Central		Water												X	X	X	X	2	
HEN_17 (500-238579-59)	8/28/23	09:40 Central		Water												X	X	X	X	2	
HEN_17-FD (500-238579-60)	8/28/23	09:40 Central		Water												X	X	X	X	2	

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

Possible Hazard Identification *Unconfirmed*			***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Stephanie Hernandez	Date/Time: 8/29/23 1500	Company EETA	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company EFAST
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT, OLD WESTLAKE POND
HEN-257804

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 500-178415.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@et.eurofinsus.com	State of Origin: Illinois	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-238579-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/25/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: HEN-23Q3	Project #: 50021987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	904.0/PrecSep_0 AC	Ra226_228GFPC_P/ AC	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
HEN_45#S (500-238579-56)	8/28/23	11:15 Central		Water					2	
HEN_16 (500-238579-58)	8/28/23	08:35 Central		Water			X	X	2	
HEN_17 (500-238579-59)	8/28/23	09:40 Central		Water			X	X	2	
HEN_17-FD (500-238579-60)	8/28/23	09:40 Central		Water			X	X	2	

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

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Stephanie Hemondy	8/29/23 1500	EEIA	FED EX		
FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	EFSTL

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No		

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-238579-10
SDG Number: HEN_SUP_000_0 RAD

Login Number: 238579
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6,0.7,0.3,1.2,0.8,0.4,0.1,2.9,1.7,3.7,1.0,2.8,0.2, 2.0,2.9,0.1,1.63.0,1.3,0.5,2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-238579-10
SDG Number: HEN_SUP_000_0 RAD

Login Number: 238579
List Number: 3
Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis
List Creation: 08/30/23 01:27 PM

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

Tracer/Carrier Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
		Ba	Ba	Ba					
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)					
500-238579-1	HEN_21R	90.1	90.1	90.1					
500-238579-3	HEN_23	96.5	96.5	96.5					
500-238579-4	HEN_23_FD	94.0	94.0	94.0					
500-238579-5	HEN_32	92.8	92.8	92.8					
500-238579-6	HEN_51	91.3	91.3	91.3					
500-238579-7	HEN_25	94.5	94.5	94.5					
500-238579-8	HEN_26	89.6	89.6	89.6					
500-238579-8 MS	HEN_26_MS	84.4	84.4	84.4					
500-238579-8 MSD	HEN_26_MSD	88.3	88.3	88.3					
500-238579-13	HEN_18&D	93.1	93.1	93.1					
500-238579-26	HEN_27	95.3	95.3	95.3					
500-238579-27	HEN_35	93.5	93.5	93.5					
500-238579-36	HEN_XPW01_pore	30.3	30.3	30.3					
500-238579-37	HEN_XPW01_pore_EB	96.3	96.3	96.3					
500-238579-38	HEN_XPW02_pore	99.3	99.3	99.3					
500-238579-39	HEN_XPW02_pore_EB	93.1	93.1	93.1					
500-238579-40	HEN_XPW03_pore	94.5	94.5	94.5					
500-238579-41	HEN_XPW03_pore_EB	99.5	99.5	99.5					
500-238579-42	HEN_257_FB	99.0	99.0	99.0					
500-238579-44	HEN_34	99.0	99.0	99.0					
500-238579-45	HEN_49	91.3	91.3	91.3					
500-238579-45 MS	HEN_49_MS	90.6	90.6	90.6					
500-238579-45 MSD	HEN_49_MSD	87.1	87.1	87.1					
500-238579-46	HEN_22	96.0	96.0	96.0					
500-238579-47	HEN_50	95.0	95.0	95.0					
500-238579-50	845_803_FB	97.3	97.3	97.3					
500-238579-51	HEN_18#S	93.3	93.3	93.3					
500-238579-53	HEN_03R	89.3	89.3	89.3					
500-238579-53 MS	HEN_03R_MS	90.3	90.3	90.3					
500-238579-53 MSD	HEN_03R_MSD	94.8	94.8	94.8					
500-238579-56	HEN_45#S	93.5	93.5	93.5					
LCS 160-626172/2-A	Lab Control Sample	93.1	93.1	93.1					
LCS 160-626178/2-A	Lab Control Sample	100	100	100					
LCS 160-626180/2-A	Lab Control Sample	94.0	94.0	94.0					
MB 160-626172/1-A	Method Blank	89.8	89.8	89.8					
MB 160-626178/1-A	Method Blank	99.3	99.3	99.3					
MB 160-626180/1-A	Method Blank	94.8	94.8	94.8					

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
		Ba	Ba	Ba	Ba	Ba			
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)			
500-238579-28	HEN_07	88.8	88.8	88.8	88.8	88.8			
500-238579-30	HEN_08	91.6	91.6	91.6	91.6	91.6			
500-238579-32	HEN_08&D	93.1	93.1	93.1	93.1	93.1			

Tracer/Carrier Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 903.0 - Radium-226 (GFPC) (Continued)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)				
		Ba	Ba	Ba	Ba	Ba
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)
500-238579-34	HEN_08_FD	91.6	91.6	91.6	91.6	91.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Ba
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
500-238579-2	HEN_22&D	91.3	91.3
500-238579-15	HEN_12	95.8	95.8
500-238579-16	HEN_13	85.4	85.4
500-238579-18	HEN_46	90.1	90.1
500-238579-19	HEN_47	93.1	93.1
500-238579-20	HEN_54	91.8	91.8
500-238579-25	HEN_52	89.6	89.6
500-238579-58	HEN_16	99.3	99.3
500-238579-59	HEN_17	93.5	93.5
500-238579-60	HEN_17-FD	91.1	91.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)					
		Ba	Y	Ba	Y	Y	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)
500-238579-1	HEN_21R	90.1	82.6	90.1	82.6	82.6	82.6
500-238579-3	HEN_23	96.5	78.9	96.5	78.9	78.9	78.9
500-238579-4	HEN_23_FD	94.0	80.0	94.0	80.0	80.0	80.0
500-238579-5	HEN_32	92.8	78.1	92.8	78.1	78.1	78.1
500-238579-6	HEN_51	91.3	82.2	91.3	82.2	82.2	82.2
500-238579-7	HEN_25	94.5	79.6	94.5	79.6	79.6	79.6
500-238579-8	HEN_26	89.6	82.6	89.6	82.6	82.6	82.6
500-238579-8 MS	HEN_26_MS	84.4	77.0	84.4	77.0	77.0	77.0
500-238579-8 MSD	HEN_26_MSD	88.3	81.9	88.3	81.9	81.9	81.9
500-238579-13	HEN_18&D	93.1	80.4	93.1	80.4	80.4	80.4
500-238579-26	HEN_27	95.3	79.3	95.3	79.3	79.3	79.3
500-238579-27	HEN_35	93.5	82.2	93.5	82.2	82.2	82.2
500-238579-36	HEN_XPW01_pore	30.3	85.6	30.3	85.6	85.6	85.6
500-238579-37	HEN_XPW01_pore_EB	96.3	87.5	96.3	87.5	87.5	87.5
500-238579-38	HEN_XPW02_pore	99.3	83.7	99.3	83.7	83.7	83.7
500-238579-39	HEN_XPW02_pore_EB	93.1	83.4	93.1	83.4	83.4	83.4
500-238579-40	HEN_XPW03_pore	94.5	81.5	94.5	81.5	81.5	81.5
500-238579-41	HEN_XPW03_pore_EB	99.5	81.5	99.5	81.5	81.5	81.5
500-238579-42	HEN_257_FB	99.0	83.4	99.0	83.4	83.4	83.4
500-238579-44	HEN_34	99.0	82.6	99.0	82.6	82.6	82.6
500-238579-45	HEN_49	91.3	84.9	91.3	84.9	84.9	84.9

Tracer/Carrier Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)					
		Ba	Y	Ba	Y	Y	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)
500-238579-45 MS	HEN_49_MS	90.6	79.6	90.6	79.6	79.6	79.6
500-238579-45 MSD	HEN_49_MSD	87.1	84.1	87.1	84.1	84.1	84.1
500-238579-46	HEN_22	96.0	86.7	96.0	86.7	86.7	86.7
500-238579-47	HEN_50	95.0	84.1	95.0	84.1	84.1	84.1
500-238579-50	845_803_FB	97.3	83.7	97.3	83.7	83.7	83.7
500-238579-51	HEN_18#S	93.3	81.9	93.3	81.9	81.9	81.9
500-238579-53	HEN_03R	89.3	84.5	89.3	84.5	84.5	84.5
500-238579-53 MS	HEN_03R_MS	90.3	80.0	90.3	80.0	80.0	80.0
500-238579-53 MSD	HEN_03R_MSD	94.8	89.3	94.8	89.3	89.3	89.3
500-238579-56	HEN_45#S	93.5	81.9	93.5	81.9	81.9	81.9
LCS 160-626177/2-A	Lab Control Sample	93.1	84.1	93.1	84.1	84.1	84.1
LCS 160-626179/2-A	Lab Control Sample	100	87.5	100	87.5	87.5	87.5
LCS 160-626182/2-A	Lab Control Sample	94.0	81.5	94.0	81.5	81.5	81.5
MB 160-626177/1-A	Method Blank	89.8	85.2	89.8	85.2	85.2	85.2
MB 160-626179/1-A	Method Blank	99.3	82.2	99.3	82.2	82.2	82.2
MB 160-626182/1-A	Method Blank	94.8	90.8	94.8	90.8	90.8	90.8

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
		Ba	Ba	Ba	Ba	Ba	Y	Y	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)	(30-110)
500-238579-28	HEN_07	88.8	88.8	88.8	88.8	88.8	77.4	77.4	77.4
500-238579-30	HEN_08	91.6	91.6	91.6	91.6	91.6	81.9	81.9	81.9
500-238579-32	HEN_08&D	93.1	93.1	93.1	93.1	93.1	82.6	82.6	82.6
500-238579-34	HEN_08_FD	91.6	91.6	91.6	91.6	91.6	85.6	85.6	85.6

		Percent Yield (Acceptance Limits)	
		Y	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
500-238579-28	HEN_07	77.4	77.4
500-238579-30	HEN_08	81.9	81.9
500-238579-32	HEN_08&D	82.6	82.6
500-238579-34	HEN_08_FD	85.6	85.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)			
		Ba	Ba	Y	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)	(30-110)	(30-110)
500-238579-2	HEN_22&D	91.3	91.3	81.9	81.9
500-238579-15	HEN_12	95.8	95.8	80.0	80.0
500-238579-16	HEN_13	85.4	85.4	77.4	77.4

Tracer/Carrier Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)			
		Ba	Ba	Y	Y
Lab Sample ID	**Client Sample ID**	**(30-110)**	**(30-110)**	**(30-110)**	**(30-110)**
500-238579-18	HEN_46	90.1	90.1	80.4	80.4
500-238579-19	HEN_47	93.1	93.1	79.3	79.3
500-238579-20	HEN_54	91.8	91.8	79.3	79.3
500-238579-25	HEN_52	89.6	89.6	74.8	74.8
500-238579-58	HEN_16	99.3	99.3	83.4	83.4
500-238579-59	HEN_17	93.5	93.5	83.4	83.4
500-238579-60	HEN_17-FD	91.1	91.1	77.8	77.8

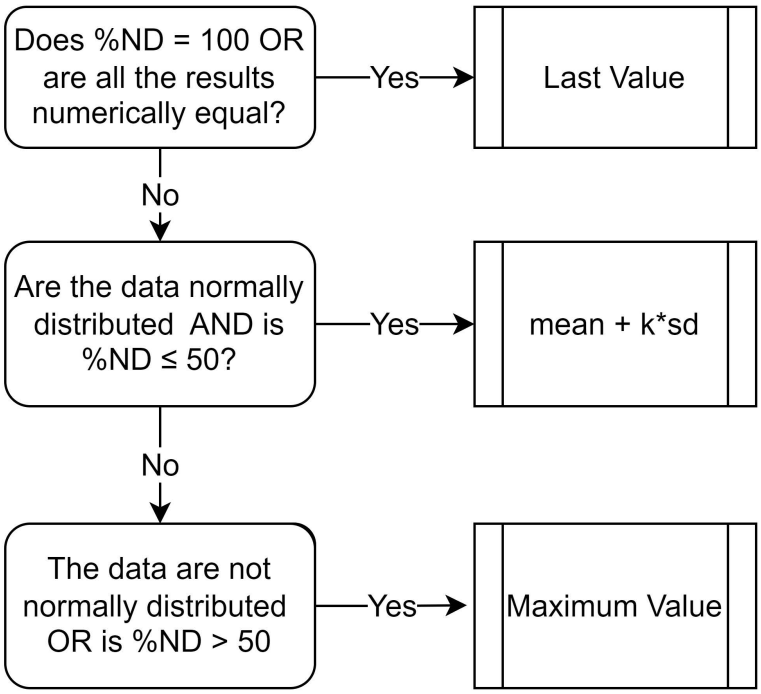
Tracer/Carrier Legend

Ba = Ba Carrier

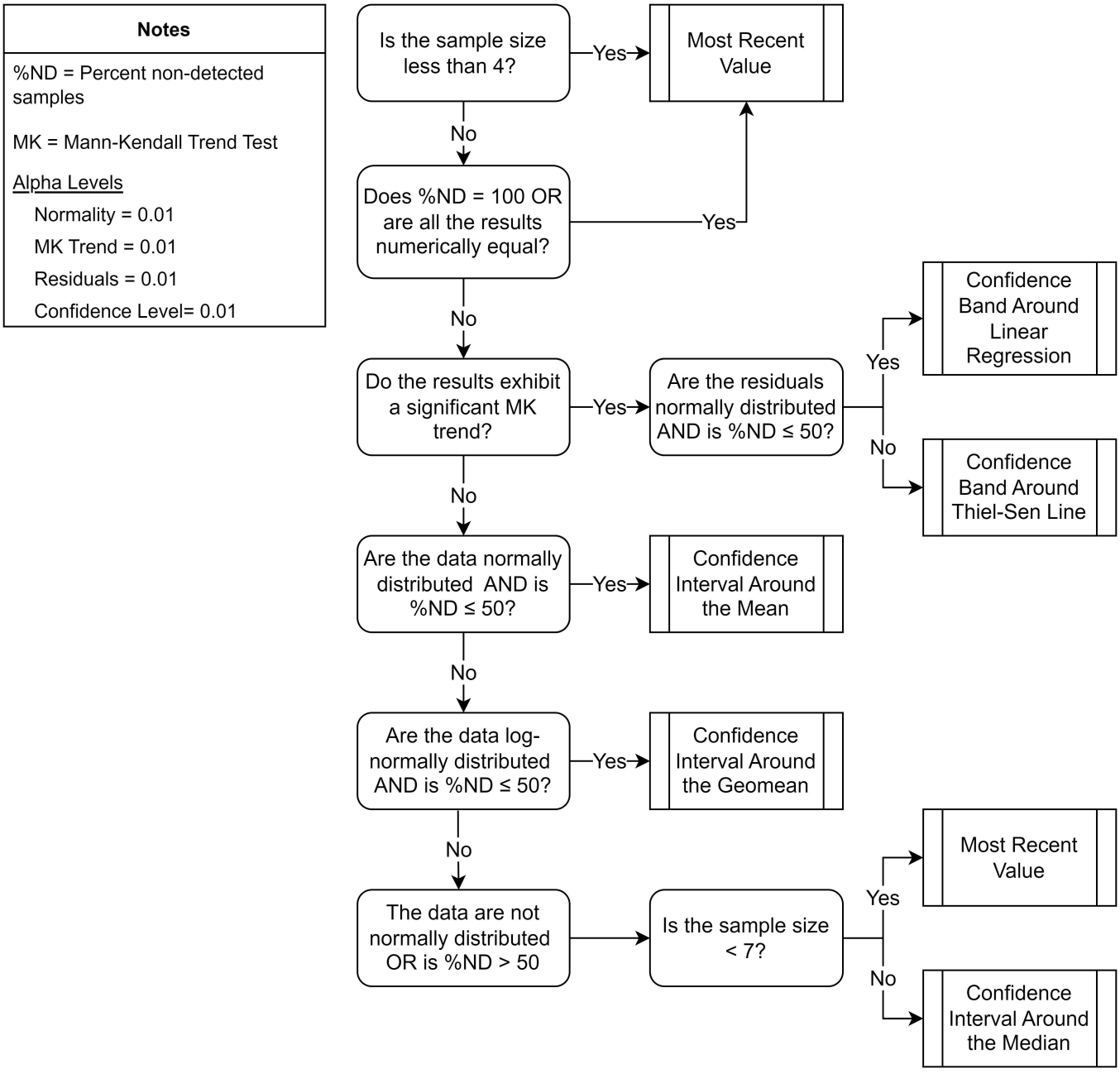
Y = Y Carrier

APPENDIX B
STATISTICAL METHODOLOGY 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
MK = Mann-Kendall Trend Test
Alpha Levels
Normality = 0.01
MK Trend = 0.01
Residuals = 0.01
Confidence Level= 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

APPENDIX D
ALTERNATIVE SOURCE DEMONSTRATIONS

Prepared for
Dynegy Midwest Generation, LLC

Date
May 1, 2023

Project No.
1940103649-010

40 C.F.R. § 257.95(G)(3)(II): ALTERNATE SOURCE DEMONSTRATION

OLD WEST ASH POND (POND NO. 1 AND POND NO. 3) AND OLD WEST POLISHING POND

HENNEPIN POWER PLANT

HENNEPIN, ILLINOIS

CCR UNIT 804

RAMBOLL Bright ideas. Sustainable change.

CERTIFICATIONS

I, Brian G. Hennings, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Brian G. Hennings
Professional Geologist
196-001482
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: May 1, 2023

LICENSED PROFESSIONAL GEOLOGIST
BRIAN G. HENNINGS
196.001482
ILLINOIS

I, Eric J. Tlachac, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Eric J. Tlachac
Qualified Professional Engineer
062-063091
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: May 1, 2023

LICENSED PROFESSIONAL ENGINEER
ERIC J. TLACHAC
062-063091
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CONTENTS

TABLES (IN TEXT)

FIGURES (IN TEXT)

FIGURES (ATTACHED)

APPENDICES

ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
A5D	Assessment Monitoring Round 5
AP2	Ash Pond No. 2
AP4	Ash Pond No. 4
ASD	Alternate Source Demonstration
CCR	coal combustion residuals
CCR Rule	40 C.F.R. § 257 Subpart D
Closure Plan	Closure and Post-Closure Care Plan
CMA	Corrective Measures Assessment
DMG	Dynegy Midwest Generation, LLC
EPRI	Electric Power Research Institute
Geosyntec	Geosyntec Consultants, Inc.
GWPS	Groundwater Protection Standard
Hennepin East	includes Landfill, AP2, AP4, and East Ash Pond
HPP	Hennepin Power Plant
IEPA	Illinois Environmental Protection Agency
LOE(s)	line(s) of evidence
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MNA	monitored natural attenuation
mV	millivolts
NAVD88	North American Vertical Datum of 1988
No.	Number
NRT/OBG	Natural Resource Technology, an OBG Company
OWAP	Old West Ash Pond (Pond Number No. 1 and Pond No. 3) and Old West Polishing Pond
Ramboll	Ramboll Americas Engineering Solutions, Inc.
redox	reduction-oxidation
RL	reporting limit
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
USGS	United States Geological Survey

1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.95(g)(3)(ii) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of a Statistically Significant Level (SSL) over the Groundwater Protection Standard (GWPS) of groundwater constituents listed in Appendix IV of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSL(s), or that the SSL(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternate Source Demonstration [ASD]).

This ASD has been prepared on behalf of Dynegy Midwest Generation, LLC (DMG), by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide pertinent information pursuant to 40 C.F.R. § 257.95(g)(3)(ii) for the Old West Ash Pond (Pond Number [No.] 1 and Pond No. 3) and Old West Polishing Pond, collectively referred to as the OWAP, located at Hennepin Power Plant (HPP) near Hennepin, Illinois.

The most recent Assessment Monitoring sampling event (Assessment Monitoring Round 5D [A5D]) samples were collected on September 13-14, 2022, and analytical data were received on October 31, 2022. Analytical data from A5D were evaluated in accordance with the Statistical Analysis Plan (Natural Resource Technology, an OBG Company [NRT/OBG], 2017a) to determine any Statistically Significant Increases (SSIs) of Appendix III parameters over background concentrations and SSLs of Appendix IV parameters over GWPSs. That evaluation identified the following SSLs at downgradient monitoring wells:

- Arsenic at wells 21R and 51
- Cadmium at well 22
- Lithium at well 22

A Corrective Measures Assessment (CMA) was completed in 2019 for the arsenic and lithium SSLs, and further evaluation of monitored natural attenuation (MNA) as an associated groundwater remedy is in progress.

Pursuant to 40 C.F.R. § 257.95(g)(3)(ii), the lines of evidence (LOEs) described in **Section 3** demonstrate that sources other than the OWAP were the cause of the cadmium SSL listed above. This ASD was completed by May 1, 2023, within 90 days of determination of the SSL, as required by 40 C.F.R. § 257.95(g)(3)(ii).

2. BACKGROUND

2.1 Site Location and Description

The HPP is located in the northwest quarter of Section 26, Township 33 North, Range 2 West, Putnam County, Illinois and approximately 3 miles north-northeast of the Village of Hennepin.

The OWAP is one of four CCR units regulated under 40 C.F.R. § 257 Subpart D (CCR Rule) at the HPP. Three CCR units (the Landfill, Ash Pond No. 2 [AP2], and the East Ash Pond) and one unit not regulated by the CCR Rule (Ash Pond No. 4 [AP4]) are located adjacent to each other and east of the HPP and are collectively known as Hennepin East. The OWAP is located west of the HPP. Areas surrounding the OWAP include agricultural land with scattered groupings or rows of trees to the southeast and low-lying floodplains of the Donnelley Wildlife Management Area to the southwest and west. The OWAP and surrounding properties are shown on **Figure 1**.

2.2 Groundwater Monitoring

The OWAP groundwater monitoring system for compliance with the CCR Rule consists of two background monitoring wells (32 and 34) and six compliance monitoring wells (21R, 22, 23, 35, 49, and 51). This monitoring network also includes two monitoring wells (22D and 50) installed to delineate groundwater impacts as required by 40 C.F.R. § 257.95(g)(1). A map showing the groundwater monitoring system, including the CCR unit and monitoring wells, is presented in **Figure 1**.

Groundwater samples are collected and analyzed in accordance with the Sampling and Analysis Plan prepared for the OWAP (NRT/OBG, 2017b). Statistical evaluation of analytical data is performed in accordance with the Statistical Analysis Plan (NRT/OBG, 2017a).

2.3 Site History

The HPP has two coal-fired generating units constructed in 1953 and 1959 with a total capacity of 210 Megawatts. Operations were ceased in November 2019. The coal source changed several times during the plant's operational history.

DMG operated the OWAP from 1952 through 1996. It consists of two closed units, the Old West Ash Pond and the Old West Polishing Pond (**Figure 1**). The Old West Ash Pond consists of the 9.3-acre Pond No. 1 at the eastern end of the impoundment and the 16.4-acre Pond No. 3 within the central portion of the impoundment. The 4.7-acre Old West Polishing Pond is situated at the western end of the impoundment. All ponds were previously bermed to approximately 15 feet above grade using locally occurring sandy soils. A portion of the Old West Polishing Pond berm was removed after CCR material was removed during closure of this unit in 2020.

During operation, service water was used to sluice fly ash, bottom ash, and low-volume wastes to the OWAP. At the time it was removed from service in late 1996, there was no surface water discharge and all sluice water ex-filtrated via evapotranspiration, seepage through the berms, or leakage through the base of the ponds. Coal ash sluiced to the OWAP was a by-product of the combustion of high-sulfur Illinois coal. The operational history of the OWAP is summarized in **Table A** below.

Table A. Operational History of OWAP

Date	Event
1952-1955	Construction of OWAP, Pond No. 1. Berms were constructed from locally sandy materials to an original elevation (since modified) of 457 feet NAVD88.
1968	Construction of OWAP, Pond No. 3. Berms were constructed to an elevation of 457 feet NAVD88.
1979	Berms surrounding the OWAP were raised by three feet to an elevation of 460 feet NAVD88.
1988-1989	Ponds No. 1 and No. 3 within the OWAP were consolidated and divided into primary and secondary cells, and the berm around the primary portion was raised five feet to an elevation of 465 feet NAVD88. It was after this consolidation that surface water discharge from the impoundment ceased.
1996	OWAP Ponds No. 1 and No. 3 were removed from service.
2020	OWAP Ponds No. 1 and No. 3 were closed in-place and Old West Polishing Pond was closed by removal (CCR consolidated into Ponds No. 1 and No. 3) in accordance with the IEPA-approved closure plan.

NAVD88 = North American Vertical Datum of 1988

The *Closure and Post-Closure Care Plan, Old West Ash Pond, Old West Polishing Pond at DMG, Hennepin Power Station* (Closure Plan) was submitted to Illinois Environmental Protection Agency (IEPA) in 2017 (Geosyntec Consultants, Inc. [Geosyntec], 2017). The Closure Plan was approved by IEPA in a letter dated June 19, 2018. The approved Closure Plan summarized the planned closure of the OWAP, which included dewatering the CCR, if needed, mechanical excavation of material from the Old West Polishing Pond for use as structural fill in the OWAP, grading within the OWAP, constructing an alternative cover system consisting of geomembrane and vegetated cover soils in direct contract with the graded CCR, and establishment of a vegetative cover. Closure construction was completed on November 17, 2020.

2.4 Site Hydrogeology and Stratigraphy

A detailed hydrogeological assessment of the HPP was completed and submitted as part of the Closure Plan (NRT/OBG, 2017c) Information pertinent to this ASD is included in this report; however, more complete information on site hydrogeology and stratigraphy is available in the Closure Plan (Geosyntec, 2017).

There are three dominant geomorphic features in the immediate vicinity of the HPP: an upper river terrace at an elevation of about 500 to 550 feet NAVD88, a lower river terrace at an elevation of about 450 to 460 feet NAVD88, and the current river valley filled with alluvium to an elevation of about 445 feet NAVD88. The HPP and the eastern portion of the OWAP (Pond No. 1) are on the lower terrace. The western portion of the OWAP (Pond No. 3 and Old West Polishing Pond) overlies alluvium.

The hydrogeological assessment identified that the stratigraphy within and immediately surrounding the OWAP consists of fill, unlithified river alluvium, and Pleistocene-age glacial outwash deposits overlying Pennsylvanian-age shale bedrock. The perimeter berms of the OWAP contain variable amounts of CCR and re-worked native silt, clay, and sand. Where undisturbed or partially excavated, the native surficial soil at the site is poorly drained, moderately permeable silty clay loam formed as alluvium in floodplains.

There are two hydrogeologic units present at the HPP: alluvium and Henry Formation sands and gravels. The river laid deposits are identified as Cahokia Alluvium. The Henry Formation sands and gravels make up the upper and lower terraces and fill the valley beneath the alluvium. The Henry Formation and alluvium together comprise the Uppermost Aquifer at the OWAP and extend from the water table to the bedrock.

The OWAP overlies both glacial deposits (Henry Formation) and alluvium (Cahokia Alluvium). The OWAP, specifically Pond No. 1, rests on top of lower terrace glacial deposits, and the eastern portion of Pond No. 3 overlies alluvial sand. The western portion of Pond No. 3 and the Old West Polishing Pond overlie silty clay alluvial channel fill deposits.

The Pennsylvanian-age bedrock consists of interbedded layers of shale with thin limestone, sandstone, and coal beds. The shale bedrock unit has low hydraulic conductivity and defines the lower boundary of the Uppermost Aquifer.

The direction of groundwater flow and hydraulic gradient within the Uppermost Aquifer varies with the elevation of the Illinois River (select groundwater elevation contour maps are provided in **Appendix A**). During normal river stage the direction of groundwater flow is most often toward the river, but comparison of groundwater and river elevation data indicate reversals in this flow direction during times of high river elevations. The relative duration of these events is short, which leads to the determination of a predominant groundwater flow direction toward the river.

Groundwater elevations were obtained from measurements in monitoring wells on September 13-14, 2022 prior to the A5D sampling event at the site. Groundwater elevations for the OWAP during the A5D sampling event are shown in **Figure 2** and ranged from 444.74 feet NAVD88 (in well 33) to 448.60 feet NAVD88 (in well 36). Groundwater flow was generally toward the Illinois River.

3. ALTERNATE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.95(g)(3)(ii), this ASD demonstrates that sources other than the OWAP (the CCR unit) caused the cadmium SSL. LOEs supporting this ASD include the following:

1. Concentrations of cadmium are lower than those observed in leachate samples.
2. Cadmium concentrations are negatively correlated with concentrations of CCR indicator parameters.
3. Cadmium concentrations were detected in nearby aquifer materials and geochemical conditions support mobilization.

Data and information supporting these LOEs are discussed in more detail below.

3.1 LOE #1: Concentrations of Cadmium are Lower than those Observed in Leachate Samples

Leachate samples were collected from multiple locations within the OWAP in April and September of 2017 (**Figure 3**). Analytical results from locations L4, LPZ1, LPZ3, and LPZ17, sampled on April 25, 2017, indicate that total cadmium concentrations were less than laboratory reporting limits (RL) (less than 0.001 milligrams per liter [mg/L]). Analytical results from locations L4 and LPZ17, sampled on September 6, 2017, indicate that the total cadmium concentration in the sample from L4 was below the RL (less than 0.001 mg/L) and the total cadmium concentration in the sample from LPZ17 was 0.0013 mg/L.

The cadmium concentrations detected in the leachate samples are less than the lower confidence limit of cadmium concentrations observed in well 22 (0.00527 mg/L).

3.2 LOE #2: Cadmium Concentrations are Negatively Correlated with Concentrations of CCR Indicator Parameters

Boron and sulfate are common indicators of CCR impacts to groundwater due to their leachability from CCR and mobility in groundwater (Electric Power Research Institute [EPRI], 2012). If an SSL is identified for a monitored parameter but concentrations of boron and sulfate are not correlated with that parameter, it is unlikely that the CCR unit is the source of the SSL.

Figure A on the following page provides a scatter plot of cadmium versus boron and sulfate concentrations (collected from 2015 through the A5D sampling event) in monitoring well 22 (the location of the cadmium SSL), along with the results of a Spearman correlation test for non-parametric data (these data were determined to be not normally distributed). The results of the test at each well are described by the p-value and rho (Spearman correlation coefficient) included in each plot. Typically, a p-value greater than 0.05 is considered to be a statistically insignificant relationship. The range of rho falls between -1 and 1, with a perfect correlation equal to -1 or 1. The closer rho is to 0, the less of a correlation exists in the data.

The results of the correlation analyses indicates that concentrations of cadmium observed at monitoring well 22 are negatively correlated with concentrations of boron and sulfate, common indicators of CCR impacts to groundwater. **Figure A** illustrates the inverse relationship between

cadmium concentrations and boron or sulfate concentrations in groundwater at monitoring well 22, where the p-values are less than 0.001 and rho is close to -1.

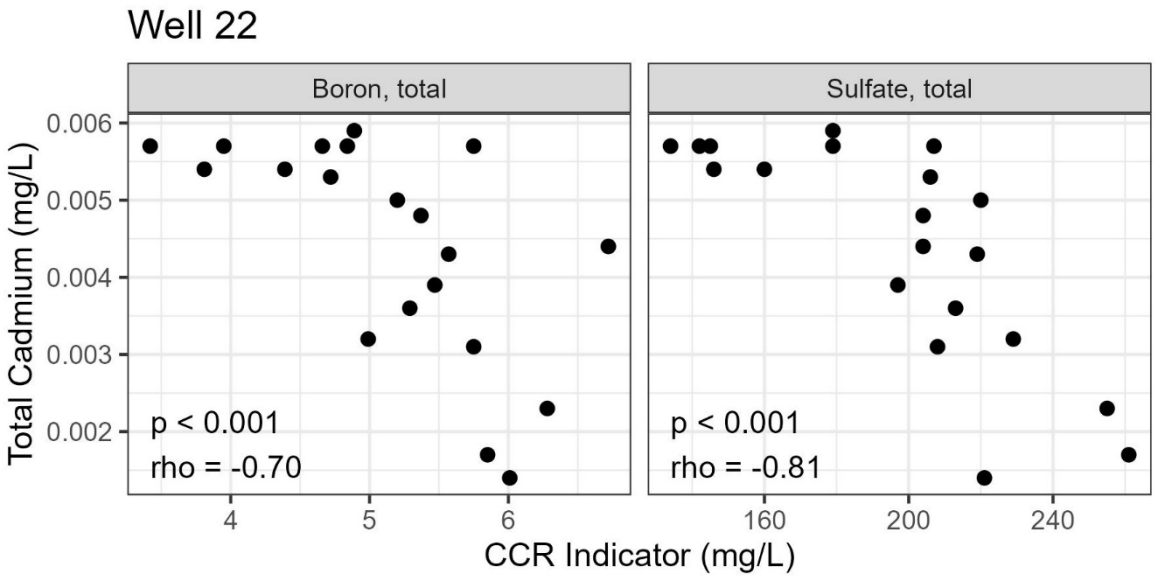

Figure A. Scatter Plot of Cadmium Versus Boron and Sulfate Concentrations at Monitoring Well 22

Cadmium concentrations are negatively correlated with boron and sulfate concentrations in the downgradient monitoring well, indicating the OWAP is not the source of the cadmium SSL.

3.3 LOE #3: Cadmium Concentrations were Detected in Nearby Aquifer Materials and Geochemical Conditions Support Mobilization

Soil samples were collected from four borings near the East Ash Pond in 2021 to support a Hydrogeologic Characterization Report for the East Ash Pond (Ramboll, 2021). Results of chemical analyses of the soil samples indicate that cadmium concentrations in the Henry Formation sands and gravels ranged from 1.13 to 1.65 milligrams per kilogram (mg/kg) with an average cadmium concentration of 1.36 mg/kg. Results of cadmium analyses from samples within the Cahokia Alluvium were slightly more variable, ranging from 0.57 to 1.34 mg/kg, with an average cadmium concentration of 0.97 mg/kg. Additionally, a sample of bedrock was obtained and yielded a cadmium concentration of 0.75 mg/kg. The Cahokia alluvium, Henry Formation, and bedrock tested at the East Ash Pond are all present at the OWAP as documented in the Hydrogeologic Characterization Report (NRT/OBG, 2017c).

Geochemical conditions that would affect cadmium mobility in groundwater at monitoring well 22 were evaluated. The primary geochemical conditions influencing cadmium mobility in non-sulfidic groundwater are pH and the association of cadmium with ligands. Cadmium will desorb from solid phases, and therefore exhibit greater mobility in groundwater, under lower pH conditions (Kubier et al., 2019). Additionally, cadmium can be mobilized from the solid phase via forming soluble complexes with certain ligands (*e.g.,* $CdCl^{+}$, $Cd(SO4)_2^{-2}$, or dissolved organic molecules) (Kubier et al., 2019). Because reduction-oxidation (redox) conditions at monitoring well 22 are insufficiently reducing to drive sulfide formation, sulfide is unlikely to occur at monitoring well 22. Therefore, the potential for pH and the formation of soluble cadmium complexes to mobilize cadmium at well 22 were assessed as described below.

Changes in pH at monitoring well 22 were evaluated using a Mann-Kendall trend test. Over the same time frame that cadmium concentrations have been increasing, pH values exhibit a statistically significant downward trend (**Figure B**). Because cadmium is more mobile in groundwater under lower pH conditions, the decrease in pH could have contributed to the increased mobilization and concentrations of cadmium in groundwater at monitoring well 22.

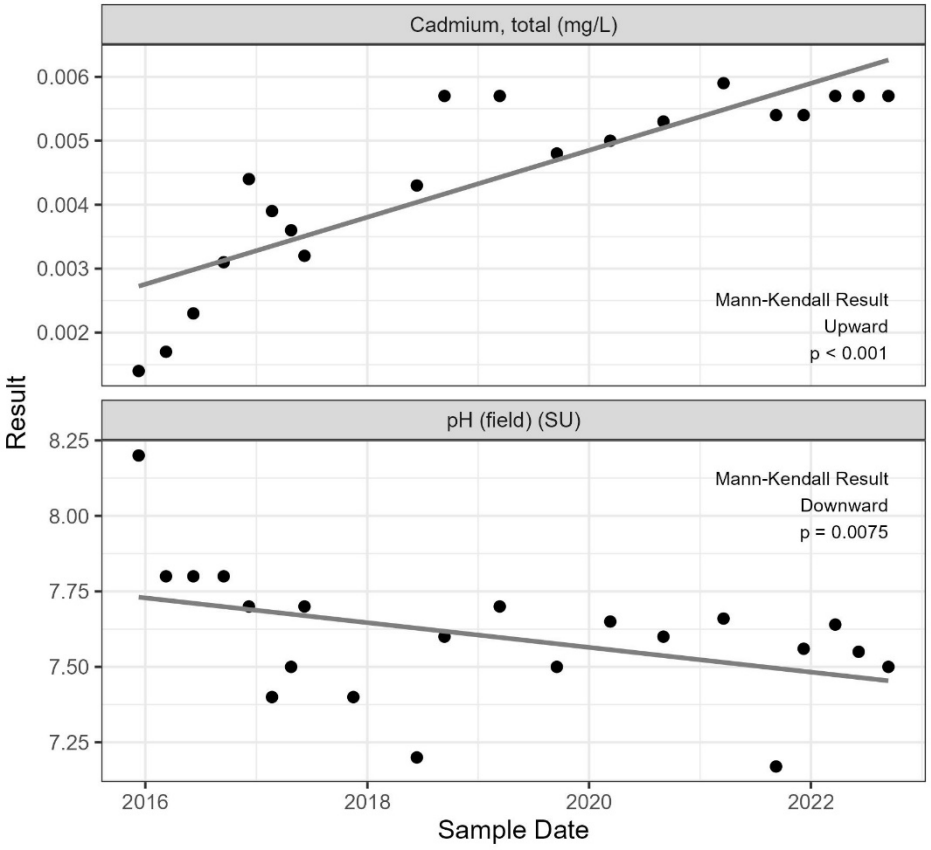

Figure B. Time Series Showing Mann-Kendall Trend Test Results for Cadmium and pH at Monitoring Well 22

Complexation with chloride and sulfate can also contribute to cadmium mobilization from the solid phase due to the formation of more mobile species (Kubier et al., 2019). Therefore, a basic cadmium speciation analysis was conducted using PHREEQC using the LLNL thermodynamic database[1] (United States Geological Survey [USGS], 2021). Samples included in the analysis were those collected under 40 C.F.R. § 257 monitoring, plus two samples collected in 2013. These earlier samples were included to achieve a more complete picture of geochemical conditions associated with low cadmium concentrations at monitoring well 22. Inputs to the speciation model were temperature, pH, redox potential, and concentrations of cadmium, chloride, and sulfate. For samples in which cadmium was not detected, the RL was used as the cadmium concentration input to the speciation model. Because redox measurements were not available for all samples, the median value (59.5 millivolts [mV], out of a range of -67 mV to 168 mV) was used as the redox input to the speciation model for all samples.

[1] Except for $Cd(SO_4)_2^{2-}$, which used thermodynamic data from the Oak Ridge National Laboratory AQUA-MER database.

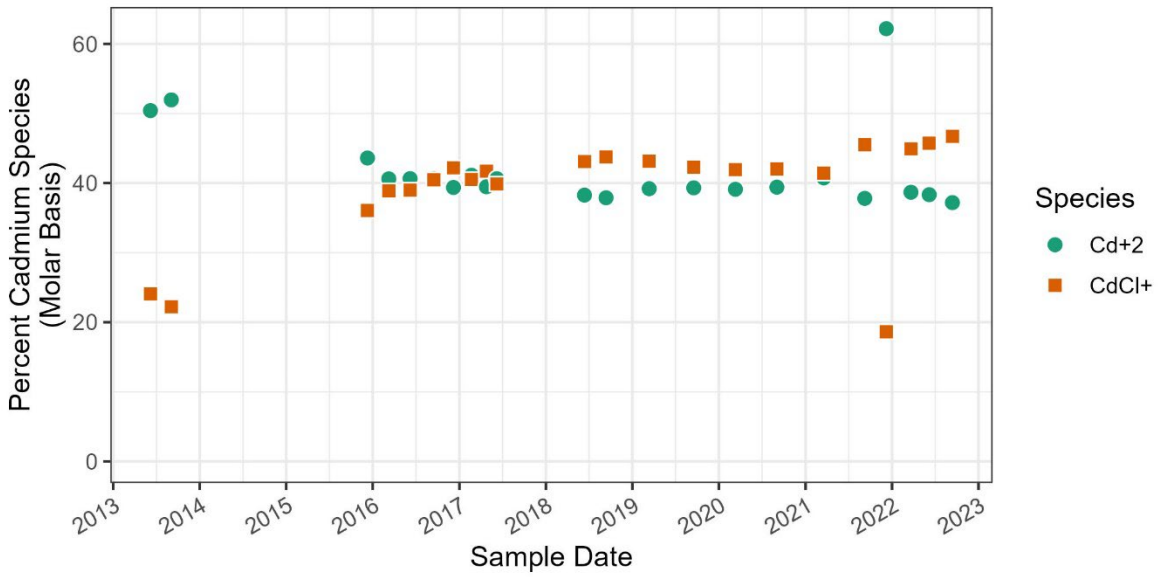

Figure C. Cadmium Speciation Results at Monitoring Well 22 (presented as the percent of total cadmium present on a molar basis)

Eight cadmium species[2] were evaluated for their contribution to total cadmium, and only Cd^{2+} and $CdCl^{+}$ contributed more than 1 percent to any sample (on a molar basis). **Figure C** shows the proportion of total cadmium that was present as Cd^{2+} and $CdCl^{+}$ in each sample. When total cadmium concentrations were low, Cd^{2+} was the dominant cadmium species. Due to its higher charge, Cd^{2+} is more likely to sorb to aquifer solids (Kubier et al., 2019). Increasing total cadmium concentrations coincide with an increasing prevalence, and eventual predominance, of $CdCl^{+}$, a more mobile cadmium species.

The downward trend in pH and the cadmium speciation analysis indicates that cadmium concentrations in groundwater samples from well 22 increased when geochemical conditions facilitated greater mobility of cadmium through dissolution out of the aquifer material due to lower pH and the increased formation of mobile $CdCl^{+}$. The increase in cadmium concentrations was likely due to the cadmium naturally present in the Henry Formation becoming mobilized due to changing geochemical conditions.

[2] Cd^{2+}, $CdOH^{+}$, $Cd(OH)_2$, $Cd(OH)Cl$, $CdCl^{+}$, $CdCl_2$, $CdSO_4$, $Cd(SO4)_2^{2-}$

4. CONCLUSIONS

Based on these three LOEs, it has been demonstrated that the OWAP is not the source of the cadmium SSL identified in well 22.

1. Concentrations of cadmium are lower than those observed in leachate samples.
2. Cadmium concentrations are negatively correlated with concentrations of CCR indicator parameters.
3. Cadmium concentrations were detected in nearby aquifer materials and geochemical conditions support mobilization.

Based on the LOEs presented, the following alternate sources are the cause of the SSL observed in the OWAP compliance well:

- Cadmium: SSL for cadmium may be caused by mobilization of naturally occurring cadmium out of aquifer materials due to favorable geochemical conditions.

This information serves as the written ASD report prepared in accordance with 40 C.F.R. § 257.95(g)(3)(ii) that the cadmium SSL observed during the A5D monitoring event was not caused by the OWAP but was from other sources.

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FIGURES

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
PART 257 REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
SITE FEATURE
PROPERTY BOUNDARY

0 200 400 Feet

MONITORING WELL LOCATION MAP

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\2021_Annual\GWM_CAR\Hennepin\OWAP_804\Figure 1 HEN OWAP MW Location Map.mxd

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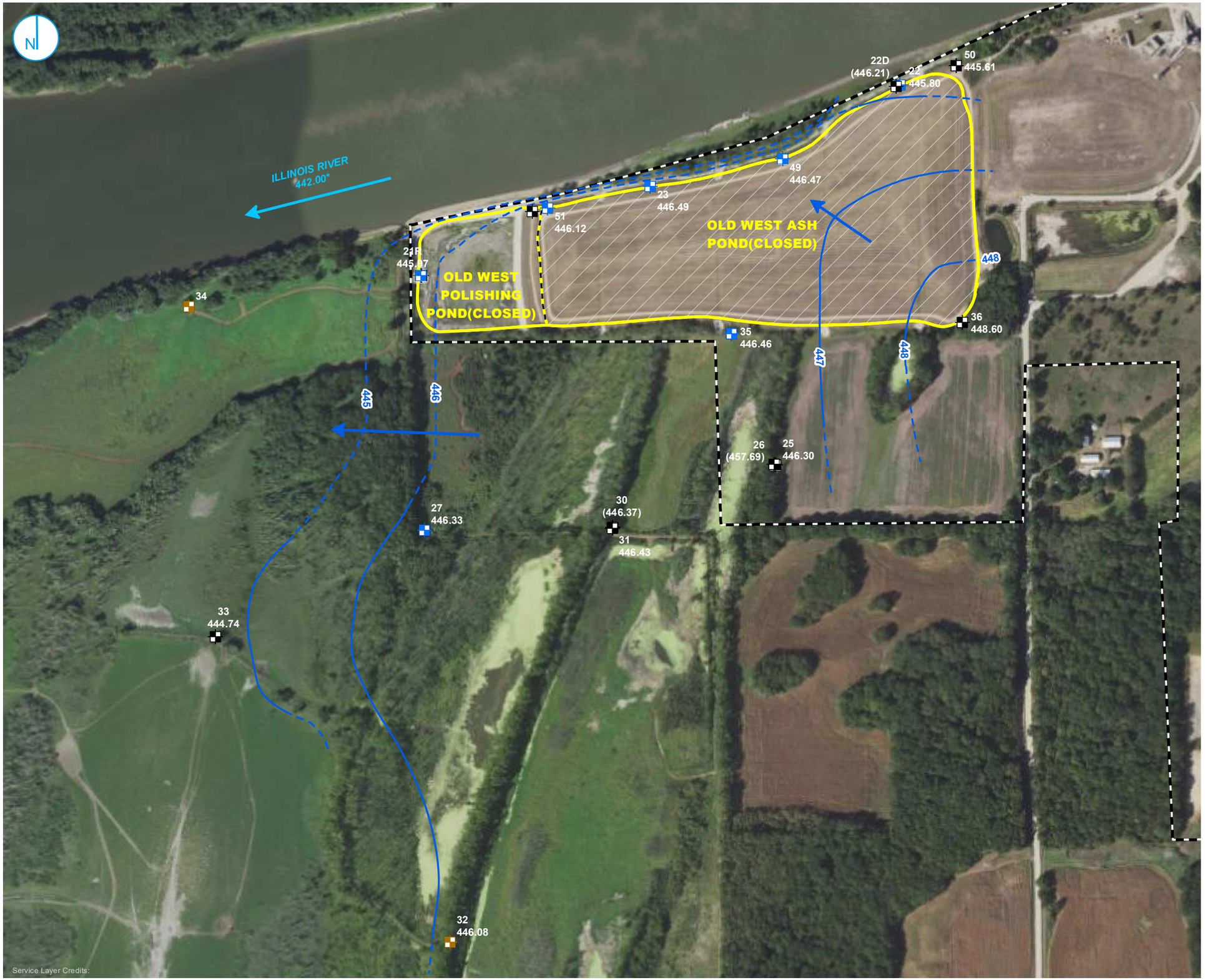

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
WEST ASH POND SYSTEM
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP
SEPTEMBER 13-14, 2022

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

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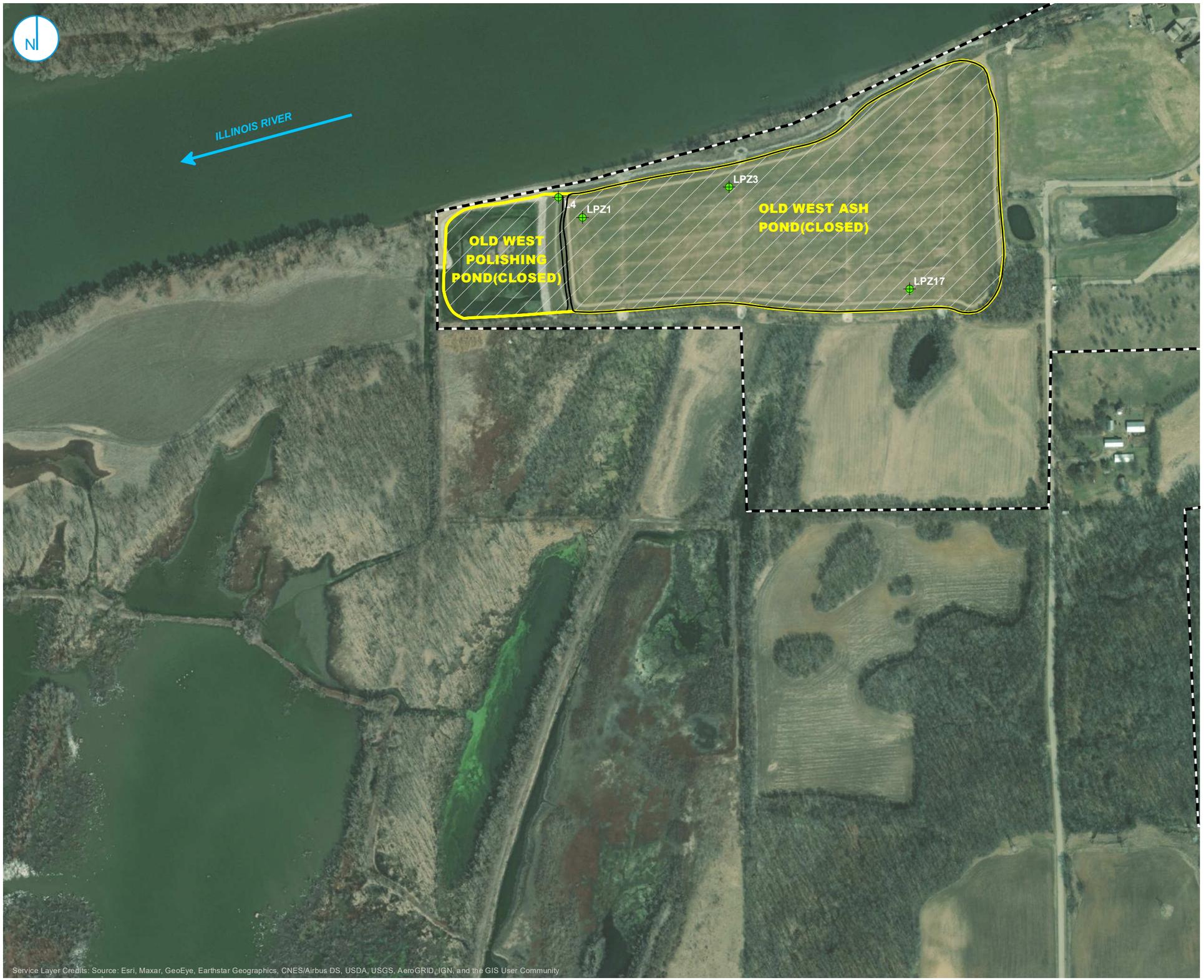


LEACHATE WELL

PART 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

0 200 400 Feet

LEACHATE SAMPLE LOCATION MAP

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

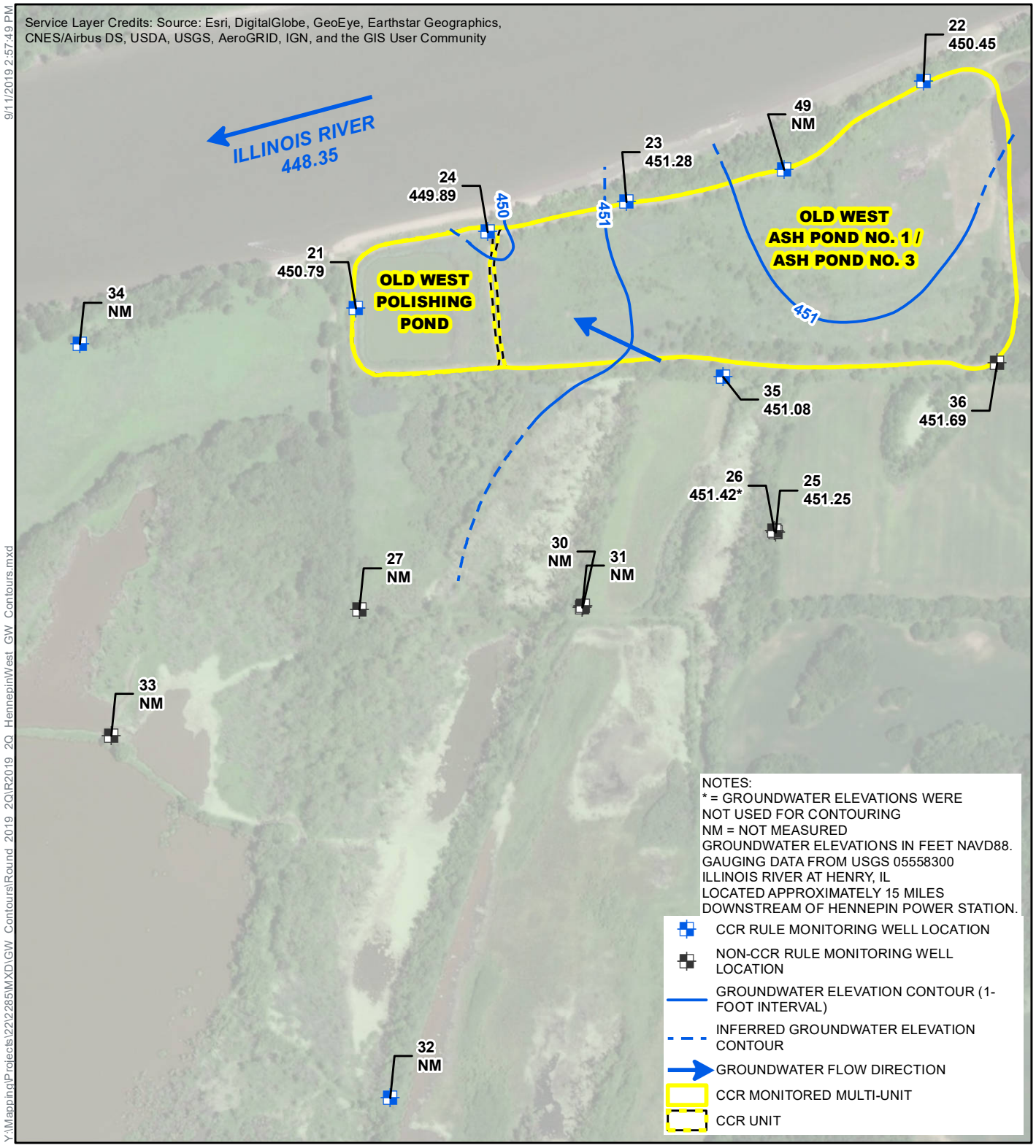
RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\Alt_Source_Dem\Hen\West\HEN OWAP Leachate Sample Location Map.mxd

PROJECT: 169000XXXX | DATED: 10/17/2022 | DESIGNER: galarnmc

APPENDICES

APPENDIX A
GROUNDWATER ELEVATION CONTOUR MAPS



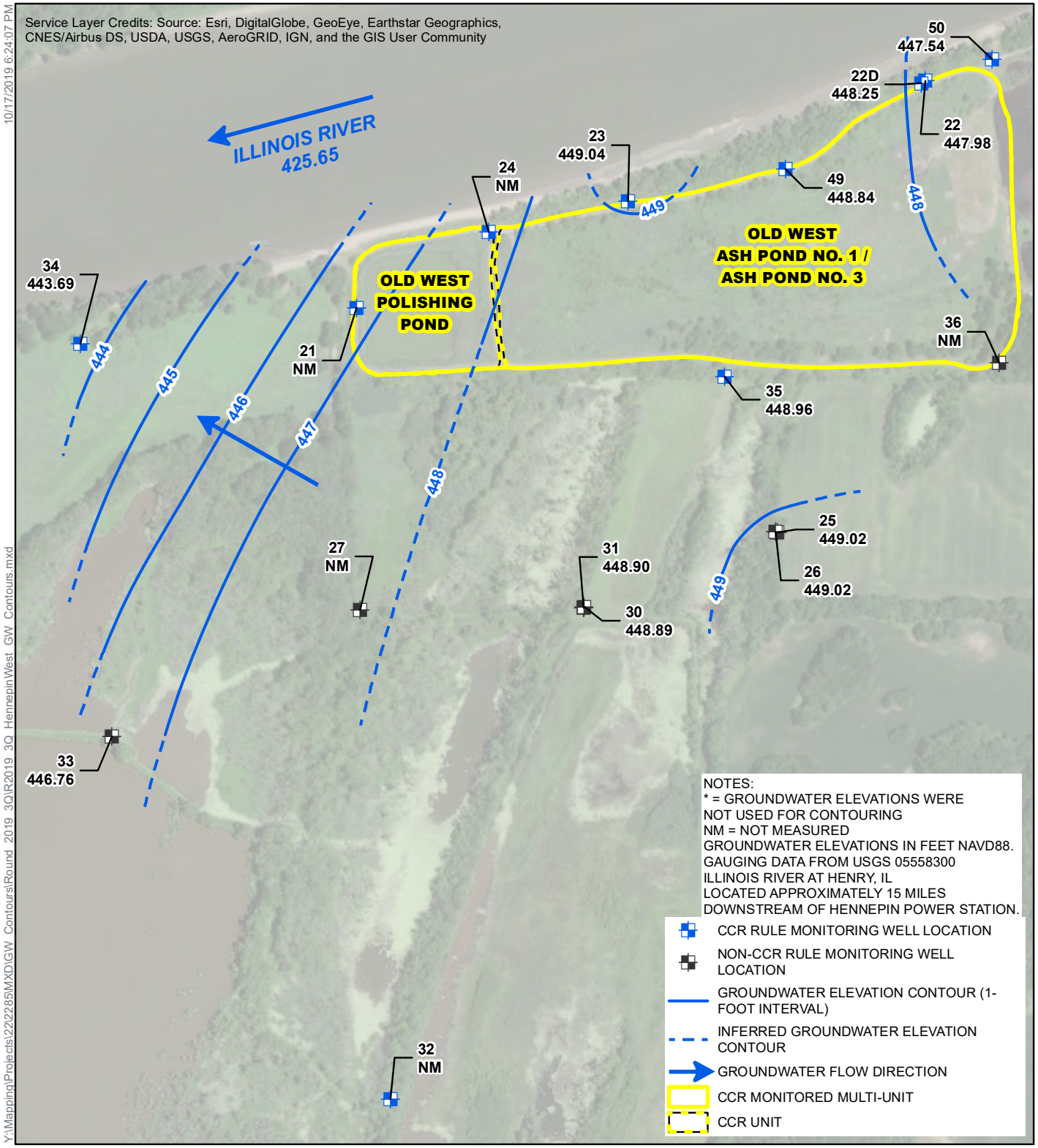
HENNEPIN OLD WEST ASH POND (POND NO.1 AND POND NO. 3) AND HENNEPIN OLD WEST POLISHING POND (UNIT ID: 804) GROUNDWATER ELEVATION CONTOUR MAP JUNE 18, 2019

CCR RULE GROUNDWATER MONITORING
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

0 125 250 500
Feet

N

O'BRIEN & GERE ENGINEERS, INC.



HENNEPIN OLD WEST ASH POND (POND NO.1 AND POND NO. 3) AND HENNEPIN OLD WEST POLISHING POND (UNIT ID: 804)
GROUNDWATER ELEVATION CONTOUR MAP
SEPTEMBER 17, 2019

CCR RULE GROUNDWATER MONITORING
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

0 125 250 500
Feet

N

O'BRIEN & GERE ENGINEERS, INC.

Prepared for
Dynegy Midwest Generation, LLC

Date
October 11, 2023

Project No.
1940103649-010

40 C.F.R. § 257.95(G)(3)(II): ALTERNATIVE SOURCE DEMONSTRATION

OLD WEST ASH POND (POND NO. 1 AND POND NO. 3) AND OLD WEST POLISHING POND

HENNEPIN POWER PLANT

HENNEPIN, ILLINOIS

CCR UNIT 804

RAMBOLL Bright ideas. Sustainable change.

CERTIFICATIONS

I, Eric J. Tlachac, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Eric J. Tlachac
Qualified Professional Engineer
062-063091
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: October 11, 2023

I, Brian G. Hennings, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Brian G. Hennings
Professional Geologist
196-001482
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Ramboll Americas Engineering Solutions, Inc.
Date: October 11, 2023

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CONTENTS

TABLES (IN TEXT)

FIGURES (IN TEXT)

FIGURES (ATTACHED)

APPENDICES

ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
AP2	Ash Pond No. 2
AP4	Ash Pond No. 4
ASD	Alternative Source Demonstration
CCR	coal combustion residuals
CCR Rule	40 C.F.R. § 257 Subpart D
Closure Plan	Closure and Post-Closure Care Plan
CMA	Corrective Measures Assessment
DMG	Dynegy Midwest Generation, LLC
EPRI	Electric Power Research Institute
Geosyntec	Geosyntec Consultants, Inc.
GWPS	Groundwater Protection Standard
Hennepin East	includes Landfill, AP2, AP4, and East Ash Pond
HPP	Hennepin Power Plant
IEPA	Illinois Environmental Protection Agency
LOE(s)	line(s) of evidence
mg/L	milligrams per liter
MNA	monitored natural attenuation
NAVD88	North American Vertical Datum of 1988
No.	Number
NRT/OBG	Natural Resource Technology, an OBG Company
OWAP	Old West Ash Pond (Pond Number No. 1 and Pond No. 3) and Old West Polishing Pond
OWPP	Old West Polishing Pond
Ramboll	Ramboll Americas Engineering Solutions, Inc.
RL	reporting limit
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
UA	Uppermost Aquifer
WAPS	West Ash Pond System CCR multi-unit, includes OWAP and OWPP

1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.95(g)(3)(ii) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of a Statistically Significant Level (SSL) over the Groundwater Protection Standard (GWPS) of constituents listed in Appendix IV of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSL(s), or that the SSL(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternative Source Demonstration [ASD]).

This ASD has been prepared on behalf of Dynegy Midwest Generation, LLC (DMG), by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide pertinent information pursuant to 40 C.F.R. § 257.95(g)(3)(ii) for the Old West Ash Pond (Pond Number [No.] 1 and Pond No. 3) (OWAP) and Old West Polishing Pond (OWPP), located at Hennepin Power Plant (HPP) near Hennepin, Illinois. The OWAP and OWPP are constituent parts of the CCR multi-unit system, collectively referred to as the West Ash Pond System (WAPS).

The most recent Assessment Monitoring sampling event (A6) samples were collected on February 28, 2023, and analytical data were received on April 14, 2023. Analytical data from A6 were evaluated in accordance with Multi-Site Sampling and Analysis Plan (SAP) (Ramboll, 2023) to determine any Statistically Significant Increases (SSIs) of Appendix III parameters over background concentrations and SSLs of Appendix IV parameters over GWPSs. That evaluation was completed by July 13, 2023, and identified the following SSLs at compliance monitoring wells:

- Arsenic at wells 21R and 51
- Cadmium at well 22

A Corrective Measures Assessment (CMA) was completed in 2019 that applies to the arsenic SSL, and further evaluation of monitored natural attenuation (MNA) as an associated groundwater remedy is in progress.

Pursuant to 40 C.F.R. § 257.95(g)(3)(ii), the lines of evidence (LOEs) described in **Section 3** demonstrate that sources other than the WAPS were the cause of the cadmium SSL listed above. This ASD was completed by October 11, 2023, within 90 days of determination of the SSL, as required by 40 C.F.R. § 257.95(g)(3)(ii).

2. BACKGROUND

2.1 Site Location and Description

The HPP is located in the northwest quarter of Section 26, Township 33 North, Range 2 West, Putnam County, Illinois and approximately 3 miles north-northeast of the Village of Hennepin.

The WAPS is one of four CCR units regulated under 40 C.F.R. § 257 Subpart D (CCR Rule) at the HPP. Three CCR units (the Landfill, Ash Pond No. 2 [AP2], and the East Ash Pond) and one unit not regulated by the CCR Rule (Ash Pond No. 4 [AP4]) are located adjacent to each other and east of the HPP and are collectively known as Hennepin East. The WAPS is located west of the HPP. Areas surrounding the WAPS include agricultural land with scattered groupings or rows of trees to the southeast and low-lying floodplains of the Donnelley Wildlife Management Area to the southwest and west. The WAPS and surrounding properties are shown on **Figure 1**.

2.2 Groundwater Monitoring

The WAPS groundwater monitoring system for compliance with the CCR Rule consists of two background monitoring wells (32 and 34) and nine compliance monitoring wells (21R, 22, 22D, 23, 27, 35, 49, 50, and 51) (Ramboll, 2022a). A map showing the groundwater monitoring system, including the CCR unit and monitoring wells, is presented in **Figure 1**.

Groundwater samples are collected and analyzed in accordance with the Multi-Site SAP (Ramboll, 2023). Statistical evaluation of analytical data is performed in accordance with Multi-Site Statistical Analysis Plan (Ramboll, 2022b).

2.3 Site History

The HPP has two coal-fired generating units constructed in 1953 and 1959 with a total capacity of 210 Megawatts. Operations were ceased in November 2019.

DMG operated the WAPS from 1952 through 1996. It consists of two closed units, the OWAP and the OWPP (**Figure 1**). The OWAP consists of the 9.3-acre Pond No. 1 at the eastern end of the impoundment and the 16.4-acre Pond No. 3 within the central portion of the impoundment. The 4.7-acre OWPP is situated at the western end of the impoundment. All ponds were previously bermed to approximately 15 feet above grade using locally occurring sandy soils. A portion of the OWPP berm was removed after CCR material was removed during closure of this unit in 2020.

During operation, service water was used to sluice fly ash, bottom ash, and low-volume wastes to the WAPS. At the time it was removed from service in late 1996, there was no surface water discharge and all sluice water ex-filtrated via evapotranspiration, seepage through the berms, or leakage through the base of the ponds. Coal ash sluiced to the WAPS was a by-product of the combustion of high-sulfur Illinois coal. The operational history of the WAPS is summarized in **Table A** on the following page.

Table A. Operational History of the West Ash Pond System

Date	Event
1952-1955	Construction of OWAP, Pond No. 1. Berms were constructed from locally sandy materials to an original elevation (since modified) of 457 feet NAVD88.
1968	Construction of OWAP, Pond No. 3. Berms were constructed to an elevation of 457 feet NAVD88.
1979	Berms surrounding the OWAP Ponds No. 1 and No. 3 were raised by three feet to an elevation of 460 feet NAVD88.
1988-1989	Ponds No. 1 and No. 3 within the OWAP were consolidated and divided into primary and secondary cells, and the berm around the primary portion was raised five feet to an elevation of 465 feet NAVD88. It was after this consolidation that surface water discharge from the impoundment ceased.
1996	OWAP Ponds No. 1 and No. 3 were removed from service.
2020	OWAP Ponds No. 1 and No. 3 were closed in place and OWPP was closed by removal (CCR consolidated into Ponds No. 1 and No. 3) in accordance with the IEPA-approved closure plan.

NAVD88 = North American Vertical Datum of 1988

The *Closure and Post-Closure Care Plan, Old West Ash Pond, Old West Polishing Pond at DMG, Hennepin Power Station* (Closure Plan) was submitted to Illinois Environmental Protection Agency (IEPA) in 2017 (Geosyntec Consultants, Inc. [Geosyntec], 2017). The Closure Plan was approved by IEPA in a letter dated June 19, 2018. The approved Closure Plan summarized the planned closure of the WAPS, which included dewatering the CCR, if needed, mechanical excavation of material from the OWPP for use as structural fill in the WAPS, grading within the WAPS, constructing an alternative cover system consisting of geomembrane and vegetated cover soils in direct contract with the graded CCR, and establishment of a vegetative cover. Closure construction was completed on November 17, 2020.

2.4 Site Hydrogeology and Stratigraphy

Information pertinent to this ASD is included in this report; however, a detailed hydrogeological assessment of the site hydrogeology and stratigraphy of the HPP was completed and included in the Hydrogeologic Site Characterization Report, submitted as part of the Closure Plan (NRT/OBG, 2017).

There are three dominant geomorphic features in the immediate vicinity of the HPP: an upper river terrace at an elevation of about 500 to 550 feet NAVD88, a lower river terrace at an elevation of about 450 to 460 feet NAVD88, and the current river valley filled with alluvium to an elevation of about 445 feet NAVD88. The HPP and the eastern portion of the WAPS (OWAP Pond No. 1) are on the lower terrace. The western portion of the WAPS (OWAP Pond No. 3 and OWPP) overlies alluvium.

The hydrogeological assessment identified that the stratigraphy within and immediately surrounding the WAPS consists of fill, unlithified river alluvium, and Pleistocene-age glacial outwash deposits overlying Pennsylvanian-age shale bedrock. The perimeter berms of the WAPS contain variable amounts of CCR and re-worked native silt, clay, and sand. Where undisturbed or

partially excavated, the native surficial soil at the site is poorly drained, moderately permeable silty clay loam formed as alluvium in floodplains.

There are two hydrogeologic units present at the HPP: alluvium and Henry Formation sands and gravels. The river laid deposits are identified as Cahokia Alluvium. The Henry Formation sands and gravels make up the upper and lower terraces and fill the valley beneath the alluvium. The Henry Formation and alluvium together comprise the Uppermost Aquifer (UA) at the WAPS and extend from the water table to the bedrock.

The WAPS overlies both glacial deposits (Henry Formation) and alluvium (Cahokia Alluvium). The WAPS, specifically OWAP Pond No. 1, rests on top of lower terrace glacial deposits, and the eastern portion of Pond No. 3 overlies alluvial sand. The western portion of Pond No. 3 and the OWPP overlie silty clay alluvial channel fill deposits.

The Pennsylvanian-age bedrock consists of interbedded layers of shale with thin limestone, sandstone, and coal beds. The shale bedrock unit has low hydraulic conductivity and defines the lower boundary of the UA.

The direction of groundwater flow and hydraulic gradient within the UA varies with the elevation of the Illinois River (select groundwater elevation contour maps are provided in **Appendix A**). During normal river stage the direction of groundwater flow is most often toward the river, but comparison of groundwater and river elevation data indicate reversals in this flow direction during times of high river elevations. The relative duration of these events is short, which leads to the determination of a predominant groundwater flow direction toward the river.

Groundwater elevations for the WAPS during the A6 sampling event on February 28, 2023 are shown in **Figure 2** and ranged from 446.09 feet NAVD88 (in well 23) to 447.20 feet NAVD88 (in well 50). During this monitoring event, the Illinois River elevation was observed to be greater than the groundwater elevations observed in wells near the river, which can lead to temporary reversal in groundwater flow as mentioned in the preceding paragraph. The groundwater elevation contours on the potentiometric surface map (**Figure 2**) illustrate the presence of relatively high groundwater elevations originating from the Illinois River to the north. Under these hydraulic conditions, groundwater will flow towards the lower heads (*i.e.,* well 23).

3. ALTERNATIVE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.95(g)(3)(ii), this ASD demonstrates that sources other than the WAPS (the CCR unit) caused the cadmium SSL. LOEs supporting this ASD include the following:

1. Concentrations of cadmium in porewater samples are lower than those observed in well 22.
2. Cadmium concentrations are not correlated with concentrations of CCR indicator parameters.
3. An aquifer solids and geochemical evaluation identified naturally occurring cadmium associated with the subsurface alluvium as a source of cadmium in the Uppermost Aquifer that can be mobilized under declining pH conditions observed at the WAPS.

Data and information supporting these LOEs are discussed in more detail below.

3.1 LOE #1: Concentrations of Cadmium in Porewater Samples are Lower Than Those Observed in Well 22

Porewater samples were collected from multiple locations shown on **Figure 3** within the WAPS in April and September of 2017 (**Appendix B**). Analytical results from locations L4, LPZ1, LPZ3, and LPZ17, sampled on April 25, 2017, indicate that total cadmium concentrations were less than laboratory reporting limits (RL) (less than 0.001 milligrams per liter [mg/L]). Analytical results from locations L4 and LPZ17, sampled on September 6, 2017, indicate that the total cadmium concentration in the sample from L4 was below the RL (less than 0.001 mg/L) and the total cadmium concentration in the sample from LPZ17 was 0.0013 mg/L.

The cadmium concentrations detected in the leachate samples are less than the lower confidence limit of cadmium concentrations observed in well 22 (0.00614 mg/L). Analytical data used to support the calculation of lower confidence limits are included in **Appendix C**.

3.2 LOE #2: Cadmium Concentrations are Not Correlated with Concentrations of CCR Indicator Parameters

Boron and sulfate are common indicators of CCR impacts to groundwater due to their leachability from CCR and mobility in groundwater (Electric Power Research Institute [EPRI], 2012). If an SSL is identified for a monitored parameter but concentrations of boron and sulfate are not correlated with that parameter, it is unlikely that the CCR unit is the source of the SSL.

Figure A on the following page provides a scatter plot of cadmium versus boron and sulfate concentrations (collected from 2015 through the A6 sampling event) in monitoring well 22 (the location of the cadmium SSL), along with the results of a Kendall correlation test for non-parametric data (these data were determined to be not normally distributed). The results of the test at each well are described by the p-value and tau (Kendall correlation coefficient) included in each plot. Typically, a p-value greater than 0.05 is considered to be a statistically insignificant relationship. The range of tau falls between -1 and 1, with a perfect correlation equal to -1 or 1. The closer tau is to 0, the less of a correlation exists in the data.

The results of the correlation analyses indicate that concentrations of cadmium observed at monitoring well 22 are not correlated with concentrations of boron and sulfate, common indicators of CCR impacts to groundwater. **Figure A** illustrates the inverse relationship between cadmium concentrations and boron or sulfate concentrations in groundwater at monitoring well 22, where the p-values are less than 0.001 and tau values are negative.

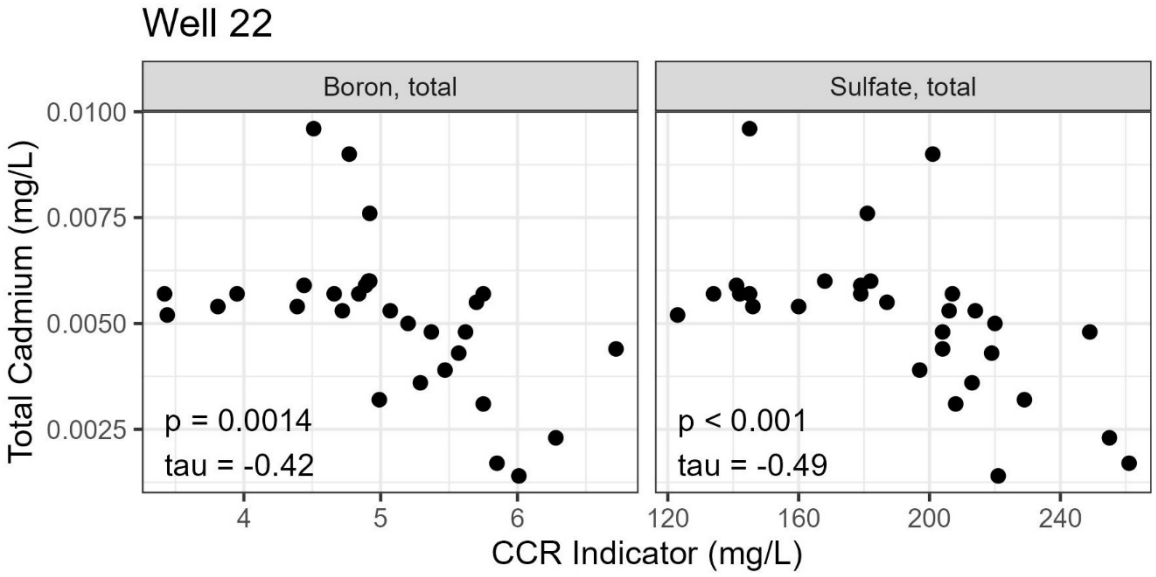

Figure A. Scatter Plot of Cadmium Versus Boron and Sulfate Concentrations at Monitoring Well 22

Cadmium concentrations are not correlated with boron and sulfate concentrations in compliance monitoring well 22, indicating the WAPS is not the source of the cadmium SSL. Analytical data used to support this correlation analysis is included in **Appendix C**.

3.3 LOE #3: An Aquifer Solids and Geochemical Evaluation Identified Naturally Occurring Cadmium Associated with the Subsurface Alluvium as a Source of Cadmium in the Uppermost Aquifer that can be Mobilized Under Declining pH Conditions Observed at the WAPS

Solid phase analyses were completed on samples of UA materials collected from the Site to support the conclusion that cadmium concentrations in groundwater observed in well 22 are associated with naturally occurring cadmium in the UA materials. A review of the geochemical and site conditions to evaluate the influence of the UA solid-phase mineralogy and geochemistry on groundwater composition was completed by Geosyntec and is included as **Appendix D**. The following conclusions were made based on the results of the aquifer solids evaluation and geochemical modeling:

- Solid-phase samples collected from soil borings completed near background well 34 and compliance well 22 contained cadmium, with the highest total cadmium concentrations observed in samples collected from the screened interval of well 22.
- The majority of cadmium in the solid phase is associated with the weak acid extractable fraction (which includes carbonates) and the reducing agent extractable fraction (which includes iron/manganese oxides). Carbonate minerals make up approximately 18-25% of

the solid phase materials and magnetite (an iron oxide mineral) was present in all solid phase samples.

- Literature supports two potential mechanisms of cadmium mobilization under declining pH conditions observed at the WAPS: the dissolution of calcite containing coprecipitated cadmium, and the desorption of cadmium from iron oxide mineral surfaces.
- There has been a downward shift in pH in groundwater at well 22 since approximately 2013 with a corresponding increase in cadmium concentrations.
- Thermodynamic reaction pathway modeling supports the conclusion that both mechanisms of cadmium mobilization (dissolution of cadmium-substituted carbonate minerals and desorption from iron oxides) should occur within the range of the observed groundwater pH decrease at well 22.

Evaluation of the solid phase material and geochemical modeling results using site-specific solid-phase data suggest that naturally occurring cadmium associated with the subsurface alluvium comprising the UA at the Site may drive the cadmium concentrations at well 22 under changing geochemical conditions.

4. CONCLUSIONS

Based on these three LOEs, it has been demonstrated that the WAPS is not the source of the cadmium SSL identified in well 22.

1. Concentrations of cadmium in porewater samples are lower than those observed in well 22.
2. Cadmium concentrations are not correlated with concentrations of CCR indicator parameters.
3. An aquifer solids and geochemical evaluation identified naturally occurring cadmium associated with the subsurface alluvium as a source of cadmium in the Uppermost Aquifer that can be mobilized under declining pH conditions observed at the WAPS.

Based on the LOEs presented, the following alternative sources are the cause of the SSL observed in the WAPS compliance well 22:

- Cadmium: SSL for cadmium is caused by mobilization of naturally occurring cadmium out of aquifer materials due to favorable geochemical conditions.

This information serves as the written ASD report prepared in accordance with 40 C.F.R. § 257.95(g)(3)(ii) that the cadmium SSL observed during the A6 monitoring event was not caused by the WAPS but was from other sources.

5. REFERENCES

Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 257, Subpart D, Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, effective April 17, 2015. Accessed from URL https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-257/subpart-D#page-top

Electric Power Research Institute (EPRI), 2012. Groundwater Quality Signatures for Assessing Potential Impacts from Coal Combustion Product Leachate. EPRI, Palo Alto, CA. 1017923.

Geosyntec Consultants, Inc. (Geosyntec), 2017. Closure and Post Closure Care Plan, Old West Ash Pond, Old West Polishing Pond at Dynegy Midwest Generation, LLC, Hennepin Power Station.

Geosyntec Consultants, Inc., 2023. Technical Memorandum – Evaluation of Cadmium Sources within Aquifer Solids, Hennepin Power Plant – West Ash Pond System, September 12, 2023.

Natural Resource Technology, an OBG Company (NRT/OBG), 2017. Hydrogeologic Site Characterization Report, West Ash Pond System, Hennepin Power Station, Hennepin, Illinois. December 20, 2017.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022a. 40 C.F.R. § 257 Groundwater Monitoring Plan, West Ash Pond System, Hennepin Power Plant, Hennepin, Illinois. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022b. *Multi-Site Statistical Analysis Plan.* December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023. *Multi-Site Sampling and Analysis Plan, Revision 1*. October 10, 2023.

FIGURES

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
SITE FEATURE
PROPERTY BOUNDARY

0 200 400 Feet

MONITORING WELL LOCATION MAP

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\2021_Annual\GWM_CAR\Hennepin\OWAP_804\Figure 1 HEN OWAP MW Location Map.mxd

PROJECT: 169000XXXX | DATED: 1/5/2022 | DESIGNER: galarmnc

COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

NOTES:

1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.

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

*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

POTENTIOMETRIC SURFACE MAP FEBRUARY 28, 2023

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

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LEACHATE WELL

40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

0 200 400 Feet

LEACHATE SAMPLE LOCATION MAP

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

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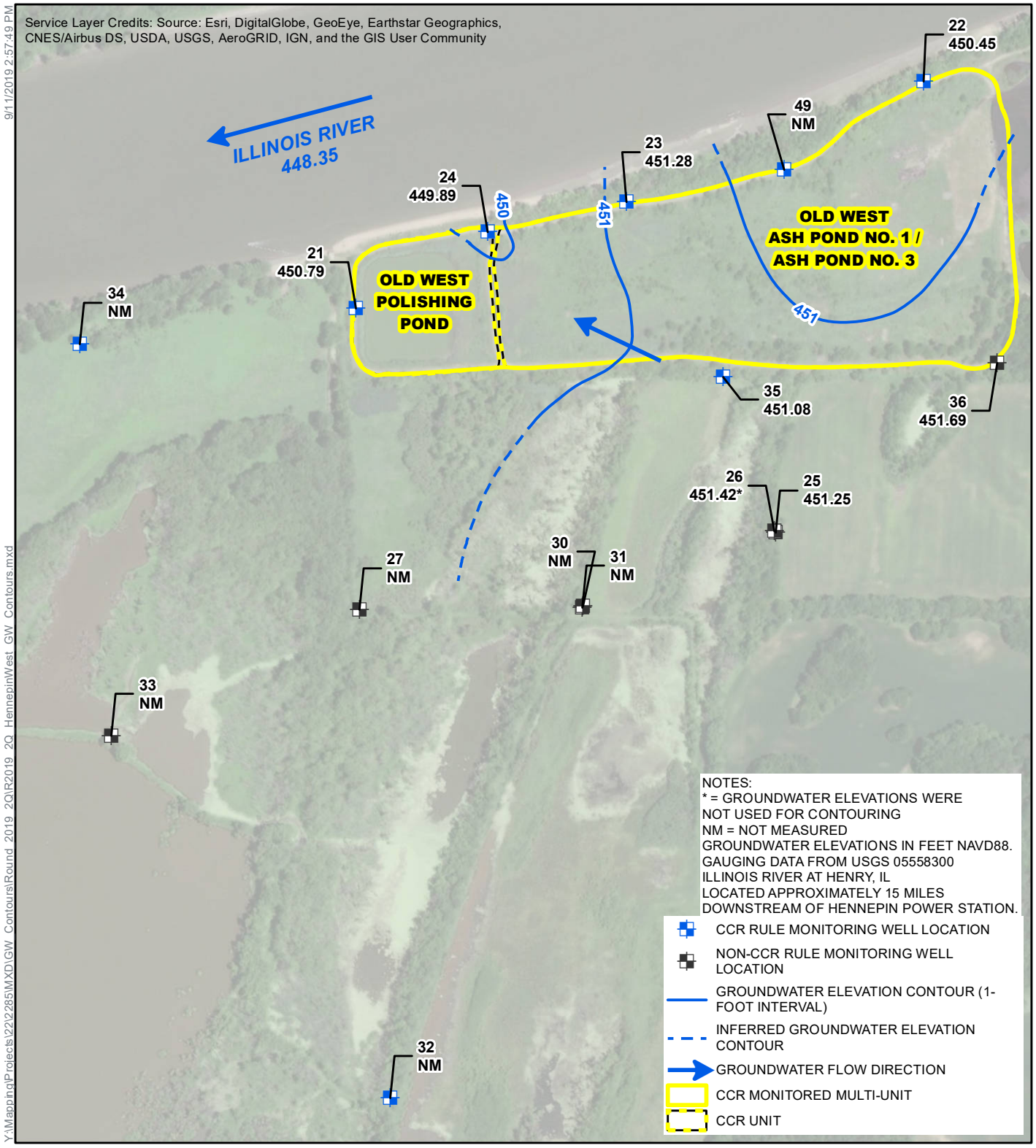
PROJECT: 169000XXXX | DATED: 10/17/2022 | DESIGNER: galarnmc

APPENDICES

APPENDIX A
GROUNDWATER ELEVATION CONTOUR MAPS



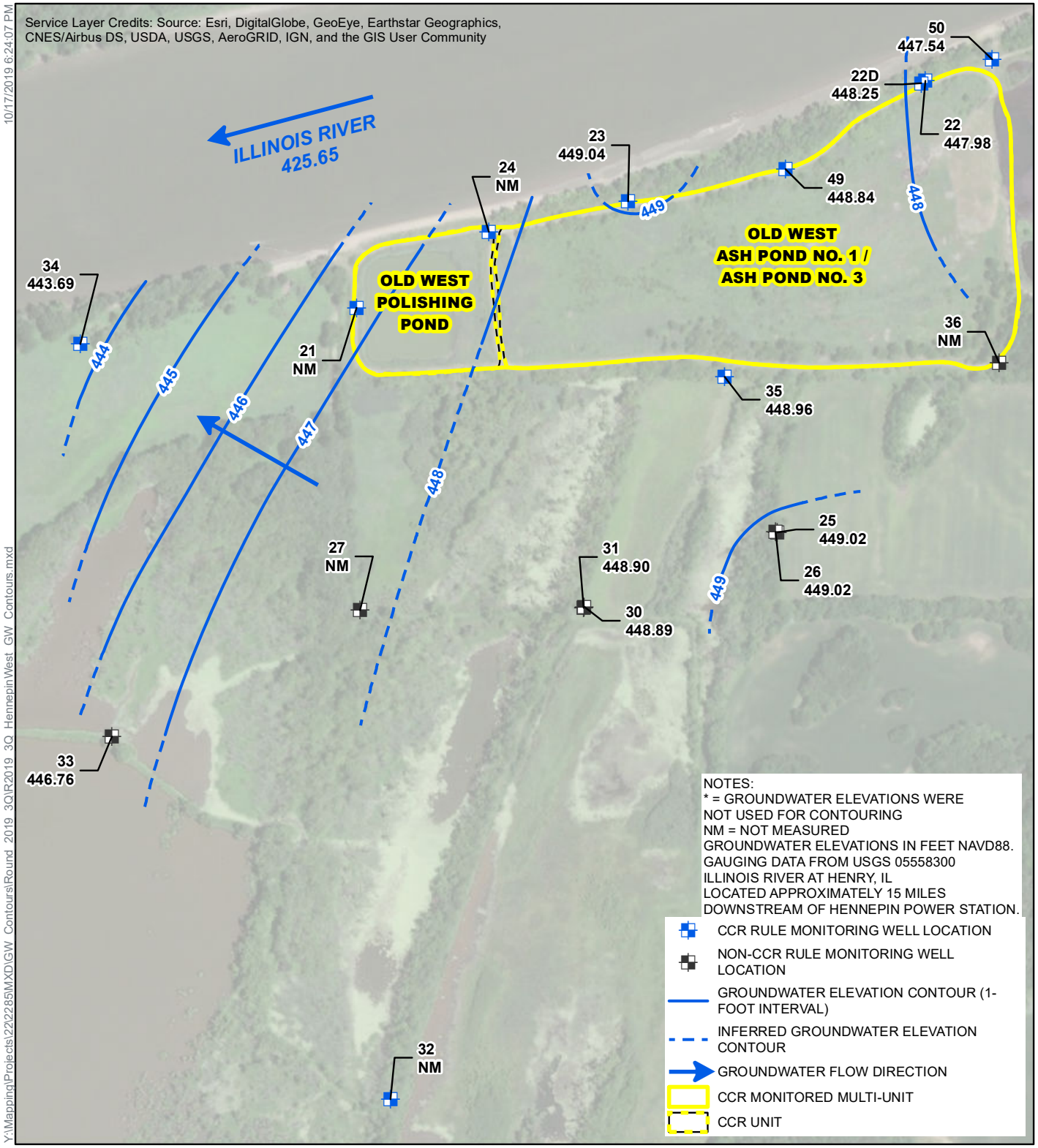
HENNEPIN OLD WEST ASH POND (POND NO.1 AND POND NO. 3) AND HENNEPIN OLD WEST POLISHING POND (UNIT ID: 804) GROUNDWATER ELEVATION CONTOUR MAP JUNE 18, 2019

CCR RULE GROUNDWATER MONITORING
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

0 125 250 500
Feet

N

O'BRIEN & GERE ENGINEERS, INC.



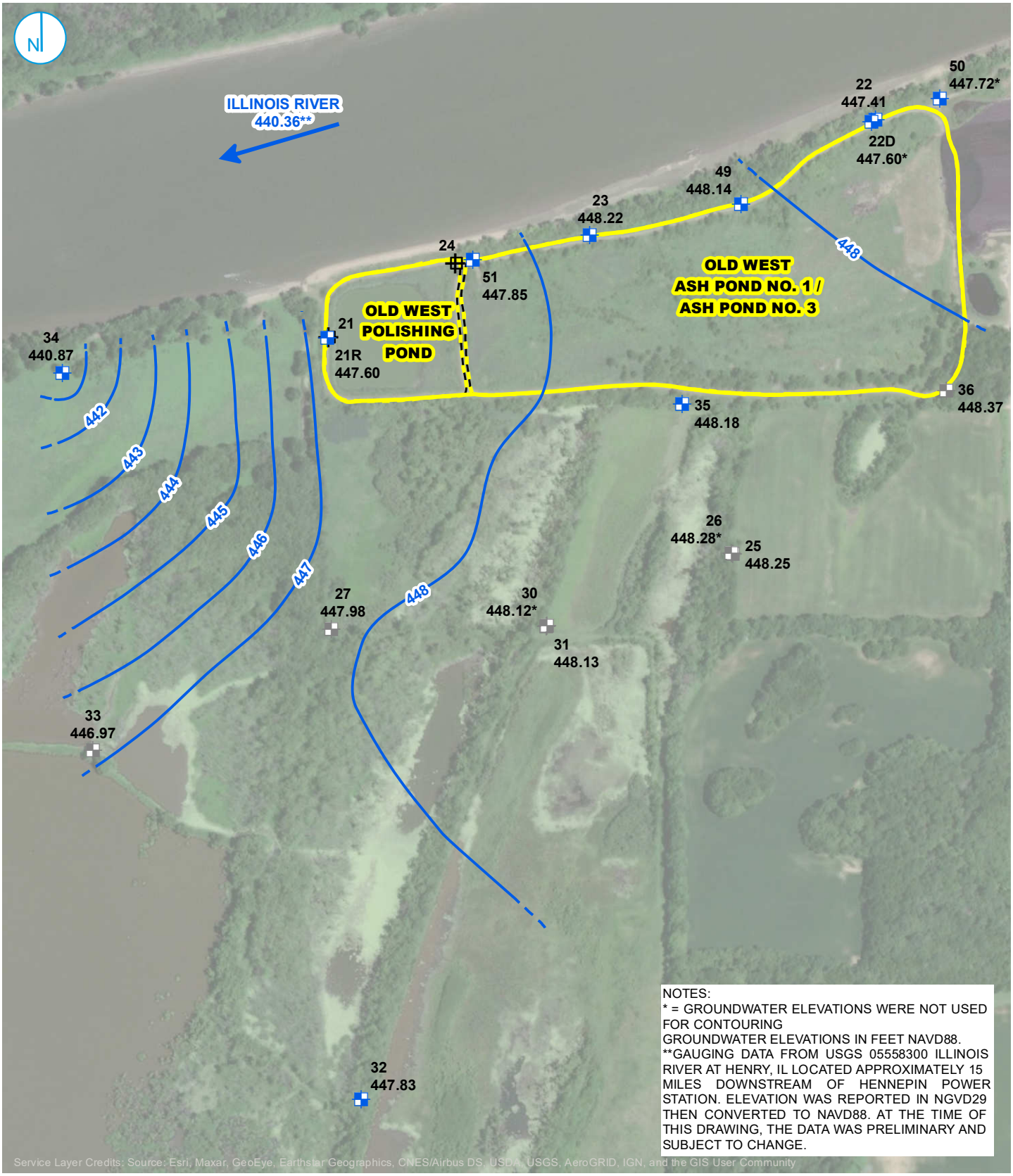
HENNEPIN OLD WEST ASH POND (POND NO.1 AND POND NO. 3) AND HENNEPIN OLD WEST POLISHING POND (UNIT ID: 804)
GROUNDWATER ELEVATION CONTOUR MAP
SEPTEMBER 17, 2019

CCR RULE GROUNDWATER MONITORING
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

0 125 250 500
Feet

N

O'BRIEN & GERE ENGINEERS, INC.



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- CCR RULE MONITORING WELL
- NON-CCR RULE MONITORING WELL
- ABANDONED MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR MONITORED MULTI-UNIT
- CCR MONITORED UNIT

0 250 500 Feet

GROUNDWATER ELEVATION CONTOUR MAP
SEPTEMBER 2, 2020

HENNEPIN OLD WEST ASH POND (POND NO.1 AND POND NO. 3) AND HENNEPIN OLD WEST POLISHING POND (UNIT ID: 804)
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

BACKGROUND WELL
COMPLIANCE WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
PART 257 REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

GROUNDWATER CONTOUR ELEVATION MAP MARCH 17, 2021

2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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BACKGROUND WELL
COMPLIANCE WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW ARROW
PART 257 REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

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

0 200 400 Feet

GROUNDWATER CONTOUR ELEVATION MAP SEPTEMBER 8, 2021

2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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PROJECT: 169000XXXX | DATED: 3/25/2022 | DESIGNER: galammc

BACKGROUND WELL
COMPLIANCE WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
PART 257 REGULATED UNIT (SUBJECT UNIT)
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

GROUNDWATER CONTOUR ELEVATION MAP MARCH 21, 2022

ALTERNATE SOURCE DEMONSTRATION
OLD WEST ASH POND

HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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PROJECT: 169000XXXX | DATED: 10/13/2022 | DESIGNER: galarnmc

COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

PART 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

NOTES:

1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.

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

*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

0 200 400 Feet

GROUNDWATER CONTOUR ELEVATION MAP SEPTEMBER 13 AND 14, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
OLD WEST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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

APPENDIX B
POREWATER ANALYTICAL DATA

May 08, 2017

Steve Wiskes
Natural Resource Technology, Inc.
2422 East Washington Street
Suite 104
Bloomington, IL 61704
TEL: (414) 837-3614
FAX: (414) 837-3608

RE: Hennepin Pond 1 & 2 Additional Testing **WorkOrder:** 17040224

Dear Steve Wiskes:

TEKLAB, INC received 9 samples on 4/27/2017 4:40:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Project Manager
(618)344-1004 ex 16
MAustin@teklabinc.com

Report Contents

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17

This reporting package includes the following:

Definitions

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Abbr	Definition
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
E -	Value above quantitation range	H -	Holding times exceeded
I -	Associated internal standard was outside method criteria	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

Case Narrative

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17

Cooler Receipt Temp: 4.62 °C

An employee of Teklab, Inc. collected the sample(s).

LPZ-5 will not be reported; the well was dry. TM/EAH 4/27/17

LPZ-17 to be used as alternate sampling point for LPZ-5. MLA 5/1/17

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road	3920 Pintail Dr	8421 Nieman Road	5445 Horseshoe Lake Road
	Collinsville, IL 62234-7425	Springfield, IL 62711-9415	Lenexa, KS 66214	Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	KNelson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2018	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2017	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2017	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2017	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Indiana	ISDH	C-IL-06		1/31/2018	Collinsville
Kentucky	KDEP	98006		12/31/2017	Collinsville
Kentucky	UST	0073		1/31/2018	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Missouri	MDNR	930		1/31/2018	Collinsville
Oklahoma	ODEQ	9978		8/31/2017	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-001 **Client Sample ID:** L4

Matrix: LEACHATE **Collection Date:** 04/25/2017 17:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**11.10**	ft	1	04/25/2017 0:00	R232332
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**7.60**		1	04/25/2017 17:22	R232332
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**< 1.0**	NTU	1	04/25/2017 17:22	R232332
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-149**	mV	1	04/25/2017 17:22	R232332
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**940**	µS/cm	1	04/25/2017 17:22	R232332
STANDARD METHODS 2550 B FIELD								
Temperature		0		**19.54**	°C	1	04/25/2017 17:22	R232332
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	04/25/2017 17:22	R232332
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:21	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**316**	mg/L	1	05/02/2017 16:21	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**900**	mg/L	1	04/28/2017 14:54	R232219
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**370**	mg/L	10	05/02/2017 1:02	R232246
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.28**	mg/L	1	04/28/2017 16:21	R232156
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**10**	mg/L	1	05/02/2017 0:54	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**190**	mg/L	1	04/28/2017 18:45	129686
Magnesium	NELAP	0.050		**26.9**	mg/L	1	04/28/2017 18:45	129686
Potassium	NELAP	0.500		**9.33**	mg/L	5	05/01/2017 18:38	129686
Sodium	NELAP	0.050		**58.4**	mg/L	1	04/28/2017 18:45	129686
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**3.0**	µg/L	5	05/02/2017 12:07	129687
Arsenic	NELAP	1.0		**35.1**	µg/L	5	05/02/2017 12:07	129687
Barium	NELAP	1.0		**50.6**	µg/L	5	05/02/2017 12:07	129687
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687
Boron	NELAP	25.0		**21200**	µg/L	5	05/04/2017 10:28	129687
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687
Chromium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687
Lithium		1.0		**45.5**	µg/L	5	05/02/2017 12:07	129687
Molybdenum	NELAP	1.0		**77.9**	µg/L	5	05/02/2017 12:07	129687
Selenium	NELAP	1.0		**1.4**	µg/L	5	05/02/2017 12:07	129687
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:07	129687

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-001
Client Sample ID: L4
Matrix: LEACHATE
Collection Date: 04/25/2017 17:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 12:14	129695

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-002 **Client Sample ID:** LPZ-1

Matrix: LEACHATE **Collection Date:** 04/25/2017 17:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**3.94**	ft	1	04/25/2017 0:00	R232332
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**9.10**		1	04/25/2017 17:34	R232332
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**5.6**	NTU	1	04/25/2017 17:34	R232332
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-177**	mV	1	04/25/2017 17:34	R232332
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**1550**	µS/cm	1	04/25/2017 17:34	R232332
STANDARD METHODS 2550 B FIELD								
Temperature		0		**18.67**	°C	1	04/25/2017 17:34	R232332
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	04/25/2017 17:34	R232332
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**84**	mg/L	1	05/02/2017 16:29	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:29	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**1600**	mg/L	1	04/28/2017 14:55	R232219
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**926**	mg/L	20	05/03/2017 15:57	R232369
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	04/28/2017 16:25	R232156
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**39**	mg/L	1	05/02/2017 1:02	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050	S	**370**	mg/L	1	04/28/2017 18:49	129686
Magnesium	NELAP	0.050		**8.46**	mg/L	1	04/28/2017 18:49	129686
Potassium	NELAP	1.00		**45.6**	mg/L	10	05/01/2017 18:42	129686
Sodium	NELAP	0.050	S	**65.1**	mg/L	1	04/28/2017 18:49	129686
MS QC limits for Ca & Na are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**3.2**	µg/L	5	05/02/2017 12:15	129687
Arsenic	NELAP	1.0		**31.1**	µg/L	5	05/02/2017 12:15	129687
Barium	NELAP	1.0		**59.6**	µg/L	5	05/02/2017 12:15	129687
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:15	129687
Boron	NELAP	500	S	**28300**	µg/L	100	05/03/2017 12:18	129687
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:15	129687
Chromium	NELAP	1.0		**2.1**	µg/L	5	05/02/2017 12:15	129687
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:15	129687
Lead	NELAP	1.0		**1.2**	µg/L	5	05/02/2017 12:15	129687
Lithium		1.0		**109**	µg/L	5	05/02/2017 12:15	129687
Molybdenum	NELAP	20.0	S	**3400**	µg/L	100	05/03/2017 12:18	129687
Selenium	NELAP	1.0		**8.6**	µg/L	5	05/02/2017 12:15	129687
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:15	129687

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-002
Client Sample ID: LPZ-1
Matrix: LEACHATE
Collection Date: 04/25/2017 17:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
MS QC limits for B and Mo are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 8:10	129707

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-003 **Client Sample ID:** LPZ-3

Matrix: LEACHATE **Collection Date:** 04/25/2017 18:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**11.02**	ft	1	04/25/2017 0:00	R232332
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**10.0**		1	04/25/2017 18:00	R232332
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**< 1.0**	NTU	1	04/25/2017 18:00	R232332
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-87**	mV	1	04/25/2017 18:00	R232332
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**688**	µS/cm	1	04/25/2017 18:00	R232332
STANDARD METHODS 2550 B FIELD								
Temperature		0		**17.93**	°C	1	04/25/2017 18:00	R232332
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	04/25/2017 18:00	R232332
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**52**	mg/L	1	05/02/2017 16:35	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:35	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**768**	mg/L	1	04/28/2017 14:55	R232219
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**375**	mg/L	10	05/02/2017 1:37	R232246
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	04/28/2017 16:29	R232156
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**7**	mg/L	1	05/02/2017 1:10	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**214**	mg/L	1	04/28/2017 19:00	129686
Magnesium	NELAP	0.050		**0.956**	mg/L	1	04/28/2017 19:00	129686
Potassium	NELAP	0.500		**13.4**	mg/L	5	05/01/2017 18:53	129686
Sodium	NELAP	0.050		**7.40**	mg/L	1	04/28/2017 19:00	129686
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**4.1**	µg/L	5	05/02/2017 12:47	129687
Arsenic	NELAP	1.0		**12.3**	µg/L	5	05/02/2017 12:47	129687
Barium	NELAP	1.0		**25.4**	µg/L	5	05/02/2017 12:47	129687
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:47	129687
Boron	NELAP	25.0		**21900**	µg/L	5	05/04/2017 10:36	129687
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:47	129687
Chromium	NELAP	1.0		**31.7**	µg/L	5	05/02/2017 12:47	129687
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:47	129687
Lead	NELAP	1.0		**8.9**	µg/L	5	05/02/2017 12:47	129687
Lithium		1.0		**52.0**	µg/L	5	05/02/2017 12:47	129687
Molybdenum	NELAP	1.0		**264**	µg/L	5	05/02/2017 12:47	129687
Selenium	NELAP	1.0		**112**	µg/L	5	05/02/2017 12:47	129687
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:47	129687

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-003
Client Sample ID: LPZ-3
Matrix: LEACHATE
Collection Date: 04/25/2017 18:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 8:12	129707

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-005
Client Sample ID: LPZ-13
Matrix: LEACHATE
Collection Date: 04/25/2017 13:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**5.59**	ft	1	04/25/2017 0:00	R232332

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-006
Client Sample ID: LPZ-15
Matrix: LEACHATE
Collection Date: 04/25/2017 13:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**5.59**	ft	1	04/25/2017 0:00	R232332

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-007 **Client Sample ID:** LPZ-17

Matrix: LEACHATE **Collection Date:** 04/25/2017 18:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**13.93**	ft	1	04/25/2017 0:00	R232332
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**10.0**		1	04/25/2017 18:44	R232332
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**28**	NTU	1	04/25/2017 18:44	R232332
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-163**	mV	1	04/25/2017 18:44	R232332
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**1780**	µS/cm	1	04/25/2017 18:44	R232332
STANDARD METHODS 2550 B FIELD								
Temperature		0		**20.48**	°C	1	04/25/2017 18:44	R232332
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	04/25/2017 18:44	R232332
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**80**	mg/L	1	05/02/2017 16:42	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:42	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**2090**	mg/L	1	05/01/2017 13:34	R232278
SW-846 9036 (TOTAL)								
Sulfate	NELAP	500		**1270**	mg/L	50	05/03/2017 16:24	R232369
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	05/02/2017 13:17	R232279
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**< 5**	mg/L	1	05/02/2017 1:45	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050	S	**578**	mg/L	1	05/02/2017 10:20	129737
Magnesium	NELAP	0.050		**1.32**	mg/L	1	05/02/2017 10:20	129737
Potassium	NELAP	0.500	S	**26.5**	mg/L	5	05/02/2017 12:51	129737
Sodium	NELAP	0.050		**16.1**	mg/L	1	05/02/2017 10:20	129737
MS QC limits for K are not applicable due to high sample/spike ratio.								
MS QC limits for Ca are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**1.0**	µg/L	5	05/02/2017 18:08	129738
Arsenic	NELAP	1.0		**26.5**	µg/L	5	05/02/2017 18:08	129738
Barium	NELAP	1.0		**92.0**	µg/L	5	05/02/2017 18:08	129738
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/03/2017 14:13	129738
Boron	NELAP	25.0	S	**26900**	µg/L	5	05/03/2017 14:13	129738
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 18:08	129738
Chromium	NELAP	1.0		**3.8**	µg/L	5	05/03/2017 14:13	129738
Cobalt	NELAP	1.0		**1.2**	µg/L	5	05/03/2017 14:13	129738
Lead	NELAP	1.0		**7.7**	µg/L	5	05/02/2017 18:08	129738
Lithium		1.0		**97.5**	µg/L	5	05/03/2017 14:13	129738
Molybdenum	NELAP	1.0		**289**	µg/L	5	05/02/2017 18:08	129738
Selenium	NELAP	1.0		**118**	µg/L	5	05/02/2017 18:08	129738

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-007 **Client Sample ID:** LPZ-17

Matrix: LEACHATE **Collection Date:** 04/25/2017 18:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 18:08	129738
MS QC limits for B are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 14:18	129736

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Lab ID: 17040224-008 **Client Sample ID:** L4 DUP

Matrix: LEACHATE **Collection Date:** 04/25/2017 17:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**11.10**	ft	1	04/25/2017 0:00	R232332
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**7.60**		1	04/25/2017 17:22	R232332
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**< 1.0**	NTU	1	04/25/2017 17:22	R232332
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-149**	mV	1	04/25/2017 17:22	R232332
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**940**	µS/cm	1	04/25/2017 17:22	R232332
STANDARD METHODS 2550 B FIELD								
Temperature		0		**19.54**	°C	1	04/25/2017 17:22	R232332
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	04/25/2017 17:22	R232332
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:47	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**282**	mg/L	1	05/02/2017 16:47	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**926**	mg/L	1	04/28/2017 14:56	R232219
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**388**	mg/L	10	05/02/2017 2:01	R232246
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.26**	mg/L	1	04/28/2017 16:34	R232156
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**11**	mg/L	1	05/02/2017 1:53	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**185**	mg/L	1	04/28/2017 19:03	129686
Magnesium	NELAP	0.050		**27.6**	mg/L	1	04/28/2017 19:03	129686
Potassium	NELAP	0.500		**9.87**	mg/L	5	05/01/2017 18:56	129686
Sodium	NELAP	0.050		**48.8**	mg/L	1	04/28/2017 19:03	129686
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**3.0**	µg/L	5	05/02/2017 12:55	129687
Arsenic	NELAP	1.0		**27.0**	µg/L	5	05/02/2017 12:55	129687
Barium	NELAP	1.0		**46.3**	µg/L	5	05/02/2017 12:55	129687
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687
Boron	NELAP	25.0		**23900**	µg/L	5	05/04/2017 10:44	129687
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687
Chromium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687
Lithium		1.0		**48.9**	µg/L	5	05/02/2017 12:55	129687
Molybdenum	NELAP	1.0		**83.0**	µg/L	5	05/02/2017 12:55	129687
Selenium	NELAP	1.0		**1.4**	µg/L	5	05/02/2017 12:55	129687
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 12:55	129687

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-008
Client Sample ID: L4 DUP
Matrix: LEACHATE
Collection Date: 04/25/2017 17:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 8:14	129707

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17040224
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 08-May-17
Lab ID: 17040224-009
Client Sample ID: Field Blank
Matrix: LEACHATE
Collection Date: 04/25/2017 19:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	05/02/2017 16:55	R232320
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**2**	mg/L	1	05/02/2017 16:55	R232319
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**< 20**	mg/L	1	04/28/2017 14:56	R232219
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	05/02/2017 2:04	R232246
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	04/28/2017 16:41	R232156
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**< 5**	mg/L	1	05/02/2017 2:02	R232262
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**0.068**	mg/L	1	04/28/2017 19:07	129686
Magnesium	NELAP	0.050		**< 0.050**	mg/L	1	04/28/2017 19:07	129686
Potassium	NELAP	0.100		**< 0.100**	mg/L	1	04/28/2017 19:07	129686
Sodium	NELAP	0.050		**< 0.050**	mg/L	1	04/28/2017 19:07	129686
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Barium	NELAP	1.0		**1.1**	µg/L	5	05/02/2017 13:03	129687
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Boron	NELAP	25.0		**< 25.0**	µg/L	5	05/03/2017 12:10	129687
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Chromium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Lithium		1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Molybdenum	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	05/02/2017 13:03	129687
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/01/2017 8:17	129707

Sample Summary

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17040224
Report Date: 08-May-17

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
17040224-001	L4	Leachate	2	04/25/2017 17:22
17040224-002	LPZ-1	Leachate	2	04/25/2017 17:34
17040224-003	LPZ-3	Leachate	2	04/25/2017 18:00
17040224-004	LPZ-5	Leachate	2	04/25/2017 13:30
17040224-005	LPZ-13	Leachate	1	04/25/2017 13:07
17040224-006	LPZ-15	Leachate	1	04/25/2017 13:10
17040224-007	LPZ-17	Leachate	2	04/25/2017 18:44
17040224-008	L4 DUP	Leachate	2	04/25/2017 17:22
17040224-009	Field Blank	Leachate	2	04/25/2017 19:00

Dates Report

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17040224
Report Date: 08-May-17

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
17040224-001A	L4	04/25/2017 17:22	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
	Standard Method 4500-H B Field				04/25/2017 17:22
	Standard Methods 2130 B Field				04/25/2017 17:22
	Standard Methods 18th Ed. 2580 B Field				04/25/2017 17:22
	Standard Methods 2320 B				05/02/2017 16:21
	Standard Methods 2320 B (Total)				05/02/2017 16:21
	Standard Methods 2510 B Field				04/25/2017 17:22
	Standard Methods 2540 C (Total)				04/28/2017 14:54
	Standard Methods 2550 B Field				04/25/2017 17:22
	Standard Methods 4500-O G Field				04/25/2017 17:22
	SW-846 9036 (Total)				05/02/2017 1:02
	SW-846 9214 (Total)				04/28/2017 16:21
	SW-846 9251 (Total)				05/02/2017 0:54
17040224-001B	L4	04/25/2017 17:22	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	04/28/2017 18:45
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	05/01/2017 18:38
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/02/2017 12:07
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/04/2017 10:28
	SW-846 7470A (Total)			04/28/2017 11:25	05/01/2017 12:14
17040224-002A	LPZ-1	04/25/2017 17:34	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
	Standard Method 4500-H B Field				04/25/2017 17:34
	Standard Methods 2130 B Field				04/25/2017 17:34
	Standard Methods 18th Ed. 2580 B Field				04/25/2017 17:34
	Standard Methods 2320 B				05/02/2017 16:29
	Standard Methods 2320 B (Total)				05/02/2017 16:29
	Standard Methods 2510 B Field				04/25/2017 17:34
	Standard Methods 2540 C (Total)				04/28/2017 14:55
	Standard Methods 2550 B Field				04/25/2017 17:34
	Standard Methods 4500-O G Field				04/25/2017 17:34
	SW-846 9036 (Total)				05/03/2017 15:57
	SW-846 9214 (Total)				04/28/2017 16:25
	SW-846 9251 (Total)				05/02/2017 1:02
17040224-002B	LPZ-1	04/25/2017 17:34	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	04/28/2017 18:49
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	05/01/2017 18:42

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/02/2017 12:15
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/03/2017 12:18
	SW-846 7470A (Total)			04/28/2017 15:10	05/01/2017 8:10
17040224-003A	LPZ-3	04/25/2017 18:00	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
	Standard Method 4500-H B Field				04/25/2017 18:00
	Standard Methods 2130 B Field				04/25/2017 18:00
	Standard Methods 18th Ed. 2580 B Field				04/25/2017 18:00
	Standard Methods 2320 B				05/02/2017 16:35
	Standard Methods 2320 B (Total)				05/02/2017 16:35
	Standard Methods 2510 B Field				04/25/2017 18:00
	Standard Methods 2540 C (Total)				04/28/2017 14:55
	Standard Methods 2550 B Field				04/25/2017 18:00
	Standard Methods 4500-O G Field				04/25/2017 18:00
	SW-846 9036 (Total)				05/02/2017 1:37
	SW-846 9214 (Total)				04/28/2017 16:29
	SW-846 9251 (Total)				05/02/2017 1:10
17040224-003B	LPZ-3	04/25/2017 18:00	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	04/28/2017 19:00
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	05/01/2017 18:53
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/02/2017 12:47
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/04/2017 10:36
	SW-846 7470A (Total)			04/28/2017 15:10	05/01/2017 8:12
17040224-004A	LPZ-5	04/25/2017 13:30	04/27/2017 16:40		
	Standard Methods 2320 B (Total)				05/02/2017 14:13
	Standard Methods 2540 C (Total)				04/28/2017 14:56
17040224-005A	LPZ-13	04/25/2017 13:07	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
17040224-006A	LPZ-15	04/25/2017 13:10	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
17040224-007A	LPZ-17	04/25/2017 18:44	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
	Standard Method 4500-H B Field				04/25/2017 18:44
	Standard Methods 2130 B Field				04/25/2017 18:44
	Standard Methods 18th Ed. 2580 B Field				04/25/2017 18:44
	Standard Methods 2320 B				05/02/2017 16:42
	Standard Methods 2320 B (Total)				05/02/2017 16:42

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	Standard Methods 2510 B Field				04/25/2017 18:44
	Standard Methods 2540 C (Total)				05/01/2017 13:34
	Standard Methods 2550 B Field				04/25/2017 18:44
	Standard Methods 4500-O G Field				04/25/2017 18:44
	SW-846 9036 (Total)				05/03/2017 16:24
	SW-846 9214 (Total)				05/02/2017 13:17
	SW-846 9251 (Total)				05/02/2017 1:45
17040224-007B	LPZ-17	04/25/2017 18:44	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			05/01/2017 11:23	05/02/2017 10:20
	SW-846 3005A, 6010B, Metals by ICP (Total)			05/01/2017 11:23	05/02/2017 12:51
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			05/01/2017 11:25	05/02/2017 18:08
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			05/01/2017 11:25	05/03/2017 14:13
	SW-846 7470A (Total)			05/01/2017 11:03	05/01/2017 14:18
17040224-008A	L4 DUP	04/25/2017 17:22	04/27/2017 16:40		
	Field Elevation Measurements				04/25/2017 0:00
	Standard Method 4500-H B Field				04/25/2017 17:22
	Standard Methods 2130 B Field				04/25/2017 17:22
	Standard Methods 18th Ed. 2580 B Field				04/25/2017 17:22
	Standard Methods 2320 B				05/02/2017 16:47
	Standard Methods 2320 B (Total)				05/02/2017 16:47
	Standard Methods 2510 B Field				04/25/2017 17:22
	Standard Methods 2540 C (Total)				04/28/2017 14:56
	Standard Methods 2550 B Field				04/25/2017 17:22
	Standard Methods 4500-O G Field				04/25/2017 17:22
	SW-846 9036 (Total)				05/02/2017 2:01
	SW-846 9214 (Total)				04/28/2017 16:34
	SW-846 9251 (Total)				05/02/2017 1:53
17040224-008B	L4 DUP	04/25/2017 17:22	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	04/28/2017 19:03
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	05/01/2017 18:56
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/02/2017 12:55
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/04/2017 10:44
	SW-846 7470A (Total)			04/28/2017 15:10	05/01/2017 8:14
17040224-009A	Field Blank	04/25/2017 19:00	04/27/2017 16:40		
	Standard Methods 2320 B				05/02/2017 16:55
	Standard Methods 2320 B (Total)				05/02/2017 16:55
	Standard Methods 2540 C (Total)				04/28/2017 14:56

Dates Report

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17040224
Report Date: 08-May-17

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9036 (Total)				05/02/2017 2:04
	SW-846 9214 (Total)				04/28/2017 16:41
	SW-846 9251 (Total)				05/02/2017 2:02
17040224-009B	Field Blank	04/25/2017 19:00	04/27/2017 16:40		
	SW-846 3005A, 6010B, Metals by ICP (Total)			04/28/2017 9:04	04/28/2017 19:07
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/02/2017 13:03
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			04/28/2017 9:09	05/03/2017 12:10
	SW-846 7470A (Total)			04/28/2017 15:10	05/01/2017 8:17

Quality Control Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

STANDARD METHOD 4500-H B FIELD

Batch R232332 **SampType:** LCS Units

SampID: LCS-R232332

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	1.00		**7.02**	7.000	0	100.3	99.1	100.9	04/25/2017
pH	1.00		**7.00**	7.000	0	100.0	99.1	100.9	04/26/2017
pH	1.00		**7.00**	7.000	0	100.0	99.1	100.9	04/27/2017

STANDARD METHODS 2510 B FIELD

Batch R232332 **SampType:** LCS Units **µS/cm**

SampID: LCS-R232332

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Conductivity	1		**1420**	1409	0	100.6	90	110	04/27/2017
Conductivity	1		**1410**	1409	0	100.3	90	110	04/25/2017

STANDARD METHODS 2510 B FIELD

Batch R232332 **SampType:** LCS Units **µmhos/cm**

SampID: LCS-R232332

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Conductivity	10		**1410**	1412	0	100.1	90	110	04/26/2017

STANDARD METHODS 2540 C (TOTAL)

Batch R232219 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**< 20**						04/28/2017
Total Dissolved Solids	20		**< 20**						04/28/2017
Total Dissolved Solids	20		**< 20**						04/28/2017
Total Dissolved Solids	20		**< 20**						04/28/2017
Total Dissolved Solids	20		**< 20**						04/28/2017

Batch R232219 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**1000**	1000	0	100.2	90	110	04/28/2017

Batch R232219 **SampType:** LCSQC Units **mg/L**

SampID: LCSQC

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**986**	1000	0	98.6	90	110	04/28/2017
Total Dissolved Solids	20		**998**	1000	0	99.8	90	110	04/28/2017
Total Dissolved Solids	20		**984**	1000	0	98.4	90	110	04/28/2017
Total Dissolved Solids	20		**988**	1000	0	98.8	90	110	04/28/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

STANDARD METHODS 2540 C (TOTAL)

Batch R232219 **SampType:** DUP Units **mg/L** RPD Limit **5**

SampID: 17040224-001ADUP

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids	20		**908**				900.0	0.88	04/28/2017

Batch R232278 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**< 20**						05/01/2017
Total Dissolved Solids	20		**< 20**						05/01/2017

Batch R232278 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**988**	1000	0	98.8	90	110	05/01/2017

Batch R232278 **SampType:** LCSQC Units **mg/L**

SampID: LCSQC

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**972**	1000	0	97.2	90	110	05/01/2017

Batch R232278 **SampType:** DUP Units **mg/L** RPD Limit **5**

SampID: 17040224-007ADUP

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids	20		**2110**				2094	0.86	05/01/2017

SW-846 9036 (TOTAL)

Batch R232246 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						05/01/2017

Batch R232246 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**19**	20.00	0	93.6	90	110	05/01/2017

Batch R232246 **SampType:** MS Units **mg/L**

SampID: 17040224-003AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	100		**469**	100.0	375.4	93.2	85	115	05/02/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 9036 (TOTAL)

Batch R232246 **SampType:** MSD Units **mg/L** RPD Limit **10**

SampID: 17040224-003AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	100		**485**	100.0	375.4	109.9	468.7	3.50	05/02/2017

Batch R232369 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						05/03/2017

Batch R232369 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**20**	20.00	0	100.0	90	110	05/03/2017

SW-846 9214 (TOTAL)

Batch R232156 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**< 0.10**						04/28/2017

Batch R232156 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**1.00**	1.000	0	100.4	90	110	04/28/2017

Batch R232156 **SampType:** MS Units **mg/L**

SampID: 17040224-008AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**2.30**	2.000	0.2570	102.0	85	115	04/28/2017

Batch R232156 **SampType:** MSD Units **mg/L** RPD Limit **10**

SampID: 17040224-008AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	0.10		**2.22**	2.000	0.2570	98.0	2.298	3.54	04/28/2017

Batch R232279 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**< 0.10**						05/02/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 9214 (TOTAL)

Batch R232279 **SampType:** LCS Units **mg/L**
SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**0.98**	1.000	0	97.6	90	110	05/02/2017

Batch R232279 **SampType:** MS Units **mg/L**
SampID: 17040224-007AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**1.89**	2.000	0.05300	92.0	85	115	05/02/2017

Batch R232279 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 17040224-007AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	0.10		**1.94**	2.000	0.05300	94.6	1.892	2.76	05/02/2017

SW-846 9251 (TOTAL)

Batch R232262 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**< 5**						05/01/2017

Batch R232262 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**20**	20.00	0	99.9	90	110	05/01/2017

Batch R232262 **SampType:** MS Units **mg/L**
SampID: 17040224-003AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**25**	20.00	6.820	92.5	85	115	05/02/2017

Batch R232262 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 17040224-003AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride	5		**25**	20.00	6.820	92.8	25.32	0.24	05/02/2017

Batch R232398 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**< 5**						05/03/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 9251 (TOTAL)

Batch R232398 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**21**	20.00	0	104.6	90	110	05/03/2017

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 129686 **SampType:** MBLK Units **mg/L**

SampID: MBLK-129686

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050		**< 0.050**	0.05000	0	0	-100	100	04/28/2017
Calcium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	04/28/2017
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	04/28/2017
Magnesium	0.050		**< 0.050**	0.05000	0	0	-100	100	04/28/2017
Potassium	0.100		**< 0.100**	0.1000	0	0	-100	100	04/28/2017
Potassium	0.100		**< 0.100**	0.1000	0	0	-100	100	04/28/2017
Sodium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	04/28/2017
Sodium	0.050		**< 0.050**	0.05000	0	0	-100	100	04/28/2017

Batch 129686 **SampType:** LCS Units **mg/L**

SampID: LCS-129686

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.0500		**2.55**	2.500	0	102.0	85	115	04/28/2017
Calcium	0.050		**2.55**	2.500	0	102.0	85	115	04/28/2017
Magnesium	0.0500		**2.56**	2.500	0	102.4	85	115	04/28/2017
Magnesium	0.050		**2.56**	2.500	0	102.4	85	115	04/28/2017
Potassium	0.100		**2.32**	2.500	0	92.6	85	115	04/28/2017
Potassium	0.100		**2.32**	2.500	0	92.6	85	115	04/28/2017
Sodium	0.050		**2.34**	2.500	0	93.4	85	115	04/28/2017
Sodium	0.0500		**2.34**	2.500	0	93.4	85	115	04/28/2017

Batch 129686 **SampType:** MS Units **mg/L**

SampID: 17040224-002BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050	S	**368**	2.500	370.2	-84.0	75	125	04/28/2017
Magnesium	0.050		**10.8**	2.500	8.455	93.8	75	125	04/28/2017
Potassium	1.00		**47.7**	2.500	45.62	84.8	75	125	05/01/2017
Sodium	0.050	S	**66.6**	2.500	65.09	62.0	75	125	04/28/2017

Batch 129686 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 17040224-002BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium	0.050	S	**374**	2.500	370.2	152.0	368.1	1.59	04/28/2017
Magnesium	0.050		**11.0**	2.500	8.455	102.6	10.80	2.02	04/28/2017
Potassium	1.00		**47.6**	2.500	45.62	79.2	47.74	0.29	05/01/2017
Sodium	0.050		**67.6**	2.500	65.09	102.0	66.64	1.49	04/28/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 129737 **SampType:** MBLK Units **mg/L**

SampID: MBLK-129737

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050		**< 0.050**	0.05000	0	45.6	-100	100	05/02/2017
Magnesium	0.050		**< 0.050**	0.05000	0	0	-100	100	05/02/2017
Potassium	0.100		**< 0.100**	0.1000	0	0	-100	100	05/02/2017
Sodium	0.050		**< 0.050**	0.05000	0	49.6	-100	100	05/02/2017

Batch 129737 **SampType:** LCS Units **mg/L**

SampID: LCS-129737

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050		**2.55**	2.500	0	102.2	85	115	05/02/2017
Magnesium	0.050		**2.54**	2.500	0	101.5	85	115	05/02/2017
Potassium	0.100		**2.37**	2.500	0	94.8	85	115	05/02/2017
Sodium	0.050		**2.34**	2.500	0	93.4	85	115	05/02/2017

Batch 129737 **SampType:** MS Units **mg/L**

SampID: 17040224-007BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050	S	**579**	2.500	577.9	44.0	75	125	05/02/2017
Magnesium	0.050		**3.89**	2.500	1.323	102.7	75	125	05/02/2017
Potassium	0.500	S	**29.8**	2.500	26.53	131.2	75	125	05/02/2017
Sodium	0.050		**18.6**	2.500	16.12	97.6	75	125	05/02/2017

Batch 129737 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 17040224-007BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium	0.050	S	**581**	2.500	577.9	128.0	579.0	0.36	05/02/2017
Magnesium	0.050		**3.91**	2.500	1.323	103.4	3.890	0.44	05/02/2017
Potassium	0.500		**29.6**	2.500	26.53	121.2	29.81	0.84	05/02/2017
Sodium	0.050		**18.7**	2.500	16.12	102.0	18.56	0.59	05/02/2017

Quality Control Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 129687 **SampType:** MBLK Units **µg/L**

SampID: MBLK-129687

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Arsenic	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Barium	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Beryllium	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Boron	25.0		**< 25.0**	25.00	0	0	-100	100	05/01/2017
Cadmium	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Chromium	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Cobalt	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Lead	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Lithium	1.0		**< 1.0**	1.000	0	81.2	-100	100	05/01/2017
Molybdenum	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Selenium	1.0		**< 1.0**	1.000	0	0	-100	100	05/01/2017
Thallium	1.0		**< 1.0**	1.000	0	66.4	-100	100	05/01/2017

Batch 129687 **SampType:** LCS Units **µg/L**

SampID: LCS-129687

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**519**	500.0	0	103.8	80	120	05/01/2017
Arsenic	1.0		**544**	500.0	0	108.9	80	120	05/01/2017
Barium	1.0		**2110**	2000	0	105.6	80	120	05/01/2017
Beryllium	1.0		**57.5**	50.00	0	115.0	80	120	05/01/2017
Boron	25.0		**575**	500.0	0	115.0	80	120	05/01/2017
Cadmium	1.0		**52.5**	50.00	0	105.0	80	120	05/01/2017
Chromium	1.0		**203**	200.0	0	101.6	80	120	05/01/2017
Cobalt	1.0		**508**	500.0	0	101.7	80	120	05/01/2017
Lead	1.0		**545**	500.0	0	108.9	80	120	05/01/2017
Lithium	1.0		**536**	500.0	0	107.2	80	120	05/02/2017
Molybdenum	1.0		**514**	500.0	0	102.9	80	120	05/01/2017
Selenium	1.0		**540**	500.0	0	108.0	80	120	05/01/2017
Thallium	1.0		**264**	250.0	0	105.5	80	120	05/01/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch **129687** **SampType:** **MS** Units **µg/L**

SampID: 17040224-002BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**515**	500.0	3.232	102.4	75	125	05/02/2017
Arsenic	1.0		**553**	500.0	31.11	104.4	75	125	05/02/2017
Barium	1.0		**2130**	2000	59.60	103.4	75	125	05/02/2017
Beryllium	1.0		**49.7**	50.00	0	99.3	75	125	05/02/2017
Boron	500	S	**27000**	500.0	28330	-273.2	75	125	05/03/2017
Cadmium	1.0		**51.2**	50.00	0.6986	101.1	75	125	05/02/2017
Chromium	1.0		**192**	200.0	2.088	95.0	75	125	05/02/2017
Cobalt	1.0		**475**	500.0	0.3738	94.9	75	125	05/02/2017
Lead	1.0		**522**	500.0	1.153	104.2	75	125	05/02/2017
Lithium	1.0		**638**	500.0	109.4	105.7	75	125	05/02/2017
Molybdenum	20.0		**3810**	500.0	3403	80.7	75	125	05/03/2017
Selenium	1.0		**498**	500.0	8.572	97.9	75	125	05/02/2017
Thallium	1.0		**252**	250.0	0	100.8	75	125	05/02/2017

Batch **129687** **SampType:** **MSD** Units **µg/L** RPD Limit **20**

SampID: 17040224-002BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	1.0		**515**	500.0	3.232	102.3	515.5	0.17	05/02/2017
Arsenic	1.0		**550**	500.0	31.11	103.9	553.3	0.52	05/02/2017
Barium	1.0		**2120**	2000	59.60	103.1	2127	0.26	05/02/2017
Beryllium	1.0		**48.9**	50.00	0	97.8	49.67	1.53	05/02/2017
Boron	500	S	**26700**	500.0	28330	-321.1	26960	0.89	05/03/2017
Cadmium	1.0		**50.9**	50.00	0.6986	100.4	51.23	0.65	05/02/2017
Chromium	1.0		**192**	200.0	2.088	95.2	192.1	0.20	05/02/2017
Cobalt	1.0		**474**	500.0	0.3738	94.7	474.9	0.22	05/02/2017
Lead	1.0		**519**	500.0	1.153	103.6	522.2	0.55	05/02/2017
Lithium	1.0		**650**	500.0	109.4	108.2	638.0	1.89	05/02/2017
Molybdenum	20.0	S	**3770**	500.0	3403	74.3	3806	0.84	05/03/2017
Selenium	1.0		**504**	500.0	8.572	99.0	498.3	1.06	05/02/2017
Thallium	1.0		**250**	250.0	0	99.8	252.0	0.96	05/02/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 129738 **SampType:** MBLK Units **µg/L**

SampID: MBLK-129738

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Arsenic	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Barium	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Beryllium	1.0		**< 1.0**	1.000	0	0	-100	100	05/03/2017
Boron	25.0		**< 25.0**	25.00	0	0	-100	100	05/03/2017
Cadmium	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Chromium	1.0		**< 1.0**	1.000	0	0	-100	100	05/03/2017
Cobalt	1.0		**< 1.0**	1.000	0	0	-100	100	05/03/2017
Lead	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Lithium	1.0		**< 1.0**	1.000	0	59.6	-100	100	05/03/2017
Molybdenum	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Selenium	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017
Thallium	1.0		**< 1.0**	1.000	0	0	-100	100	05/02/2017

Batch 129738 **SampType:** LCS Units **µg/L**

SampID: LCS-129738

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**457**	500.0	0	91.3	80	120	05/02/2017
Arsenic	1.0		**478**	500.0	0	95.5	80	120	05/02/2017
Barium	1.0		**1890**	2000	0	94.6	80	120	05/02/2017
Beryllium	1.0		**51.3**	50.00	0	102.5	80	120	05/03/2017
Boron	25.0		**502**	500.0	0	100.3	80	120	05/03/2017
Cadmium	1.0		**45.6**	50.00	0	91.1	80	120	05/02/2017
Chromium	1.0		**183**	200.0	0	91.7	80	120	05/03/2017
Cobalt	1.0		**468**	500.0	0	93.6	80	120	05/03/2017
Lead	1.0		**476**	500.0	0	95.1	80	120	05/02/2017
Lithium	1.0		**550**	500.0	0	110.0	80	120	05/03/2017
Molybdenum	1.0		**449**	500.0	0	89.9	80	120	05/02/2017
Selenium	1.0		**462**	500.0	0	92.4	80	120	05/02/2017
Thallium	1.0		**229**	250.0	0	91.7	80	120	05/02/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 129738 **SampType:** MS Units **µg/L**

SampID: 17040224-007BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**472**	500.0	1.019	94.2	75	125	05/02/2017
Arsenic	1.0		**501**	500.0	26.45	94.8	75	125	05/02/2017
Barium	1.0		**2020**	2000	91.99	96.6	75	125	05/02/2017
Beryllium	1.0		**49.7**	50.00	0	99.4	75	125	05/03/2017
Boron	25.0	S	**28200**	500.0	26930	245.2	75	125	05/03/2017
Cadmium	1.0		**46.7**	50.00	0.6973	92.1	75	125	05/02/2017
Chromium	1.0		**185**	200.0	3.761	90.8	75	125	05/03/2017
Cobalt	1.0		**458**	500.0	1.193	91.5	75	125	05/03/2017
Lead	1.0		**493**	500.0	7.712	97.1	75	125	05/02/2017
Lithium	1.0		**627**	500.0	97.46	105.9	75	125	05/03/2017
Molybdenum	1.0		**753**	500.0	289.0	92.7	75	125	05/02/2017
Selenium	1.0		**567**	500.0	118.1	89.7	75	125	05/02/2017
Thallium	1.0		**232**	250.0	0	92.8	75	125	05/02/2017

Batch 129738 **SampType:** MSD Units **µg/L** RPD Limit **20**

SampID: 17040224-007BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	1.0		**465**	500.0	1.019	92.8	472.2	1.54	05/02/2017
Arsenic	1.0		**499**	500.0	26.45	94.5	500.7	0.29	05/02/2017
Barium	1.0		**1990**	2000	91.99	94.9	2024	1.65	05/02/2017
Beryllium	1.0		**48.9**	50.00	0	97.7	49.72	1.73	05/03/2017
Boron	25.0	S	**27900**	500.0	26930	192.9	28160	0.93	05/03/2017
Cadmium	1.0		**46.2**	50.00	0.6973	91.0	46.75	1.17	05/02/2017
Chromium	1.0		**186**	200.0	3.761	91.2	185.3	0.48	05/03/2017
Cobalt	1.0		**464**	500.0	1.193	92.6	458.5	1.25	05/03/2017
Lead	1.0		**487**	500.0	7.712	95.9	493.5	1.26	05/02/2017
Lithium	1.0		**617**	500.0	97.46	103.8	627.1	1.68	05/03/2017
Molybdenum	1.0		**745**	500.0	289.0	91.1	752.7	1.08	05/02/2017
Selenium	1.0		**567**	500.0	118.1	89.7	566.7	0.03	05/02/2017
Thallium	1.0		**231**	250.0	0	92.3	232.0	0.55	05/02/2017

SW-846 7470A (TOTAL)

Batch 129695 **SampType:** MBLK Units **µg/L**

SampID: MBLK-129695

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**< 0.20**	0.2000	0	0	-100	100	05/01/2017

Batch 129695 **SampType:** LCS Units **µg/L**

SampID: LCS-129695

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**5.14**	5.000	0	102.8	85	115	05/01/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17040224

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 08-May-17

SW-846 7470A (TOTAL)

Batch 129707 **SampType: MBLK** Units **µg/L**

SampID: MBLK-129707

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**< 0.20**	0.2000	0	0	-100	100	05/01/2017

Batch 129707 **SampType: LCS** Units **µg/L**

SampID: LCS-129707

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**4.64**	5.000	0	92.8	85	115	05/01/2017

Batch 129707 **SampType: MS** Units **µg/L**

SampID: 17040224-009BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**4.66**	5.000	0	93.2	75	125	05/01/2017

Batch 129707 **SampType: MSD** Units **µg/L** RPD Limit **15**

SampID: 17040224-009BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.20		**4.64**	5.000	0	92.8	4.661	0.40	05/01/2017

Batch 129736 **SampType: MBLK** Units **µg/L**

SampID: MBLK-129736

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**< 0.20**	0.2000	0	0	-100	100	05/01/2017

Batch 129736 **SampType: LCS** Units **µg/L**

SampID: LCS-129736

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**5.26**	5.000	0	105.2	85	115	05/01/2017

Batch 129736 **SampType: MS** Units **µg/L**

SampID: 17040224-007BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**5.05**	5.000	0	101.0	75	125	05/01/2017

Batch 129736 **SampType: MSD** Units **µg/L** RPD Limit **15**

SampID: 17040224-007BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.20		**4.96**	5.000	0	99.2	5.049	1.79	05/01/2017

Receiving Check List

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17040224
Report Date: 08-May-17

Carrier: Tim Mathis

Received By: AMD

Completed by: Amber M. Dilallo
On: 27-Apr-17

Reviewed by: Elizabeth A. Hurley
On: 27-Apr-17

Pages to follow: Chain of custody 1 Extra pages included 8

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.62
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☐	No ☑		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Additional Nitric Acid was needed in L4, LPZ-3, and LPZ-17 upon arrival at the laboratory. AMD 4/27/17

No containers were labeled as LPZ-17. Per Tim Mathis, LPZ-17 was collected in containers labeled as LPZ-5 which was dry. EAH 5/1/17

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 17040224

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Natural Resource Technology, Inc.
Address: 2422 East Washington Street
City / State / Zip Bloomington, IL 61704
Contact: Steve Wiskes **Phone:** (414) 837-3614
E-Mail: steve.wiskes@obg.com **Fax:**

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.02 °C
Preserved in: ☒ LAB ☐ FIELD
FOR LAB USE ONLY
Lab Notes: ☆ HNO3 gmb 4/27/17

Are these samples known to be involved in litigation? If yes, a surcharge will apply ☐ Yes ☒ No
Are these samples known to be hazardous? ☐ Yes ☒ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. ☐ Yes ☒ No

Client Comments
Total Metals: ICP/MS 6020A Sb As Ba Be B Cd Cr Co Pb Li Mo Se Tl, ICP 6010 Ca Mg K Na, and Hg 7470A.

★LPZ-17: Alternate sampling point if LPZ-5 is dry.

✱ DRY ★ ~~SAMPLE ID ON CONTAINERS SHOULD~~ TIM TE

Project Name/Number	Sample Collector's Name
Hennepin Pond 1 & 2 Additional Testing	Tim/MIKE

Results Requested
☒ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNP	HNO3	MATRIX: Leachate	Alkalinity, Carb (as CaCO3)	Alkalinity, Hyd (as CaCO3)	Chloride 9251	Field Conductivity SM 2510-B	Field DO SM 4500-O	Field Leachate Elevations	Field ORP SM 2580-B	Field pH SM 4500-H+B	Field Temperature SM 2550	Field Turbidity SM 2130-B	Fluoride 9214	Sulfate 9036	TDS SM 2540C	Total Metals
17040224-001	L4 ★	4.25.17 1722	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-002	LPZ-1	1734	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-003	LPZ-3 ★	1800	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-004	LPZ-5 ✱ ★	1330	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-005	LPZ-13	1307 ★ TMT	0		X						X								
-006	LPZ-15	1310	0		X						X								
-007	LPZ-17 ★	1844 ~~1310~~	0		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-008	L4 DUP	1722	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-009	Field Blank	1900	1	1	X	X	X	X								X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
[signature]	4-27-17 1640	Ombe Ocello	4/27/17 1640

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 37016

gmb 4/27/17

September 22, 2017

Steve Wiskes
Natural Resource Technology, Inc.
2422 East Washington Street
Suite 104
Bloomington, IL 61704
TEL: (414) 837-3614
FAX: (414) 837-3608

RE: Hennepin Pond 1 & 2 Additional Testing **WorkOrder:** 17081821

Dear Steve Wiskes:

TEKLAB, INC received 9 samples on 9/8/2017 1:10:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Michael L. Austin
Project Manager
(618)344-1004 ex 16
MAustin@teklabinc.com

Report Contents

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17081821
Report Date: 22-Sep-17

This reporting package includes the following:

Definitions

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Abbr	Definition
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
E -	Value above quantitation range	H -	Holding times exceeded
I -	Associated internal standard was outside method criteria	J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response	ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits	S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)	X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17

Cooler Receipt Temp: 1.02 °C

An employee of Teklab, Inc. collected the sample(s).

LPZ-1, LPZ-3, and LPZ-5 will not be reported; wells were dry. TM/EAH 9/8/17

LPZ-17 to be used as alternate sampling point for LPZ-5. MLA 9/8/17

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email jhriley@teklabinc.com

Accreditations

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2018	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2018	Collinsville
Kentucky	KDEP	98006		12/31/2017	Collinsville
Kentucky	UST	0073		1/31/2018	Collinsville
Louisiana	LDPH	LA170027		12/31/2017	Collinsville
Missouri	MDNR	930		1/31/2018	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2018	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Lab ID: 17081821-001 **Client Sample ID:** L4

Matrix: LEACHATE **Collection Date:** 09/06/2017 15:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**14.57**	ft	1	09/06/2017 15:15	R237731
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**7.85**		1	09/06/2017 15:15	R237731
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**8.5**	NTU	1	09/06/2017 15:15	R237731
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-85**	mV	1	09/06/2017 15:15	R237731
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**1130**	µS/cm	1	09/06/2017 15:15	R237731
STANDARD METHODS 2550 B FIELD								
Temperature		0		**14.72**	°C	1	09/06/2017 15:15	R237731
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	09/06/2017 15:15	R237731
STANDARD METHODS 2320 B								
Alkalinity, Total (as CaCO3)	NELAP	0		**220**	mg/L	1	09/11/2017 15:05	R237563
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	09/11/2017 15:05	R237566
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**220**	mg/L	1	09/11/2017 15:05	R237565
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**972**	mg/L	1	09/12/2017 16:16	R237592
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**419**	mg/L	20	09/12/2017 15:46	R237579
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.19**	mg/L	1	09/08/2017 18:28	R237461
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**21**	mg/L	1	09/12/2017 15:08	R237578
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**202**	mg/L	1	09/11/2017 14:25	133977
Magnesium	NELAP	0.050		**35.1**	mg/L	1	09/11/2017 14:25	133977
Potassium	NELAP	0.200		**12.7**	mg/L	2	09/12/2017 14:25	133977
Sodium	NELAP	0.050		**35.1**	mg/L	1	09/11/2017 14:25	133977
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**5.1**	µg/L	5	09/11/2017 15:16	133980
Arsenic	NELAP	1.0		**61.0**	µg/L	5	09/11/2017 15:16	133980
Barium	NELAP	1.0		**51.8**	µg/L	5	09/11/2017 15:16	133980
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:16	133980
Boron	NELAP	25.0		**32000**	µg/L	5	09/11/2017 15:16	133980
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:16	133980
Chromium	NELAP	1.0	J	**0.3**	µg/L	5	09/11/2017 15:16	133980
Cobalt	NELAP	1.0	J	**0.3**	µg/L	5	09/11/2017 15:16	133980
Lead	NELAP	1.0		**< 1.0**	µg/L	5	09/12/2017 14:29	133980
Lithium		1.0		**62.7**	µg/L	5	09/11/2017 15:16	133980
Molybdenum	NELAP	1.0		**77.3**	µg/L	5	09/11/2017 15:16	133980
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:16	133980

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17
Lab ID: 17081821-001
Client Sample ID: L4
Matrix: LEACHATE
Collection Date: 09/06/2017 15:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:16	133980
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	09/11/2017 9:32	133984

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17
Lab ID: 17081821-005
Client Sample ID: LPZ-13
Matrix: LEACHATE
Collection Date: 09/07/2017 15:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**12.85**	ft	1	09/07/2017 15:00	R237731

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17
Lab ID: 17081821-006
Client Sample ID: LPZ-15
Matrix: LEACHATE
Collection Date: 09/07/2017 15:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**15.05**	ft	1	09/07/2017 15:45	R237731

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Lab ID: 17081821-007 **Client Sample ID:** LPZ-17

Matrix: LEACHATE **Collection Date:** 09/06/2017 15:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**15.92**	ft	1	09/06/2017 15:01	R237731
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**10.46**		1	09/06/2017 15:01	R237731
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**9.8**	NTU	1	09/06/2017 15:01	R237731
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-230**	mV	1	09/06/2017 15:01	R237731
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**1820**	µS/cm	1	09/06/2017 15:01	R237731
STANDARD METHODS 2550 B FIELD								
Temperature		0		**16.84**	°C	1	09/06/2017 15:01	R237731
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	09/06/2017 15:01	R237731
STANDARD METHODS 2320 B								
Alkalinity, Total (as CaCO3)	NELAP	0		**162**	mg/L	1	09/11/2017 15:20	R237563
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**68**	mg/L	1	09/11/2017 15:20	R237566
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	09/11/2017 15:20	R237565
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**1910**	mg/L	1	09/12/2017 16:16	R237592
SW-846 9036 (TOTAL)								
Sulfate	NELAP	500		**1120**	mg/L	50	09/12/2017 16:03	R237579
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10	J	**0.05**	mg/L	1	09/08/2017 18:30	R237461
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**16**	mg/L	1	09/12/2017 15:54	R237578
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050	S	**538**	mg/L	1	09/11/2017 14:31	133977
Magnesium	NELAP	0.050		**2.63**	mg/L	1	09/11/2017 14:31	133977
Potassium	NELAP	0.500		**25.5**	mg/L	5	09/12/2017 14:35	133977
Sodium	NELAP	0.050		**21.6**	mg/L	1	09/11/2017 14:31	133977
MS QC limits for Ca are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**1.3**	µg/L	5	09/11/2017 15:24	133980
Arsenic	NELAP	1.0		**38.1**	µg/L	5	09/11/2017 15:24	133980
Barium	NELAP	1.0		**97.2**	µg/L	5	09/11/2017 15:24	133980
Beryllium	NELAP	1.0	J	**0.8**	µg/L	5	09/11/2017 15:24	133980
Boron	NELAP	25.0	S	**28600**	µg/L	5	09/11/2017 15:24	133980
Cadmium	NELAP	1.0		**1.3**	µg/L	5	09/11/2017 15:24	133980
Chromium	NELAP	1.0		**8.3**	µg/L	5	09/11/2017 15:24	133980
Cobalt	NELAP	1.0		**2.3**	µg/L	5	09/11/2017 15:24	133980
Lead	NELAP	1.0		**15.3**	µg/L	5	09/12/2017 14:37	133980
Lithium		1.0		**90.3**	µg/L	5	09/11/2017 15:24	133980
Molybdenum	NELAP	1.0		**299**	µg/L	5	09/11/2017 15:24	133980

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Lab ID: 17081821-007 **Client Sample ID:** LPZ-17

Matrix: LEACHATE **Collection Date:** 09/06/2017 15:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Selenium	NELAP	1.0		**7.0**	µg/L	5	09/11/2017 15:24	133980
Thallium	NELAP	1.0	J	**0.5**	µg/L	5	09/11/2017 15:24	133980
MS QC limits for B are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	09/11/2017 9:46	133984

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Lab ID: 17081821-008 **Client Sample ID:** L4 DUP

Matrix: LEACHATE **Collection Date:** 09/06/2017 15:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Depth to leachate from measuring point		0		**14.57**	ft	1	09/06/2017 15:15	R237731
STANDARD METHOD 4500-H B FIELD								
pH		1.00		**7.85**		1	09/06/2017 15:15	R237731
STANDARD METHODS 2130 B FIELD								
Turbidity		1.0		**8.5**	NTU	1	09/06/2017 15:15	R237731
STANDARD METHODS 18TH ED. 2580 B FIELD								
Oxidation-Reduction Potential		-300		**-85**	mV	1	09/06/2017 15:15	R237731
STANDARD METHODS 2510 B FIELD								
Conductivity		1		**1130**	µS/cm	1	09/06/2017 15:15	R237731
STANDARD METHODS 2550 B FIELD								
Temperature		0		**14.72**	°C	1	09/06/2017 15:15	R237731
STANDARD METHODS 4500-O G FIELD								
Oxygen, Dissolved		1.00		**< 1.00**	mg/L	1	09/06/2017 15:15	R237731
STANDARD METHODS 2320 B								
Alkalinity, Total (as CaCO3)	NELAP	0		**226**	mg/L	1	09/11/2017 15:28	R237563
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	09/11/2017 15:28	R237566
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**226**	mg/L	1	09/11/2017 15:28	R237565
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		**954**	mg/L	1	09/12/2017 16:46	R237592
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**439**	mg/L	10	09/12/2017 16:11	R237579
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.19**	mg/L	1	09/08/2017 18:34	R237461
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**22**	mg/L	1	09/12/2017 16:02	R237578
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**210**	mg/L	1	09/11/2017 14:48	133977
Magnesium	NELAP	0.050		**35.2**	mg/L	1	09/11/2017 14:48	133977
Potassium	NELAP	0.200		**12.5**	mg/L	2	09/12/2017 14:53	133977
Sodium	NELAP	0.050		**35.3**	mg/L	1	09/11/2017 14:48	133977
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**4.5**	µg/L	5	09/11/2017 15:33	133980
Arsenic	NELAP	1.0		**66.4**	µg/L	5	09/11/2017 15:33	133980
Barium	NELAP	1.0		**59.1**	µg/L	5	09/11/2017 15:33	133980
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:33	133980
Boron	NELAP	25.0		**33300**	µg/L	5	09/11/2017 15:33	133980
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:33	133980
Chromium	NELAP	1.0	J	**0.3**	µg/L	5	09/11/2017 15:33	133980
Cobalt	NELAP	1.0	J	**0.3**	µg/L	5	09/11/2017 15:33	133980
Lead	NELAP	1.0		**< 1.0**	µg/L	5	09/12/2017 14:45	133980
Lithium		1.0		**63.8**	µg/L	5	09/11/2017 15:33	133980
Molybdenum	NELAP	1.0		**74.4**	µg/L	5	09/11/2017 15:33	133980
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:33	133980

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Work Order: 17081821
Client Project: Hennepin Pond 1 & 2 Additional Testing
Report Date: 22-Sep-17
Lab ID: 17081821-008
Client Sample ID: L4 DUP
Matrix: LEACHATE
Collection Date: 09/06/2017 15:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:33	133980
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	09/11/2017 9:49	133984

Laboratory Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Lab ID: 17081821-009 **Client Sample ID:** Field Blank

Matrix: LEACHATE **Collection Date:** 09/06/2017 15:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2320 B								
Alkalinity, Total (as CaCO3)	NELAP	0		**2**	mg/L	1	09/11/2017 15:33	R237563
STANDARD METHODS 2320 B								
Alkalinity, Carbonate (as CaCO3)	NELAP	0		**0**	mg/L	1	09/11/2017 15:33	R237566
STANDARD METHODS 2320 B (TOTAL)								
Alkalinity, Bicarbonate (as CaCO3)	NELAP	0		**2**	mg/L	1	09/11/2017 15:33	R237565
STANDARD METHODS 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20	J	**10**	mg/L	1	09/12/2017 16:46	R237592
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	09/12/2017 16:13	R237579
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	09/08/2017 18:35	R237461
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**< 5**	mg/L	1	09/12/2017 16:10	R237578
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Calcium	NELAP	0.050		**< 0.050**	mg/L	1	09/11/2017 14:54	133977
Magnesium	NELAP	0.050		**< 0.050**	mg/L	1	09/11/2017 14:54	133977
Potassium	NELAP	0.100		**< 0.100**	mg/L	1	09/12/2017 15:02	133977
Sodium	NELAP	0.050		**< 0.050**	mg/L	1	09/11/2017 14:54	133977
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Barium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Beryllium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Boron	NELAP	25.0	J	**21**	µg/L	5	09/12/2017 14:21	133980
Cadmium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Chromium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Cobalt	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Lead	NELAP	1.0		**< 1.0**	µg/L	5	09/12/2017 14:21	133980
Lithium		1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Molybdenum	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Selenium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
Thallium	NELAP	1.0		**< 1.0**	µg/L	5	09/11/2017 15:41	133980
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	09/11/2017 9:52	133984

Sample Summary

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17081821
Report Date: 22-Sep-17

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
17081821-001	L4	Leachate	2	09/06/2017 15:15
17081821-002	LPZ-1	Leachate	1	09/06/2017 13:48
17081821-003	LPZ-3	Leachate	1	09/06/2017 13:40
17081821-004	LPZ-5	Leachate	1	09/06/2017 13:36
17081821-005	LPZ-13	Leachate	1	09/07/2017 15:00
17081821-006	LPZ-15	Leachate	1	09/07/2017 15:45
17081821-007	LPZ-17	Leachate	2	09/06/2017 15:01
17081821-008	L4 DUP	Leachate	2	09/06/2017 15:15
17081821-009	Field Blank	Leachate	2	09/06/2017 15:25

Dates Report

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17081821
Report Date: 22-Sep-17

Sample ID	Client Sample ID / Test Name	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
17081821-001A	L4	09/06/2017 15:15	09/08/2017 13:10		
	Field Elevation Measurements				09/06/2017 15:15
	Standard Method 4500-H B Field				09/06/2017 15:15
	Standard Methods 2130 B Field				09/06/2017 15:15
	Standard Methods 2320 B				09/11/2017 15:05
	Standard Methods 18th Ed. 2580 B Field				09/06/2017 15:15
	Standard Methods 2320 B				09/11/2017 15:05
	Standard Methods 2320 B (Total)				09/11/2017 15:05
	Standard Methods 2510 B Field				09/06/2017 15:15
	Standard Methods 2540 C (Total)				09/12/2017 16:16
	Standard Methods 2550 B Field				09/06/2017 15:15
	Standard Methods 4500-O G Field				09/06/2017 15:15
	SW-846 9036 (Total)				09/12/2017 15:46
	SW-846 9214 (Total)				09/08/2017 18:28
	SW-846 9251 (Total)				09/12/2017 15:08
17081821-001B	L4	09/06/2017 15:15	09/08/2017 13:10		
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/11/2017 14:25
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/12/2017 14:25
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/11/2017 15:16
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/12/2017 14:29
	SW-846 7470A (Total)			09/08/2017 14:51	09/11/2017 9:32
17081821-005A	LPZ-13	09/07/2017 15:00	09/08/2017 13:10		
	Field Elevation Measurements				09/07/2017 15:00
17081821-006A	LPZ-15	09/07/2017 15:45	09/08/2017 13:10		
	Field Elevation Measurements				09/07/2017 15:45
17081821-007A	LPZ-17	09/06/2017 15:01	09/08/2017 13:10		
	Field Elevation Measurements				09/06/2017 15:01
	Standard Method 4500-H B Field				09/06/2017 15:01
	Standard Methods 2130 B Field				09/06/2017 15:01
	Standard Methods 2320 B				09/11/2017 15:20
	Standard Methods 18th Ed. 2580 B Field				09/06/2017 15:01
	Standard Methods 2320 B				09/11/2017 15:20
	Standard Methods 2320 B (Total)				09/11/2017 15:20
	Standard Methods 2510 B Field				09/06/2017 15:01
	Standard Methods 2540 C (Total)				09/12/2017 16:16
	Standard Methods 2550 B Field				09/06/2017 15:01
	Standard Methods 4500-O G Field				09/06/2017 15:01

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9036 (Total)				09/12/2017 16:03
	SW-846 9214 (Total)				09/08/2017 18:30
	SW-846 9251 (Total)				09/12/2017 15:54
17081821-007B	LPZ-17	09/06/2017 15:01	09/08/2017 13:10		
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/11/2017 14:31
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/12/2017 14:35
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/11/2017 15:24
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/12/2017 14:37
	SW-846 7470A (Total)			09/08/2017 14:51	09/11/2017 9:46
17081821-008A	L4 DUP	09/06/2017 15:15	09/08/2017 13:10		
	Field Elevation Measurements				09/06/2017 15:15
	Standard Method 4500-H B Field				09/06/2017 15:15
	Standard Methods 2130 B Field				09/06/2017 15:15
	Standard Methods 2320 B				09/11/2017 15:28
	Standard Methods 18th Ed. 2580 B Field				09/06/2017 15:15
	Standard Methods 2320 B				09/11/2017 15:28
	Standard Methods 2320 B (Total)				09/11/2017 15:28
	Standard Methods 2510 B Field				09/06/2017 15:15
	Standard Methods 2540 C (Total)				09/12/2017 16:46
	Standard Methods 2550 B Field				09/06/2017 15:15
	Standard Methods 4500-O G Field				09/06/2017 15:15
	SW-846 9036 (Total)				09/12/2017 16:11
	SW-846 9214 (Total)				09/08/2017 18:34
	SW-846 9251 (Total)				09/12/2017 16:02
17081821-008B	L4 DUP	09/06/2017 15:15	09/08/2017 13:10		
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/11/2017 14:48
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/12/2017 14:53
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/11/2017 15:33
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/12/2017 14:45
	SW-846 7470A (Total)			09/08/2017 14:51	09/11/2017 9:49
17081821-009A	Field Blank	09/06/2017 15:25	09/08/2017 13:10		
	Standard Methods 2320 B				09/11/2017 15:33
	Standard Methods 2320 B				09/11/2017 15:33
	Standard Methods 2320 B (Total)				09/11/2017 15:33
	Standard Methods 2540 C (Total)				09/12/2017 16:46
	SW-846 9036 (Total)				09/12/2017 16:13
	SW-846 9214 (Total)				09/08/2017 18:35

Dates Report

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17081821
Report Date: 22-Sep-17

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			**Prep Date/Time**	**Analysis Date/Time**
	SW-846 9251 (Total)				09/12/2017 16:10
17081821-009B	Field Blank	09/06/2017 15:25	09/08/2017 13:10		
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/11/2017 14:54
	SW-846 3005A, 6010B, Metals by ICP (Total)			09/08/2017 14:09	09/12/2017 15:02
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/11/2017 15:41
	SW-846 3005A, 6020A, Metals by ICPMS (Total)			09/08/2017 14:31	09/12/2017 14:21
	SW-846 7470A (Total)			09/08/2017 14:51	09/11/2017 9:52

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

STANDARD METHOD 4500-H B FIELD

Batch R237731 **SampType:** LCS Units

SampID: LCS-R237731

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	1.00		**7.00**	7.000	0	100.0	99.1	100.9	09/06/2017

STANDARD METHODS 2510 B FIELD

Batch R237731 **SampType:** LCS Units **µmhos/cm**

SampID: LCS-R237731

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Conductivity	1		**1410**	1412	0	99.9	90	110	09/06/2017

STANDARD METHODS 2320 B

Batch R237563 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)	0		**0**						09/11/2017

Batch R237563 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)	0		**230**	232.0	0	99.1	90	110	09/11/2017

Batch R237563 **SampType:** MS Units **mg/L**

SampID: 17081821-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Alkalinity, Total (as CaCO3)	0		**310**	93.00	220.0	96.8	85	115	09/11/2017

Batch R237563 **SampType:** MSD Units **mg/L** RPD Limit **10**

SampID: 17081821-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Alkalinity, Total (as CaCO3)	0		**308**	93.00	220.0	94.6	310.0	0.65	09/11/2017

STANDARD METHODS 2540 C (TOTAL)

Batch R237592 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**< 20**						09/12/2017
Total Dissolved Solids	20		**< 20**						09/12/2017
Total Dissolved Solids	20	J	**12**						09/12/2017

Batch R237592 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**990**	1000	0	99.0	90	110	09/12/2017

Quality Control Results

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

STANDARD METHODS 2540 C (TOTAL)

Batch R237592 **SampType:** LCSQC Units **mg/L**

SampID: LCSQC

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids	20		**932**	1000	0	93.2	90	110	09/12/2017
Total Dissolved Solids	20		**984**	1000	0	98.4	90	110	09/12/2017

Batch R237592 **SampType:** DUP Units **mg/L** RPD Limit **5**

SampID: 17081821-001ADUP

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids	20		**984**				972.0	1.23	09/12/2017

SW-846 9036 (TOTAL)

Batch R237579 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						09/12/2017

Batch R237579 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**20**	20.00	0	98.9	90	110	09/12/2017

Batch R237579 **SampType:** MS Units **mg/L**

SampID: 17081821-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	200		**597**	200.0	418.6	89.2	85	115	09/12/2017

Batch R237579 **SampType:** MSD Units **mg/L** RPD Limit **10**

SampID: 17081821-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	200		**611**	200.0	418.6	96.4	597.0	2.37	09/12/2017

SW-846 9214 (TOTAL)

Batch R237461 **SampType:** MBLK Units **mg/L**

SampID: MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**< 0.10**						09/08/2017

Batch R237461 **SampType:** LCS Units **mg/L**

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**1.06**	1.000	0	105.5	90	110	09/08/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

SW-846 9214 (TOTAL)

Batch R237461 **SampType:** MS Units **mg/L**

SampID: 17081821-007AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	0.10		**2.16**	2.000	0.05000	105.6	85	115	09/08/2017

Batch R237461 **SampType:** MSD Units **mg/L** RPD Limit **10**

SampID: 17081821-007AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	0.10		**2.21**	2.000	0.05000	107.8	2.162	2.01	09/08/2017

SW-846 9251 (TOTAL)

Batch R237578 **SampType:** MBLK Units **mg/L**

SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**< 5**						09/12/2017

Batch R237578 **SampType:** LCS Units **mg/L**

SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**21**	20.00	0	105.3	90	110	09/12/2017

Batch R237578 **SampType:** MS Units **mg/L**

SampID: 17081821-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	5		**38**	20.00	20.81	86.4	85	115	09/12/2017

Batch R237578 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 17081821-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride	5		**38**	20.00	20.81	86.4	38.08	0.05	09/12/2017

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 133977 **SampType:** MBLK Units **mg/L**

SampID: MBLK-133977

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017
Calcium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017
Potassium	0.100		**< 0.100**	0.1000	0	0	-100	100	09/12/2017
Sodium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017
Sodium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	09/11/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 133977 **SampType:** LCS Units **mg/L**

SampID: LCS-133977

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.0500		**2.68**	2.500	0	107.4	85	115	09/11/2017
Calcium	0.0500		**2.61**	2.500	0	104.3	85	115	09/11/2017
Magnesium	0.0500		**2.63**	2.500	0	105.0	85	115	09/11/2017
Magnesium	0.0500		**2.68**	2.500	0	107.3	85	115	09/11/2017
Potassium	0.100		**2.38**	2.500	0	95.4	85	115	09/12/2017
Sodium	0.0500		**2.39**	2.500	0	95.6	85	115	09/11/2017
Sodium	0.0500		**2.47**	2.500	0	98.7	85	115	09/11/2017

Batch 133977 **SampType:** MS Units **mg/L**

SampID: 17081821-007BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium	0.050	S	**536**	2.500	538.2	-100.0	75	125	09/11/2017
Magnesium	0.050		**5.24**	2.500	2.627	104.3	75	125	09/11/2017
Potassium	0.500		**27.9**	2.500	25.48	95.8	75	125	09/12/2017
Sodium	0.050		**23.7**	2.500	21.56	85.2	75	125	09/11/2017

Batch 133977 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 17081821-007BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium	0.050	S	**525**	2.500	538.2	-532.0	535.7	2.04	09/11/2017
Magnesium	0.050		**5.22**	2.500	2.627	103.9	5.235	0.19	09/11/2017
Potassium	0.500		**27.7**	2.500	25.48	89.8	27.88	0.54	09/13/2017
Sodium	0.050		**23.8**	2.500	21.56	90.4	23.69	0.55	09/11/2017

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 133980 **SampType:** MBLK Units **µg/L**

SampID: MBLK-133980

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Arsenic	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Barium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Beryllium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Boron	25.0		**< 25.0**	25.00	0	0	-100	100	09/11/2017
Cadmium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Chromium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Cobalt	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Lead	1.0		**< 1.0**	1.000	0	0	-100	100	09/12/2017
Lithium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Molybdenum	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Selenium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017
Thallium	1.0		**< 1.0**	1.000	0	0	-100	100	09/11/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 133980 **SampType:** LCS Units **µg/L**

SampID: LCS-133980

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**487**	500.0	0	97.4	80	120	09/11/2017
Arsenic	1.0		**522**	500.0	0	104.3	80	120	09/11/2017
Barium	1.0		**2020**	2000	0	101.0	80	120	09/11/2017
Beryllium	1.0		**52.8**	50.00	0	105.7	80	120	09/11/2017
Boron	25.0		**569**	500.0	0	113.8	80	120	09/11/2017
Cadmium	1.0		**48.8**	50.00	0	97.7	80	120	09/11/2017
Chromium	1.0		**203**	200.0	0	101.6	80	120	09/11/2017
Cobalt	1.0		**513**	500.0	0	102.7	80	120	09/11/2017
Lead	1.0		**514**	500.0	0	102.9	80	120	09/11/2017
Lithium	1.0		**514**	500.0	0	102.7	80	120	09/11/2017
Molybdenum	1.0		**491**	500.0	0	98.2	80	120	09/11/2017
Selenium	1.0		**518**	500.0	0	103.6	80	120	09/11/2017
Thallium	1.0		**238**	250.0	0	95.1	80	120	09/11/2017

Batch 133980 **SampType:** MS Units **µg/L**

SampID: 17081821-007BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	1.0		**485**	500.0	1.257	96.8	75	125	09/11/2017
Arsenic	1.0		**556**	500.0	38.14	103.5	75	125	09/11/2017
Barium	1.0		**2080**	2000	97.21	99.0	75	125	09/11/2017
Beryllium	1.0		**52.5**	50.00	0.8463	103.3	75	125	09/11/2017
Boron	25.0	S	**29800**	500.0	28580	241.2	75	125	09/11/2017
Cadmium	1.0		**49.2**	50.00	1.346	95.7	75	125	09/11/2017
Chromium	1.0		**204**	200.0	8.319	97.8	75	125	09/11/2017
Cobalt	1.0		**494**	500.0	2.264	98.4	75	125	09/11/2017
Lead	1.0		**520**	500.0	15.27	101.0	75	125	09/12/2017
Lithium	1.0		**595**	500.0	90.27	101.0	75	125	09/11/2017
Molybdenum	1.0		**794**	500.0	299.0	99.1	75	125	09/11/2017
Selenium	1.0		**494**	500.0	7.005	97.4	75	125	09/11/2017
Thallium	1.0		**241**	250.0	0.5254	96.2	75	125	09/11/2017

Client: Natural Resource Technology, Inc. **Work Order:** 17081821

Client Project: Hennepin Pond 1 & 2 Additional Testing **Report Date:** 22-Sep-17

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 133980 **SampType:** MSD Units **µg/L** RPD Limit **20**

SampID: 17081821-007BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	1.0		**482**	500.0	1.257	96.2	485.5	0.64	09/11/2017
Arsenic	1.0		**544**	500.0	38.14	101.1	555.9	2.22	09/11/2017
Barium	1.0		**2060**	2000	97.21	98.0	2077	0.94	09/11/2017
Beryllium	1.0		**51.5**	50.00	0.8463	101.4	52.50	1.87	09/11/2017
Boron	25.0	S	**28300**	500.0	28580	-54.8	29790	5.09	09/11/2017
Cadmium	1.0		**48.8**	50.00	1.346	94.9	49.20	0.82	09/11/2017
Chromium	1.0		**202**	200.0	8.319	96.7	204.0	1.16	09/11/2017
Cobalt	1.0		**487**	500.0	2.264	97.0	494.1	1.37	09/11/2017
Lead	1.0		**521**	500.0	15.27	101.1	520.4	0.06	09/12/2017
Lithium	1.0		**584**	500.0	90.27	98.7	595.1	1.93	09/11/2017
Molybdenum	1.0		**777**	500.0	299.0	95.5	794.3	2.24	09/11/2017
Selenium	1.0		**485**	500.0	7.005	95.7	494.2	1.80	09/11/2017
Thallium	1.0		**241**	250.0	0.5254	96.1	241.0	0.12	09/11/2017

SW-846 7470A (TOTAL)

Batch 133984 **SampType:** MBLK Units **µg/L**

SampID: MBLK-133984

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**< 0.20**	0.2000	0	0	-100	100	09/11/2017

Batch 133984 **SampType:** LCS Units **µg/L**

SampID: LCS-133984

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**5.32**	5.000	0	106.3	85	115	09/11/2017

Batch 133984 **SampType:** MS Units **µg/L**

SampID: 17081821-001BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.20		**4.43**	5.000	0	88.7	75	125	09/11/2017

Batch 133984 **SampType:** MSD Units **µg/L** RPD Limit **15**

SampID: 17081821-001BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.20		**4.36**	5.000	0	87.2	4.435	1.66	09/11/2017

Receiving Check List

http://www.teklabinc.com/

Client: Natural Resource Technology, Inc.
Client Project: Hennepin Pond 1 & 2 Additional Testing

Work Order: 17081821
Report Date: 22-Sep-17

Carrier: Tim Mathis

Received By: AMD

Completed by: Amber M. Dilallo
On: 08-Sep-17

Reviewed by: Marvin L. Darling
On: 08-Sep-17

Pages to follow: Chain of custody 1 Extra pages included 16

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 1.02
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 17081821

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Natural Resource Technology, Inc.
Address: 2422 East Washington Street
City / State / Zip Bloomington, IL 61704
Contact: Steve Wiskes **Phone:** (414) 837-3614
E-Mail: steve.wiskes@obg.com **Fax:**

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 1.02 °C
Preserved in: [ ] LAB [X] FIELD
Lab Notes: * Dry 9/8/17

FOR LAB USE ONLY

Are these samples known to be involved in litigation? If yes, a surcharge will apply [ ] Yes [X] No
Are these samples known to be hazardous? [ ] Yes [X] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. [ ] Yes [X] No

Client Comments
Total Metals: ICP/MS 6020A Sb As Ba Be B Cd Cr Co Pb Li Mo Se Tl, ICP 6010 Ca Mg K Na, and Hg 7470A.

LPZ-17: Depth to Leachate only, analyze as Alternate sampling point if LPZ-5 is dry.

Project Name/Number: Hennepin Pond 1 & 2 Additional Testing
Sample Collector's Name: Tim Zoz

Results Requested: [X] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other ____ [ ] 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNP	HNO3	MATRIX: Leachate	Alkalinity Total	Alkalinity, Bicarb (as CaCO3)	Alkalinity, Carb (as CaCO3)	Chloride 9251	Field Conductivity SM 2510-B	Field DO SM 4500-O	Field Leachate Elevations	Field ORP SM 2580-B	Field pH SM 4500-H+B	Field Temperature SM 2550	Field Turbidity SM 2130-B	Fluoride 9214	Sulfate 9036	TDS SM 2540C	Total Metals
17081821-001	L4	9.6.17 1515	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
002	LPZ-1 *	1348	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
003	LPZ-3 *	1340	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
004	LPZ-5 *	1336	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
005	LPZ-13	9.7.17 1500	0		X							X								
006	LPZ-15	9.7.17 1545	0		X							X								
007	LPZ-17	1501	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
008	L4 DUP	1515	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
009	Field Blank	1525	1	1	X	X	X	X									X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
[signature]	9.8.17 1310	[signature]	9/8/17 1310

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 38544

APPENDIX C
SUPPORTING GROUNDWATER ANALYTICAL DATA

APPENDIX C.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Date	Parameter	Result	Unit
22	Compliance	12/10/2015	Boron, total	6.01	mg/L
22	Compliance	03/09/2016	Boron, total	5.85	mg/L
22	Compliance	06/07/2016	Boron, total	6.28	mg/L
22	Compliance	09/15/2016	Boron, total	5.75	mg/L
22	Compliance	12/07/2016	Boron, total	6.72	mg/L
22	Compliance	02/21/2017	Boron, total	5.47	mg/L
22	Compliance	04/25/2017	Boron, total	5.29	mg/L
22	Compliance	06/08/2017	Boron, total	4.99	mg/L
22	Compliance	06/13/2018	Boron, total	5.57	mg/L
22	Compliance	09/12/2018	Boron, total	4.66	mg/L
22	Compliance	12/12/2018	Boron, total	4.92	mg/L
22	Compliance	03/13/2019	Boron, total	5.75	mg/L
22	Compliance	06/19/2019	Boron, total	5.62	mg/L
22	Compliance	09/17/2019	Boron, total	5.37	mg/L
22	Compliance	12/11/2019	Boron, total	5.70	mg/L
22	Compliance	03/11/2020	Boron, total	5.20	mg/L
22	Compliance	06/03/2020	Boron, total	5.07	mg/L
22	Compliance	09/02/2020	Boron, total	4.72	mg/L
22	Compliance	12/09/2020	Boron, total	4.77	mg/L
22	Compliance	03/19/2021	Boron, total	4.89	mg/L
22	Compliance	06/23/2021	Boron, total	4.91	mg/L
22	Compliance	09/08/2021	Boron, total	4.39	mg/L
22	Compliance	12/08/2021	Boron, total	3.81	mg/L
22	Compliance	03/22/2022	Boron, total	4.84	mg/L
22	Compliance	06/07/2022	Boron, total	3.95	mg/L
22	Compliance	09/13/2022	Boron, total	3.42	mg/L
22	Compliance	12/27/2022	Boron, total	4.44	mg/L
22	Compliance	02/28/2023	Boron, total	4.51	mg/L
22	Compliance	05/31/2023	Boron, total	3.44	mg/L
22	Compliance	12/10/2015	Cadmium, total	0.00140	mg/L
22	Compliance	03/09/2016	Cadmium, total	0.00170	mg/L
22	Compliance	06/07/2016	Cadmium, total	0.00230	mg/L
22	Compliance	09/15/2016	Cadmium, total	0.00310	mg/L
22	Compliance	12/07/2016	Cadmium, total	0.00440	mg/L
22	Compliance	02/21/2017	Cadmium, total	0.00390	mg/L
22	Compliance	04/25/2017	Cadmium, total	0.00360	mg/L
22	Compliance	06/08/2017	Cadmium, total	0.00320	mg/L
22	Compliance	06/13/2018	Cadmium, total	0.00430	mg/L
22	Compliance	09/12/2018	Cadmium, total	0.00570	mg/L
22	Compliance	12/12/2018	Cadmium, total	0.00760	mg/L
22	Compliance	03/13/2019	Cadmium, total	0.00570	mg/L
22	Compliance	06/19/2019	Cadmium, total	0.00480	mg/L
22	Compliance	09/17/2019	Cadmium, total	0.00480	mg/L
22	Compliance	12/11/2019	Cadmium, total	0.00550	mg/L
22	Compliance	03/11/2020	Cadmium, total	0.00500	mg/L
22	Compliance	06/03/2020	Cadmium, total	0.00530	mg/L

APPENDIX C.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Well ID	Well Type	Date	Parameter	Result	Unit
22	Compliance	09/02/2020	Cadmium, total	0.00530	mg/L
22	Compliance	12/09/2020	Cadmium, total	0.00900	mg/L
22	Compliance	03/19/2021	Cadmium, total	0.00590	mg/L
22	Compliance	06/23/2021	Cadmium, total	0.00600	mg/L
22	Compliance	09/08/2021	Cadmium, total	0.00540	mg/L
22	Compliance	12/08/2021	Cadmium, total	0.00540	mg/L
22	Compliance	03/22/2022	Cadmium, total	0.00570	mg/L
22	Compliance	06/07/2022	Cadmium, total	0.00570	mg/L
22	Compliance	09/13/2022	Cadmium, total	0.00570	mg/L
22	Compliance	12/27/2022	Cadmium, total	0.00590	mg/L
22	Compliance	02/28/2023	Cadmium, total	0.00960	mg/L
22	Compliance	05/31/2023	Cadmium, total	0.00520	mg/L
22	Compliance	12/10/2015	Sulfate, total	221	mg/L
22	Compliance	03/09/2016	Sulfate, total	261	mg/L
22	Compliance	06/07/2016	Sulfate, total	255	mg/L
22	Compliance	09/15/2016	Sulfate, total	208	mg/L
22	Compliance	12/07/2016	Sulfate, total	204	mg/L
22	Compliance	02/21/2017	Sulfate, total	197	mg/L
22	Compliance	04/25/2017	Sulfate, total	213	mg/L
22	Compliance	06/08/2017	Sulfate, total	229	mg/L
22	Compliance	06/13/2018	Sulfate, total	219	mg/L
22	Compliance	09/12/2018	Sulfate, total	207	mg/L
22	Compliance	12/12/2018	Sulfate, total	181	mg/L
22	Compliance	03/13/2019	Sulfate, total	179	mg/L
22	Compliance	06/19/2019	Sulfate, total	249	mg/L
22	Compliance	09/17/2019	Sulfate, total	204	mg/L
22	Compliance	12/11/2019	Sulfate, total	187	mg/L
22	Compliance	03/11/2020	Sulfate, total	220	mg/L
22	Compliance	06/03/2020	Sulfate, total	214	mg/L
22	Compliance	09/02/2020	Sulfate, total	206	mg/L
22	Compliance	12/09/2020	Sulfate, total	201	mg/L
22	Compliance	03/19/2021	Sulfate, total	179	mg/L
22	Compliance	06/23/2021	Sulfate, total	168	mg/L
22	Compliance	09/08/2021	Sulfate, total	160	mg/L
22	Compliance	12/08/2021	Sulfate, total	146	mg/L
22	Compliance	03/22/2022	Sulfate, total	145	mg/L
22	Compliance	06/07/2022	Sulfate, total	134	mg/L
22	Compliance	09/13/2022	Sulfate, total	142	mg/L
22	Compliance	12/27/2022	Sulfate, total	141	mg/L
22	Compliance	02/28/2023	Sulfate, total	145	mg/L
22	Compliance	05/31/2023	Sulfate, total	123	mg/L

APPENDIX C.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
HENNEPIN POWER PLANT
OLD WEST ASH POND
HENNEPIN, IL

Notes:
mg/L = milligrams per liter

APPENDIX D
TECHNICAL MEMORANDUM
EVALUATION OF CADMIUM SOURCES WITHIN AQUIFER SOLIDS, HENNEPIN POWER PLANT - WEST ASH POND SYSTEM

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TECHNICAL MEMORANDUM

Date:	October 9, 2023
To:	Brian Voelker, Vistra
Copies to:	Stu Cravens and Phil Morris, Vistra Eric Tlachac and Brian Hennings, Ramboll
From:	Allison Kreinberg and Ryan Fimmen, PhD, Geosyntec Consultants
Subject:	Evaluation of Cadmium Sources within Aquifer Solids Hennepin Power Plant – West Ash Pond System

This document serves as an Appendix to the October 11, 2023, Alternative Source Demonstration (ASD) for Hennepin (HEN) Power Plant West Ash Pond System (WAPS) (Site) for the sixth assessment monitoring event (A6) (referred to as the A6 ASD), completed to fulfill the requirements of Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.95(g)(3)(ii). A previous ASD prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) in May 2023 concluded that the SSL of cadmium at downgradient monitoring well #22 could be attributed to sources other than the WAPS and was potentially related to changing groundwater pH (Ramboll 2023). Geosyntec Consultants, Inc. (Geosyntec) has completed a review of geochemical and site conditions at the Site to evaluate the influence of the uppermost aquifer solid-phase mineralogy and geochemistry on groundwater composition. Using additional evidence from laboratory analyses and geochemical modeling, this technical memorandum demonstrates that naturally occurring cadmium associated with aquifer solids throughout the Site is a source of elevated cadmium in Site groundwater.

SITE CONDITIONS

Site geology consists primarily of unlithified alluvial and glacial deposits overlying shale bedrock. These alluvial deposits consist of the fine-grained Cahokia Alluvium, and the gravelly, glacially deposited Henry Formation. The Cahokia Alluvium deposits at the Site extend to depths of less than 20 feet and are composed of sandy silts and clays that are interbedded with sand and gravel (OBG 2017). Henry Formation deposits at the Site underlie the Cahokia Alluvium. These deposits

extend in depth to the uppermost bedrock (to a maximum of 130 feet dependent upon location at the Site) and are composed of coarse-grained materials that include gravel, coarse sands, and cobbles. The Pennsylvanian-age bedrock consists of interbedded layers of shale with thin limestone, sandstone, and coal beds.

The Henry Formation and alluvium together comprise the Uppermost Aquifer (UA) at the WAPS and extend from the water table to the bedrock. The UA is unconfined and extends from the water table to the bedrock. Additional information regarding site hydrogeology and stratigraphy is provided in the A6 ASD prepared by Ramboll.

AQUIFER SOLIDS EVALUATION

The previous ASD report for cadmium at well #22 completed by Ramboll (2023) identified naturally occurring cadmium within soil samples collected from soil borings near the Hennepin East Ash Pond System. Additional aquifer solids samples were collected near the WAPS by Geosyntec and analyzed to evaluate whether subsurface material in the vicinity of the WAPS may account for reported cadmium concentrations in groundwater. The analytical results of the aquifer solids demonstrate that the aqueous groundwater cadmium concentrations at monitoring well #22 in excess of the GWPS are derived from the native mineralogy.

Samples were collected from soil borings advanced in March 2021 adjacent to background well #34 and compliance well #22[1]. One sample was collected from the screened interval of monitoring well #34 (32–33 feet bgs) and two samples were collected from the screened interval of monitoring well #22 (26–27 feet bgs and 29–30 feet bgs). Well construction forms for both wells are provided in **Attachment 1**. Field observations of the sample lithologies (provided in Table 1) were generally consistent with the lithologies for the screened intervals of well #34 and well #22 provided in the boring logs (**Attachment 1**).

Samples were submitted for analysis of total cadmium, cadmium distribution within the aquifer solids using sequential extraction procedure (SEP), and mineralogy via X-ray diffraction (XRD). Results for total and SEP analyses of cadmium in these samples are presented in **Table 1**, and the analytical laboratory reports are provided as **Attachment 2**.

SEP is an analytical technique that uses progressively stronger reagents to solubilize metals from specific phases within the solid matrix and is used to infer associations between constituents and different classes of solids (Tessier et al. 1979). These classes of solids are identified based on their

[1] An aquifer solids sample was also collected from the screened interval of well #51 during this sampling event. Results of this sample are excluded from subsequent results tables and discussion to emphasize relevant findings. Analytical results of this sample are included in the Attachments section.

solubility under different reagents and include the exchangeable fraction, the carbonate-bound fraction, the iron/manganese oxide-bound fraction, the organic matter-bound fraction, and the residual fraction. To evaluate data quality in an SEP analysis, first the sum of individual extraction steps from the SEP was compared to the total cadmium concentration. The sum of the SEP is not expected to be exactly equal to the total metals analysis but should be generally consistent with the total metals result. The total cadmium concentrations ranged from 0.53 to 2.9 micrograms per gram of soil (µg/g). The summed concentrations of cadmium from the SEP analyses ranged from 0.45 to 2.6 µg/g. The results were generally consistent between the total metals analyses and the summed SEP steps, indicating good metals recovery and data quality.

These results indicate that cadmium is naturally present in both background and compliance well solid-phase samples at the Site. The highest cadmium concentrations were observed in the samples from monitoring well #22. The largest components of cadmium in all three samples were found to be associated with the weak-acid extractable fraction (including carbonates) and the reducing agent extractable fraction (including iron and manganese oxides) (**Table 1**). Smaller components of cadmium were found to be associated with the other fractions, although 69%–83% of cadmium from all three samples was associated with a combination of carbonates and iron/manganese oxides.

Mineralogical analyses were completed using XRD to evaluate the mineralogy of the aquifer solids. Mineralogy of the samples analyzed consists primarily of quartz, various carbonate minerals (dolomite, calcite, and ankerite), various feldspar minerals (albite and microcline), and muscovite (mica). Of the mineral groups identified as present within the aquifer solids via XRD, SEP testing quantified the largest component of cadmium was leached from the weak-acid extractable and reducing agent extractable fractions, which are often associated with carbonates and oxides, respectively (**Table 1**). Carbonate minerals were found in each sample analyzed at abundances of 18 to 25 weight percent (wt. %) (**Table 2**). Magnetite, an iron oxide mineral, was detected in every sample analyzed (**Table 2**). Based on the XRD results, these minerals are abundant in samples from both well #22 and well #34 of the WAPS, suggesting that these cadmium-associated minerals occur in the UA throughout the Site and constitute a natural source of cadmium. Mineralogy results are provided in **Table 2** and the laboratory analytical report is included as **Attachment 3**.

The association of cadmium with carbonate minerals, specifically calcite, is a well-studied phenomenon. Cadmium ions can readily substitute for calcium ions in the calcite crystal structure due to similarities in charge and ionic radii between the two ions (Lorens 1981, Tesoriero and Pankow 1996). This process is known to occur via initial sorption of aqueous cadmium ions to the hydrated surface layer of calcite crystals, which then become incorporated into the calcite crystal structure during new layer growth in a process known as co-precipitation (Papadopoulos and

Rowell 1988, Reeder 1996, Horner et al. 2011, Callagon et al. 2017). The primary control on calcite solubility in groundwater is pH, with calcite solubility increasing at lower pH.

Sorption of cadmium to iron oxide minerals is also well documented, as divalent transition metals such as cadmium are known to bind strongly to iron and manganese oxides (Cowan et al. 1991, Loganathan et al. 2012). Cadmium sorption to iron oxides is primarily a function of pH, aqueous cadmium concentrations, and aqueous concentrations of competitive divalent cations such as calcium and magnesium (Cowan et al. 1991).

Aquifer solids analyses completed for well #34 and well #22 show that aquifer solids are composed of approximately 18-25% carbonate minerals. SEP results indicate the dissolution of cadmium from aquifer solids with a weak acid, consistent with cadmium association with carbonate minerals. Therefore, cadmium co-precipitation with or dissolution from carbonate minerals would influence concentrations of aqueous cadmium. Dissolution of naturally occurring cadmium-bearing carbonates constitutes a potential alternative source of cadmium. SEP results also indicated that cadmium is associated with iron/manganese oxides such as magnetite, which was detected in the samples from both wells #34 and #22. Desorption of cadmium from magnetite constitutes an additional potential alternative source of cadmium in groundwater.

GEOCHEMICAL MODELING

The previous ASD report prepared by Ramboll (2023) for cadmium at well #22 noted a downward shift in pH values of groundwater at well #22 since approximately 2013 with a corresponding increase in cadmium concentrations (**Figure 1**). A decline in pH conditions may affect aqueous cadmium concentrations due to changes in cadmium speciation by destabilizing cadmium-substituted carbonate minerals in the UA. A decrease in pH could also result in mobilization of cadmium from the existing iron oxide mineral phases such as magnetite via desorption of cadmium from mineral surfaces and dissolution of these iron oxide minerals.

Geochemical equilibrium speciation modeling was used to evaluate the impact of pH changes on aqueous cadmium concentrations at well #22. Thermodynamic reaction pathway modeling was conducted using the React module of Geochemist's Workbench (GWB) geochemical modeling software package (version 17.0.1). The purpose of the model is to show the relationship between pH and aqueous cadmium concentrations as a function of the dissolution of cadmium-bearing carbonates and the desorption of cadmium from iron oxides.

The initial aqueous component of the geochemical model was populated using the groundwater composition of the most recent sample collected at well #22 on May 31, 2023 (**Table 3**). The pH value of the aqueous component was not defined and was set as a sliding scale to test the hypothesis

that pH changes may cause changes to aqueous cadmium concentrations. Solid-phase reactants were defined based on XRD results of the well #22 samples (**Table 3**). Magnetite was included in the system with an abundance of 0.5 wt. % to evaluate the influence of sorption and desorption of cadmium from the iron oxide fraction. To represent the cadmium-bearing carbonate phase, a cadmium-calcite source phase was included as a reactant at an abundance of 5.25 wt. % (averaged from calcite abundances of the two well #22 samples) to evaluate the impact that the dissolution of calcite with co-precipitated cadmium has on aqueous cadmium concentrations. This source phase was defined with a mineral formula of $(Ca_{0.85}Cd_{0.15})CO_3$, which was determined by calibrating the model output to the May 31, 2023, well #22 analytical results for aqueous cadmium and calcium. The calcite-otavite (cadmium carbonate) solid-solution series can occur in nature across all proportion ranges depending upon geochemical conditions. This can include either 100% calcium carbonate, 100% cadmium carbonate, or any proportion of calcium and cadmium carbonate in between these two end member compositions. The selected mineral formula contains a reasonable proportion of cadmium within the crystal structure to represent coprecipitation while still retaining the general calcite crystal structure and thermodynamic traits (Ma et al. 2022).

The WATEQ4F thermodynamic database developed by the United States Geological Survey was modified to include the cadmium-calcite source phase and was used in model calculations. Thermodynamic information for the cadmium-calcite source phase was populated using the experimentally derived solubility constants of the calcite-otavite solid-solution series from Ma et al. (2022). Sorption to iron oxides was incorporated into model calculations using the Dzombak and Morel (1990) two-layer surface complexation model, which is provided in GWB as sorption dataset FeOH.sdat. This sorption dataset was modified to include magnetite as an iron oxide mineral containing sorption sites. Iron minerals hematite, goethite, and $Fe(OH)_3(s)$ were suppressed during model simulations due to their absence in XRD results. Pure (*i.e.*, non-substituted) calcite was suppressed in favor of using of the cadmium-calcite source phase in calculations. A porosity value of 20% was used for the UA, as indicated in the *Hydrogeologic Monitoring Plan* (OBG 2017).

The geochemical model was used to show predictions of cadmium and calcium concentrations over the pH range observed in groundwater at well #22 from 2013 to the present (**Figure 2**). Calcium concentrations are shown to illustrate the effects of dissolution of the cadmium-calcite source phase on aqueous conditions. Generally, both calcium and cadmium concentrations are predicted to increase as pH decreases toward neutral. Aqueous concentrations of cadmium are predicted to increase with decreasing pH within the pH range of 8.2 standard units (SU) to approximately 7.2 SU due to dissolution of the cadmium-calcite source phase, which decreases from approximately 3.4 wt. % to 2.3 wt. % (**Figure 3A**). Around a pH value of 7.7 SU, the model predicts that desorption of cadmium from iron oxide minerals (magnetite) will begin to occur. As

pH continues to decrease, aqueous concentrations of cadmium are predicted to increase due to the concurrent effects of the dissolution of the cadmium-calcite phase and desorption of cadmium from magnetite (**Figure 3B**).

The geochemical model was calibrated by adjusting the cadmium-calcium ratio of the source phase to align (as near as possible) with the predicted aqueous cadmium and calcium concentrations at a pH of 7.58 SU (pH measured at well #22 on May 31, 2023 used for the aqueous input) with reported values. At a pH of 7.58 SU, the model predicted aqueous cadmium and calcium concentrations of 0.0024 and 71.74 mg/L respectively, compared to reported well #22 concentrations of 0.0052 and 87.1 mg/L (**Figure 2**). These results indicate that the model output aligns closely with observed values and that the model predictions are reasonable when compared to previously reported cadmium substitution rates (Ma et. al 2022).

CONCLUSION

Naturally occurring cadmium associated with the minerals of the UA solids at the Site was identified as a source for cadmium in Site groundwater. Solid-phase samples collected from background well #34 and compliance well #22 contained cadmium, with the highest total cadmium concentrations observed in samples collected from the screened interval of the well #22. SEP analyses of the solid-phase samples determined that the majority of cadmium in the solid phase is associated with the carbonate and iron/manganese oxide fractions. XRD confirmed the presence of magnetite (an iron oxide mineral) in all samples analyzed and identified carbonate minerals that make up approximately 18-25% of the solid phase. These solid phase results verify the presence of naturally occurring cadmium within the UA and suggest dual mechanisms of cadmium mobilization that are strongly supported by literature: (1) the dissolution of calcite containing coprecipitated cadmium within the crystal structure, and (2) the desorption of cadmium from iron oxide mineral surfaces (such as magnetite).

These potential mechanisms of cadmium mobilization were evaluated using a thermodynamic reaction pathway model. Groundwater analytical data and mineralogy results were used as model inputs to assess the impact that shifts in pH values of groundwater at monitoring well #22 are predicted to have on aqueous cadmium concentrations. Model results were successfully calibrated to observed concentrations, and the model supports the conclusion that both mechanisms of cadmium mobilization should occur within the pH range of groundwater observed at well #22 and may result in increases in aqueous cadmium concentrations as a function of observed decreases in pH of groundwater at the well.

The solid-phase assessment and geochemical modeling efforts support the determination that aqueous cadmium concentration increases at downgradient monitoring well #22 are related to naturally occurring mineral-water interactions within the UA and not a release from the WAPS.

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TABLES

Table 1 - Cadmium SEP Results Summary
Hennepin Power Plant

Geosyntec Consultants, Inc.

Well ID			**SB-22**		**SB-22**		**SB-34**	
Depth (ft)			**(26-27)**		**(29-30)**		**(32-33)**	
Location			**Downgradient**		**Downgradient**		**Background**	
Total Cadmium			0.76		2.9		0.53	
SEP Fraction	SEP Reagent	**SEP Results**						
			Concentration	% of Total	Concentration	% of Total	Concentration	% of Total
1	Deionized Water	Water Soluble Fraction	<0.02	--	0.04	3%	<0.02	--
2	$MgCl_2$	Exchangeable Metals Fraction	<0.02	--	0.24	9%	<0.02	--
3	Sodium acetate, acetic acid	Metals Bound to Carbonates Fraction	0.37	56%	0.69	27%	0.12	27%
4	Hydroxylamine HCl and acetic acid	Metals Bound to Fe/Mn Oxides Fraction	0.16	24%	1.1	42%	0.25	56%
5	HNO_3, H_2O_2, and ammonium acetate	Bound to Organic Material Fraction	0.03	5%	0.25	10%	0.03	7%
6	HNO_3, HCl, and HF	Residual Metals Fraction	0.10	15%	0.23	9%	0.05	11%
SEP Total			0.66	100%	2.6	100%	0.45	100%

Notes:
SEP - sequential extraction procedure
All results shown in microgram of cadmium per gram of soil (µg/g).
Non-detect values are shown as less than the detection limit.
The cadmium fraction associated with each SEP phase is shown.
% of total cadmium is calculated from the sum of the SEP fractions.

Table 2 - Summary of X-Ray Diffraction Analysis
Hennepin Power Plant

Well ID			**MW-22**	**MW-22**	**MW-34**
Depth (ft bgs)			**(26-27)**	**(29-30)**	**(32-33)**
Location			**Downgradient**	**Downgradient**	**Upgradient**
Boring Log Description			**Fine sand**	**Gravel with sand and trace clay**	**Fine-medium sand**
Mineral/Compound	**Formula**	**Mineral Type**	(wt %)	(wt %)	(wt %)
Quartz	SiO_2	Silicate	57.0	54.5	53.0
Dolomite	$CaMg(CO_3)_2$	Carbonate	14.4	11.4	2.6
Albite	$NaAlSi_3O_8$	Feldspar	7.3	9.8	7.1
Calcite	$CaCO_3$	Carbonate	7.2	3.3	11.1
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	Mica	2.1	7.4	7.9
Microcline	$KAlSi_3O_8$	Feldspar	5.2	5.2	5.1
Ankerite	$Ca(Fe,Mg)(CO_3)_2$	Carbonate	2.9	2.8	6.0
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$	Clay	1.9	2.7	3.4
Kaolinite	$Al_2Si_2O_5(OH)_4$	Clay	0.6	2.5	3.4
Pyrite	FeS_2	Sulfide	-	-	0.2
Magnetite	Fe_3O_4	Oxide	0.5	0.4	0.4
Actinolite	$Ca_2(Mg,Fe)_3Si_8O_{22}(OH)_2$	Amphibole	0.8	-	-
Carbonate Total			25	18	20

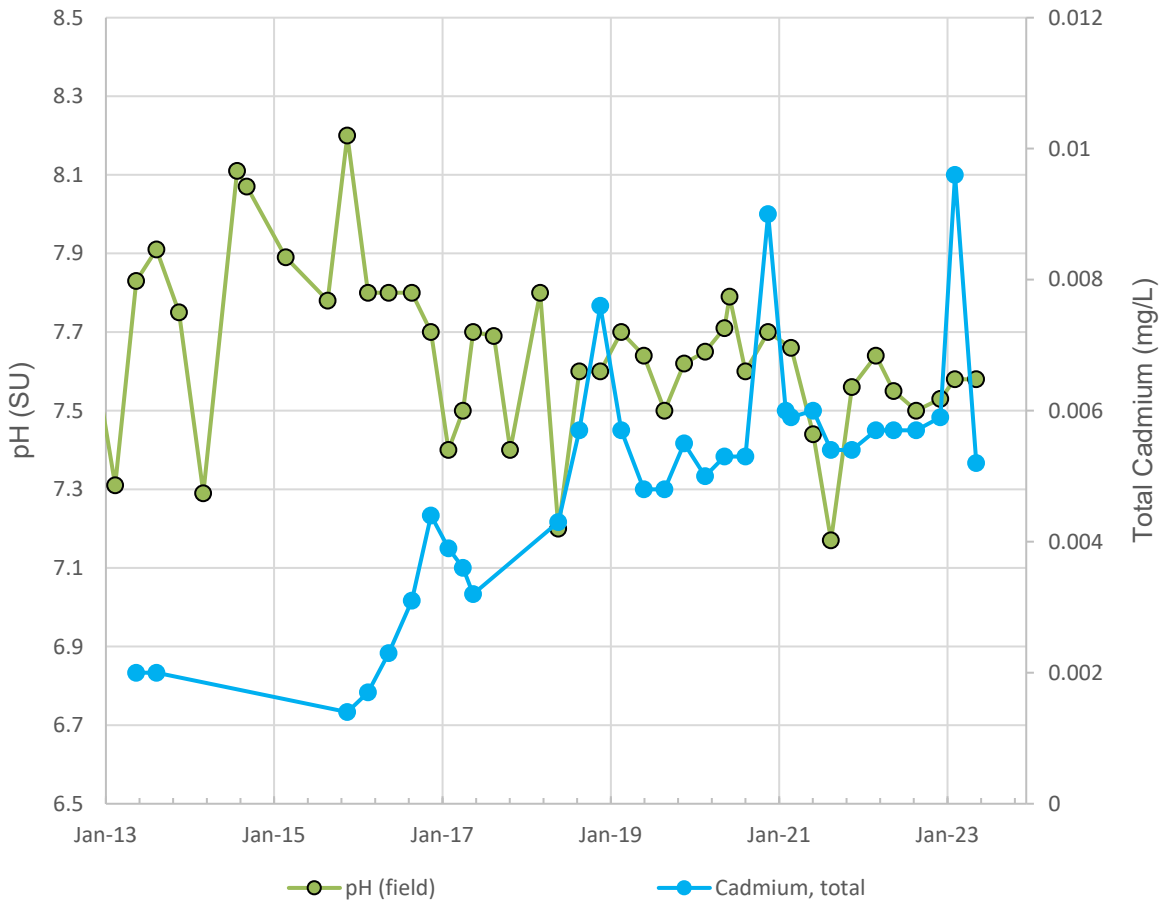
Notes:
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.
Sample depths are shown in feet below ground surface (ft bgs).
wt %: percentage by weight

Table 3 - Summary of Geochemical Model Inputs *Geosyntec Consultants, Inc.*
Hennepin Power Plant

Aqueous Phase			
Parameter	**Unit**	**Input Value**	**Source**
Calcium	mg/L	87.1	May 31, 2023 sampling event
Cadmium	mg/L	0.00520	May 31, 2023 sampling event
Chloride	mg/L	97.0	May 31, 2023 sampling event
Iron	mg/L	0.0200	May 31, 2023 sampling event
Magnesium	mg/L	32.0	May 31, 2023 sampling event
Manganese	mg/L	0.0511	May 31, 2023 sampling event
Potassium	mg/L	11.4	May 31, 2023 sampling event
Sodium	mg/L	55.8	May 31, 2023 sampling event
Sulfate	mg/L	123	May 31, 2023 sampling event
Total Alkalinity	mg/L	243	May 31, 2023 sampling event
Eh	V	0.249	May 31, 2023 sampling event
Temperature	°C	15.7	May 31, 2023 sampling event
pH	SU	6.5-9	Model variable
Solid Phase			
Reactant	**Unit**	**Input Value**	**Source**
Magnetite	wt. %	0.5	March 2021 sample XRD
Cadmium-Calcite Source Phase[1,2]	wt. %	5.25	March 2021 sample XRD (calcite)
Porosity	%	20	OBG, 2017

Notes:
mg/L: milligrams per liter
V: volts
°C: degrees Celsius
SU: standard units
wt. %: weight percentage
1. Mineral formula $(Ca_{0.85}Cd_{0.25})CO_3$
2: A log K value of -8.98 at 25°C, interpolated from experimental results of Ma et al. (2022), was used for thermodynamic calculations

FIGURES



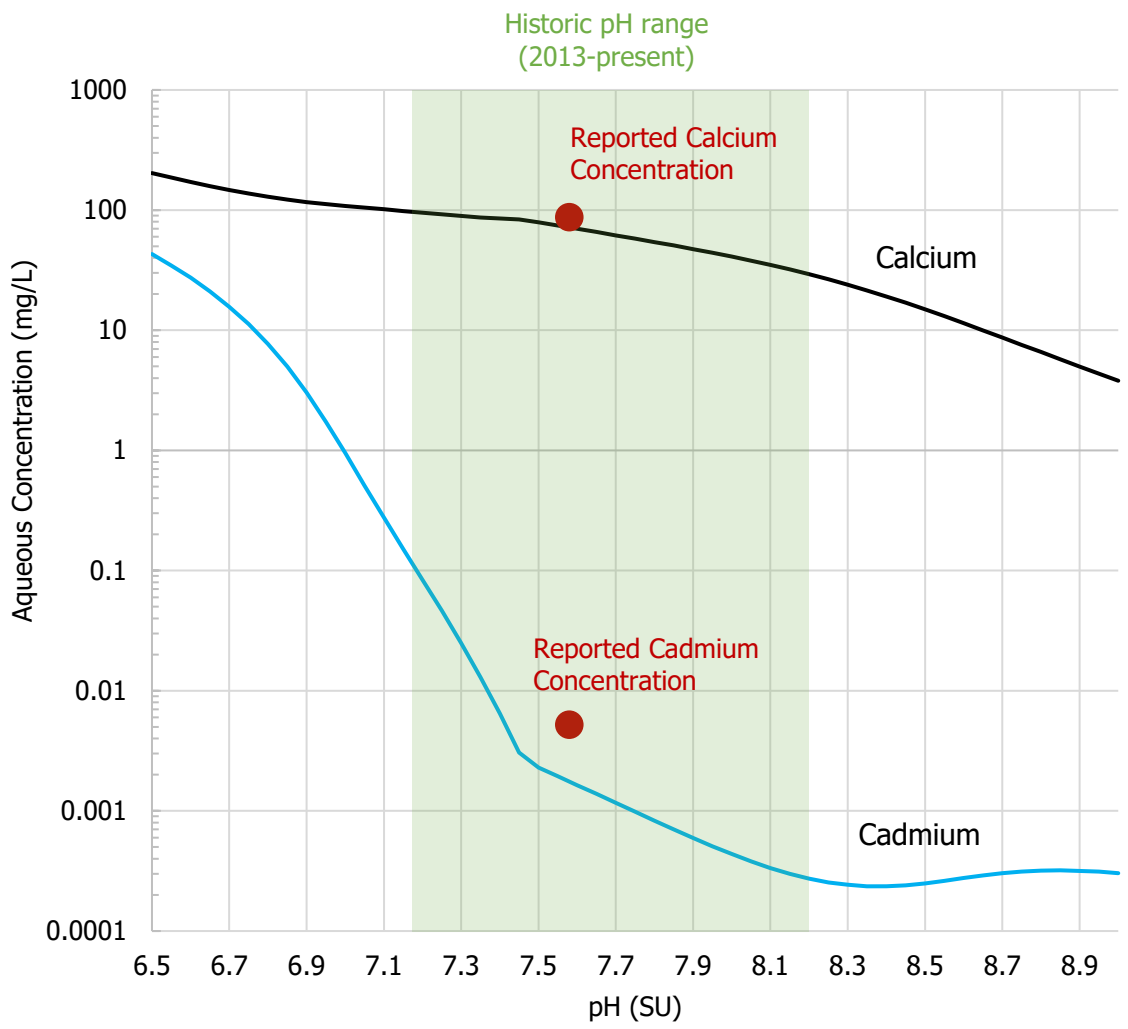
Notes: pH values are measured in the field during sampling events and are shown in standard units (SU). Cadmium results are shown for unfiltered samples in units of milligrams per liter (mg/L).

pH and Cadmium Time Series Graph: Monitoring Well 22

Geosyntec consultants

Columbus, OH | August 2023

Figure **1**



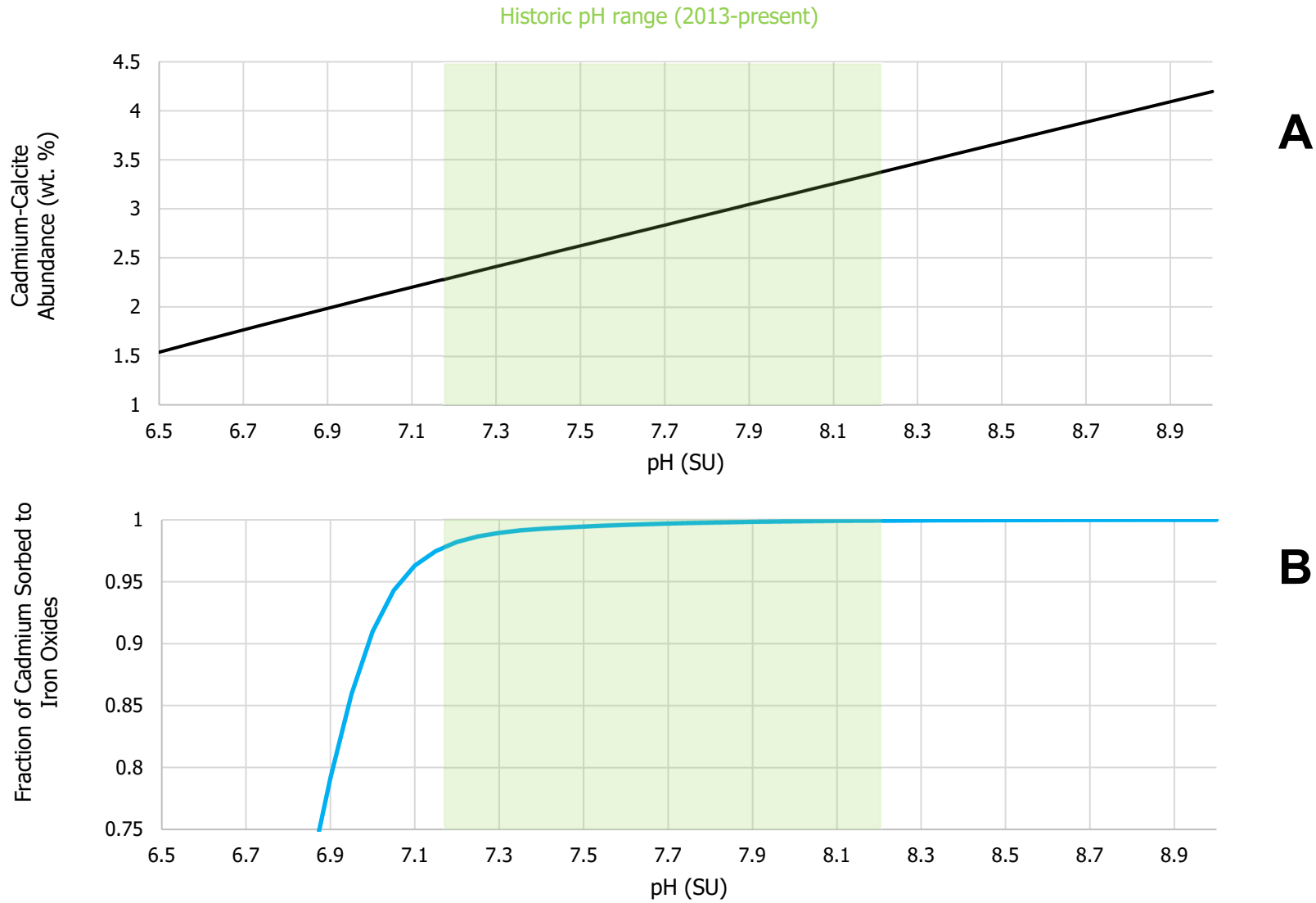
Notes: pH values are shown in standard units (SU). Predicted concentrations of cadmium and calcium are shown in units of milligrams per liter (mg/L) on a log scale. The historic range of measured pH values at monitoring well 22 groundwater from 2013 to the present is indicated by the green shading. Reported concentrations of calcium and cadmium from the May 31, 2023, groundwater sample collected at monitoring well 22 are indicated by red dots

Geochemical Model Output – Aqueous Cadmium and Calcium Concentrations

Geosyntec consultants

Columbus, OH | August 2023

Figure **2**



Notes: pH values are shown in standard units (SU). Plot A displays predicted abundances of the cadmium-calcite source phase in units of weight percentage (wt. %).
The historic range of measured pH values at monitoring well 22 groundwater from 2013 to the present in indicated by the green shading. Plot B displays the fraction of cadmium in the system that is predicted to sorb to iron oxide minerals.

Geochemical Model Output – Source Phase Abundance and Sorbed Cadmium Fraction

Geosyntec consultants

Columbus, OH | August 2023

Figure 3

ATTACHMENT 1

Boring Logs - Wells 22 and 34

PROJECT Hydrogeologic Study
Hennepin Power Plant
JOB NO. 82-1293

BORING W-2
SHEET 1 OF 1

22

DEPTH (ft)	SAMPLE NUMBER	INTERVAL AND TYPE	ADVANCED / RECOVERED (in)	SEE REMARK #	DESCRIPTION OF MATERIALS (Color Modifier MATERIAL. Classification)	BLOWS (per 6 in)	DRY UNIT WEIGHT (pcf)
	1	AS			Brown Sandy CLAY, CL		
5	2	SS	18/9		Gray - Brown Silty CLAY Trace Sand, CL	3-5-5	
10	3	SS	18/16		Brown Fine SAND w/Silt Trace Gravel, SM	5-7-5	
15	4	SS	18/16			19-20-28	
					Gray-Brown GRAVEL w/Sand Trace Clay, GP		
20	5	SS	18/18			17-27-38	
25	6	SS	18/13		-Coal @ 25.4'	23-18-12	
					Brown Fine SAND, SP		
30	7	SS	18/15			6-11-11	
					Brown GRAVEL w/Sand Trace Clay, GP-GC		
35	8	SS	18/6		TOB	0-4-6	

Surface Elevation 461.4'
Soil Classification System Unified

Shear Strength, tsf
SV△ QP/2□ QU/2○
0 ½ 1 1½ 2 2½
PL + NMC • LL x
0 50 100
Rock Quality Designation
0 50 100

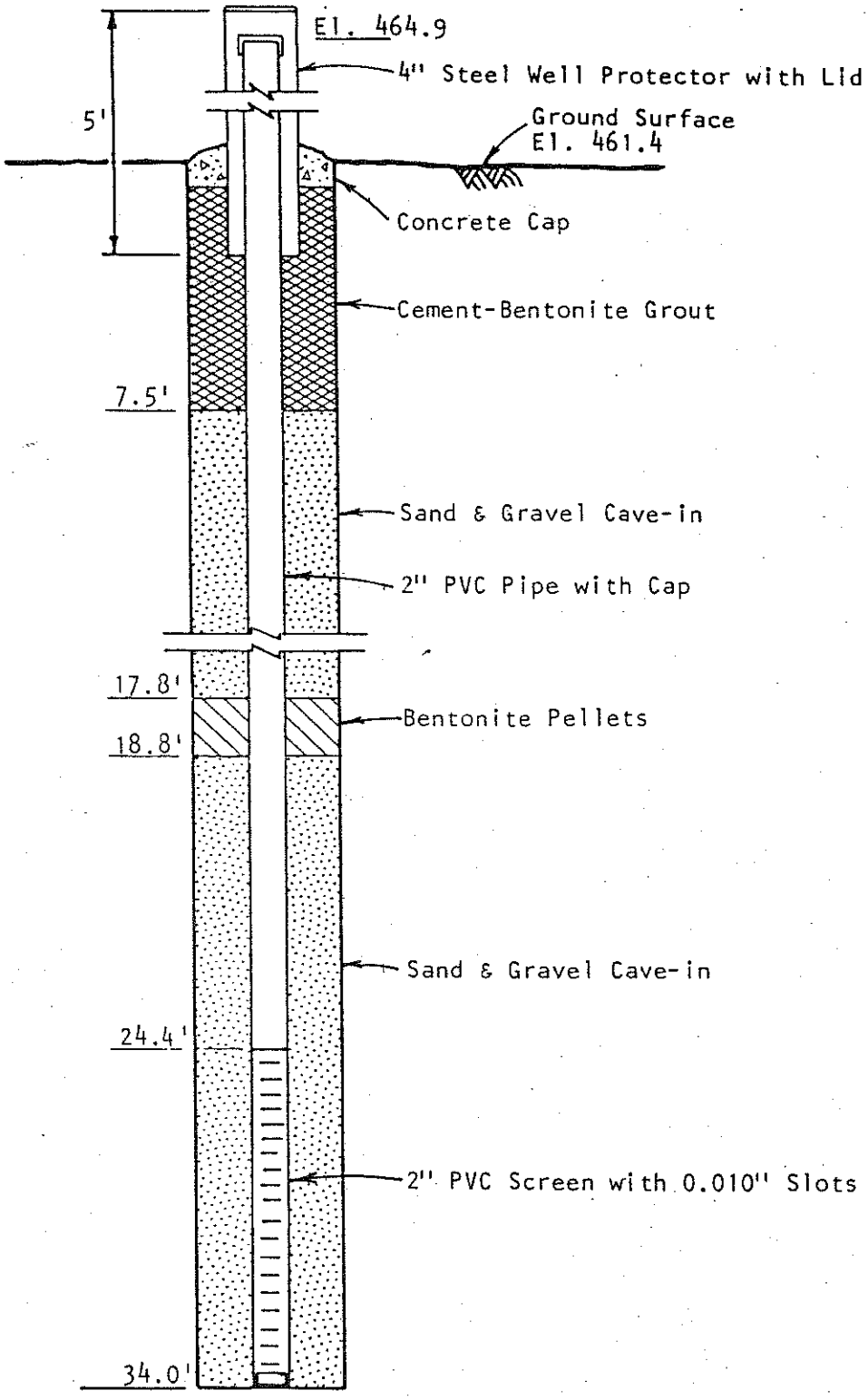
DRILLING METHOD Hollow Auger
DATE DRILLED 12/9/82
DRILLED BY Roberts
LOGGED BY Maxeiner
PIEZOMETER Yes

GROUNDWATER LEVELS
Encountered at 8.0 Feet
___ Hours after completion ___ Feet
6 Days after completion 8.0 Feet
___ after completion ___ Feet

NOTE: Refer to the attached GENERAL NOTES and NOTATION USED ON RECORDS OF SUBSURFACE EXPLORATION for abbreviations, explanations, and qualifications relative to this log.

mathes

John Mathes & Associates, Inc.



6" Borehole to Termination Depth

Not to Scale

22

PIEZOMETER W-2

mathes

John Mathes & Associates, Inc.

PLATE 16

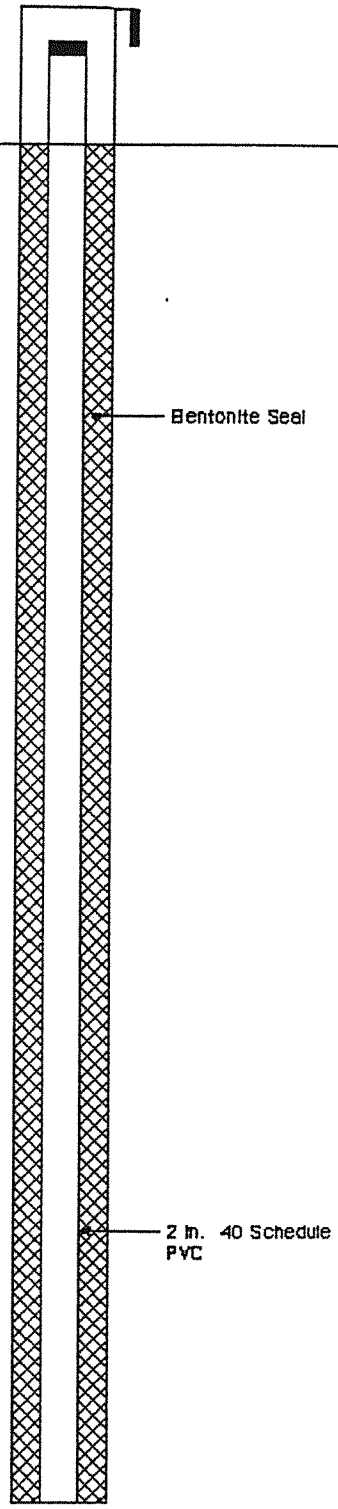
Monitoring Well No. 34

PROJECT Title: Hennepin West Ash Impoundment
DRILL RIG: Hollow Stem Auger
DRILLER: Boart Longyear

DATE: 8-22-96
HOLE DIA.: 7 in.
FINAL GW: 7.54 ft.

LOGGED BY: Mueller/Tu
SAMPLER: Split Spoon
HOLE ELEV.: 448.19 ft. MSL

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE
Silty clay, trace of plant debris, little fine-grained sand, very dark brown in color, medium to high plasticity (alluvium).			0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	C-1A, C-1B, C-1C, C-1D



STMI

2511 N. 124th St. Suite 205
Brookfield, Wisconsin 53005-8208

Notes:

Project No. 135-1.31

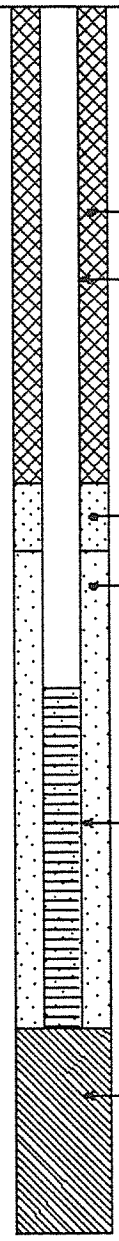
Monitoring Well No. 34

PROJECT Title: Hennepin West Ash Impoundment
DRILL RIG: Hollow Stem Auger
DRILLER: Boart Longyear

DATE: 8-22-96
HOLE DIA.: 7 in.
FINAL GW: 7.54 ft.

LOGGED BY: Mueller/Tu
SAMPLER: Split Spoon
HOLE ELEV.: 448.19 ft. MSL

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE		WELL CONSTRUCTION DETAIL
Clayey silt, trace to little fine-grained sand and shell fragments, soft, olive-gray. Wet.			20, 21, 22, 23, 24, 25, 26	C-1E, C-1F		Bentonite Seal; 2 in. 40 Schedule PVC
Sand, fine-grained to medium-grained, well-sorted, quartz, trace of silt, loose. Yellowish brown color grades to olive gray below 31 ft.			27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38	C-1G		#7 Fine Sand; #5 Fine Sand; 0.01 Slotted Well Screen; Holeplug
			39, 40			



STMI
2511 N. 124th St. Suite 205
Brookfield, Wisconsin 53005-8208

Notes:

Project No. 135-1.31

ATTACHMENT 2

Sequential Extraction Procedure
Laboratory Analytical Reports

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : Hennepin MNA

06-April-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 05 March 2021
LR Report: **CA14198-MAR21**
Reference: P.O# 80003210A

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time					04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Sulphide [%]	22-Mar-21	12:31	22-Mar-21	17:06	0.09	0.18	< 0.04	0.06
SO4 [%]	23-Mar-21	07:20	25-Mar-21	09:13	< 0.1	< 0.1	< 0.1	< 0.1
TOC [%]	22-Mar-21	02:08	22-Mar-21	17:06	1.92	3.55	0.339	4.55
TS LOI [mg/L]	11-Mar-21	19:34	16-Mar-21	09:39	64100	70500	15400	74800
Ag [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.05	0.06	< 0.05	0.08
Al [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	5000	8200	2800	3700
As [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	2.7	3.5	5.1	8.4
Ba [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	47	84	20	31
Be [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.29	0.50	0.20	0.87
B [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	5	10	6	7
Bi [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.23	0.59	0.13	0.26
Ca [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	52000	91000	56000	36000
Cd [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.53	0.89	0.76	2.9
Co [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	6.9	9.3	5.2	9.8
Cr [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	45	27	79	130
Cu [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	8	14	11	25
Fe [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	10000	14000	9400	12000
K [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	1200	1900	910	1200
Li [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	6	12	4	6
Mg [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	13000	15000	21000	16000
Mn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	260	350	310	220
Mo [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.9	2.0	3.1	5.0
Na [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	180	170	190	160
Ni [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12	19	15	43
Pb [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	6.1	11	7.7	28
P [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	380	430	350	330
Se [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.7	1.1	< 0.7	0.8
Si [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	7200	4500	5400	1600
Sb [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.8	< 0.8	< 0.8	< 0.8
Sn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	1.1	0.6	< 0.5	0.5
Tl [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.16	0.25	0.13	0.26
U [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.65	1.2	1.3	1.8
V [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12	18	17	41

OnLine LIMS

0002451834

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : Hennepin MNA

LR Report : **CA14198-MAR21**

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
W [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.06	0.05	0.07	0.10
Y [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	5.7	8.0	6.1	7.6
Zn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	40	67	46	91

Catharine Arnold

CHARTERED CATHARINE ARNOLD CHEMIST

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0002451834

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

water soluble

Project : Hennepin MNA

30-March-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 05 March 2021
LR Report: **CA14201-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time					04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	120	140	32	310
As [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.5	< 0.5	< 0.5	< 0.5
Ba [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	0.8	0.9	0.2	1.5
Be [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.02	< 0.02	< 0.02	0.02
B [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 1	1	< 1	1
Bi [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.09	< 0.09	< 0.09	< 0.09
Ca [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	500	600	220	410
Cd [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.02	< 0.02	< 0.02	0.04
Co [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	0.03	0.04	0.02	0.23
Cr [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.5	< 0.5	< 0.5	1.6
Cu [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.1	< 0.1	< 0.1	0.5
Fe [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	72	68	22	310
K [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	110	140	99	220
Li [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 2	< 2	< 2	< 2

OnLine LIMS

0002446249

SGS Canada Inc.
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Lakefield - Ontario - KOL 2HO
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water soluble

Project : Hennepin MNA

LR Report : **CA14201-MAR21**

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mg [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	89	120	100	140
Mn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	1.4	1.3	0.5	4.0
Mo [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	0.1	0.6	0.1	0.3
Na [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	28	35	40	52
Ni [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.5	< 0.5	< 0.5	0.7
P [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	4	4	< 3	10
Pb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.1	< 0.1	< 0.1	0.7
Si [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	300	290	120	740
Sb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.5	< 0.5	< 0.5	< 0.5
Tl [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.02	< 0.02	< 0.02	< 0.02
U [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	0.016	0.043	0.004	0.069
V [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 3	< 3	< 3	4
W [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.04	< 0.04	< 0.04	< 0.04
Y [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	0.045	0.042	0.029	0.15
Zn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:50	< 0.7	< 0.7	< 0.7	2.5

Fraction 1 - Water Soluble

Catharine Arnold

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0002446249

SGS Canada Inc.
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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Fraction 1 Exchangeable Metals

Project : Hennepin MNA

30-March-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 05 March 2021
LR Report: **CA14202-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time					04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	3	4	< 1	3
As [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Ba [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	4.0	4.7	1.5	5.0
Be [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	< 0.02
B [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 1	< 1	< 1	< 1
Bi [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.09	< 0.09	< 0.09	< 0.09
Ca [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	2200	3200	1000	3500
Cd [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	0.24
Co [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.02	0.03	< 0.01	0.10
Cr [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Cu [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.1	< 0.1	< 0.1	< 0.1
Fe [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	5	6	< 1	2
K [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	57	88	58	92
Li [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 2	< 2	< 2	< 2

OnLine LIMS

0002446254

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Fraction 1 Exchangeable Metals

Project : Hennepin MNA

LR Report : CA14202-MAR21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	6.5	8.5	1.5	17
Mo [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.1	0.1	< 0.1	< 0.1
Na [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	8	9	11	12
Ni [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Pb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.1	< 0.1	< 0.1	< 0.1
P [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 3	< 3	< 3	< 3
Sb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.7	< 0.7	< 0.7	< 0.7
Si [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	32	30	45	30
Sn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Tl [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	< 0.02
U [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.017	0.061	0.021	0.024
V [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 3	< 3	< 3	< 3
W [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.04	< 0.04	< 0.04	< 0.04
Y [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.006	0.006	0.004	0.008
Zn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.7	< 0.7	< 0.7	< 0.7

Exchangeable Metals

Catharine Arnold

CHARTERED CATHARINE ARNOLD CHEMIST

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0002446254

SGS Canada Inc.
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Fraction 2 Metals Bound to Carbonates

Project : Hennepin MNA

30-March-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 05 March 2021
LR Report: **CA14203-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time					04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	5	2	28	6
As [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Ba [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	20	22	6.0	7.5
Be [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	0.03
B [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 1	< 1	< 1	1
Bi [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.09	< 0.09	< 0.09	< 0.09
Ca [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	30000	30000	24000	13000
Cd [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.12	0.11	0.37	0.69
Co [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.39	0.39	1.1	1.1
Cr [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	2.6	9.6
Cu [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.1	< 0.1	0.2	< 0.1
Fe [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	8	4	41	32
K [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	41	49	45	67
Li [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 2	< 2	< 2	< 2

OnLine LIMS

0002446258

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Fraction 2 Metals Bound to Carbonates

Project : Hennepin MNA

LR Report : CA14203-MAR21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mg [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	2800	4700	2200	7000
Mn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	78	74	140	69
Mo [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.1	< 0.1	< 0.1	< 0.1
Ni [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	2.7	1.9
Pb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.2	0.2	0.3	0.6
P [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 3	< 3	< 3	< 3
Sb [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.7	< 0.7	< 0.7	< 0.7
Si [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	90	77	70	110
Sn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Tl [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	< 0.02
U [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.039	0.15	0.089	0.030
V [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 3	< 3	< 3	< 3
W [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	< 0.04	< 0.04	< 0.04	< 0.04
Y [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	0.57	0.26	1.0	0.23
Zn [µg/g]	26-Mar-21	11:11	26-Mar-21	17:51	1.4	1.4	1.6	1.7

Fraction 2 Metals Bound to Carbonates

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Fraction 3 Metals Bound to Fe and Mn Oxides

Project : Hennepin MNA

30-March-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 05 March 2021
LR Report: **CA14204-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time			04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	17:51	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	26-Mar-21	17:51	270	320	270	230
As [µg/g]	26-Mar-21	17:51	0.8	0.9	< 0.5	< 0.5
Ba [µg/g]	26-Mar-21	17:51	8.6	29	3.4	5.9
Be [µg/g]	26-Mar-21	17:51	0.14	0.22	0.07	0.48
B [µg/g]	26-Mar-21	17:51	1	2	2	2
Bi [µg/g]	26-Mar-21	17:51	0.12	0.29	< 0.09	< 0.09
Ca [µg/g]	26-Mar-21	17:51	18000	49000	30000	18000
Cd [µg/g]	26-Mar-21	17:51	0.25	0.59	0.16	1.1
Co [µg/g]	26-Mar-21	17:51	1.4	2.2	0.70	2.6
Cr [µg/g]	26-Mar-21	17:51	14	5.3	30	28
Cu [µg/g]	26-Mar-21	17:51	0.1	< 0.1	1.6	0.3
Fe [µg/g]	26-Mar-21	17:51	3100	2500	1600	1100
K [µg/g]	26-Mar-21	17:51	54	73	61	82
Li [µg/g]	26-Mar-21	17:51	< 2	< 2	< 2	< 2

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Fraction 3 Metals Bound to Fe and Mn Oxides

Project : Hennepin MNA

LR Report : CA14204-MAR21

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mg [µg/g]	26-Mar-21	17:51	9000	7000	17000	10000
Mn [µg/g]	26-Mar-21	17:51	110	170	90	65
Mo [µg/g]	26-Mar-21	17:51	0.1	0.2	0.5	0.2
Na [µg/g]	26-Mar-21	17:51	850	3700	540	2200
Ni [µg/g]	26-Mar-21	17:51	2.9	3.7	3.1	9.9
Pb [µg/g]	26-Mar-21	17:51	3.1	5.7	3.1	7.7
P [µg/g]	26-Mar-21	17:51	100	71	59	35
Sb [µg/g]	26-Mar-21	17:51	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Mar-21	17:51	< 0.7	< 0.7	< 0.7	< 0.7
Si [µg/g]	26-Mar-21	17:51	480	450	410	410
Sn [µg/g]	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Tl [µg/g]	26-Mar-21	17:51	0.02	0.03	0.03	< 0.02
U [µg/g]	26-Mar-21	17:51	0.095	0.19	0.27	0.31
V [µg/g]	26-Mar-21	17:51	< 3	< 3	< 3	4
W [µg/g]	26-Mar-21	17:51	< 0.04	< 0.04	< 0.04	< 0.04
Y [µg/g]	26-Mar-21	17:51	1.8	2.6	1.8	1.4
Zn [µg/g]	26-Mar-21	17:51	14	24	7.4	26

Fraction 3 Metals Bound to Fe and Mn Oxides

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30-March-2021

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Date Rec. : 08 March 2021
LR Report: **CA14205-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time			04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	17:51	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	26-Mar-21	17:51	77	120	150	630
As [µg/g]	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Ba [µg/g]	26-Mar-21	17:51	1.5	5.5	1.1	2.4
Be [µg/g]	26-Mar-21	17:51	< 0.02	< 0.02	< 0.02	0.18
B [µg/g]	26-Mar-21	17:51	< 1	1	< 1	< 1
Bi [µg/g]	26-Mar-21	17:51	< 0.09	< 0.09	< 0.09	< 0.09
Ca [µg/g]	26-Mar-21	17:51	1800	3700	600	1300
Cd [µg/g]	26-Mar-21	17:51	0.03	0.03	0.03	0.25
Co [µg/g]	26-Mar-21	17:51	1.0	0.87	0.12	1.1
Cr [µg/g]	26-Mar-21	17:51	3.8	2.5	3.3	20
Cu [µg/g]	26-Mar-21	17:51	2.0	3.4	1.0	11
Fe [µg/g]	26-Mar-21	17:51	170	180	34	1100
K [µg/g]	26-Mar-21	17:51	12	22	24	45
Li [µg/g]	26-Mar-21	17:51	< 2	< 2	< 2	< 2

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Fraction 4 Bound to Organic Material

LR Report : **CA14205-MAR21**

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mg [µg/g]	26-Mar-21	17:51	1800	3400	240	490
Mn [µg/g]	26-Mar-21	17:51	5.1	7.5	3.5	11
Mo [µg/g]	26-Mar-21	17:51	0.2	0.1	0.3	1.0
Na [µg/g]	26-Mar-21	17:51	10	65	15	36
Ni [µg/g]	26-Mar-21	17:51	1.1	1.8	0.7	15
Pb [µg/g]	26-Mar-21	17:51	0.2	0.2	0.2	1.9
P [µg/g]	26-Mar-21	17:51	70	51	23	24
Sb [µg/g]	26-Mar-21	17:51	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Mar-21	17:51	< 0.7	0.9	< 0.7	< 0.7
Si [µg/g]	26-Mar-21	17:51	130	160	220	480
Sn [µg/g]	26-Mar-21	17:51	< 0.5	< 0.5	< 0.5	< 0.5
Tl [µg/g]	26-Mar-21	17:51	0.03	0.04	< 0.02	0.02
U [µg/g]	26-Mar-21	17:51	0.097	0.086	0.12	0.48
V [µg/g]	26-Mar-21	17:51	< 3	< 3	< 3	8
W [µg/g]	26-Mar-21	17:51	< 0.04	< 0.04	< 0.04	< 0.04
Y [µg/g]	26-Mar-21	17:51	0.42	0.31	1.0	3.0
Zn [µg/g]	26-Mar-21	17:51	2.5	2.8	1.7	9.7

Fraction 4 Bound to Organic Material

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Fraction 5 Residual metals

Project : Hennepin MNA

30-March-2021

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Date Rec. : 05 March 2021
LR Report: **CA14206-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Sample Date & Time			04-Mar-21 12:15	04-Mar-21 12:30	04-Mar-21 12:40	04-Mar-21 13:00
Ag [µg/g]	26-Mar-21	17:52	0.06	0.09	0.07	0.09
Al [µg/g]	26-Mar-21	17:52	22000	24000	14000	17000
As [µg/g]	26-Mar-21	17:52	1.9	2.7	3.9	6.6
Ba [µg/g]	26-Mar-21	17:52	190	170	130	130
Be [µg/g]	26-Mar-21	17:52	0.46	0.74	0.29	0.47
B [µg/g]	26-Mar-21	17:52	13	26	10	18
Bi [µg/g]	26-Mar-21	17:52	< 0.09	0.21	< 0.09	0.16
Ca [µg/g]	26-Mar-21	17:52	3000	4400	1800	1700
Cd [µg/g]	26-Mar-21	17:52	0.05	0.07	0.10	0.23
Co [µg/g]	26-Mar-21	17:52	3.9	5.4	2.9	3.9
Cr [µg/g]	26-Mar-21	17:52	37	39	54	98
Cu [µg/g]	26-Mar-21	17:52	5.7	9.6	7.4	9.7
Fe [µg/g]	26-Mar-21	17:52	8800	14000	8500	10000
K [µg/g]	26-Mar-21	17:52	9500	10000	6500	7500
Li [µg/g]	26-Mar-21	17:52	11	18	5	13

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Fraction 5 Residual metals

Project : Hennepin MNA

LR Report : CA14206-MAR21

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-34 32-33'	6: SB-51 42-43'	7: SB-22 26-27'	8: SB-22 29-30'
Mg [µg/g]	26-Mar-21	17:52	1900	2300	1100	1100
Mn [µg/g]	26-Mar-21	17:52	68	95	60	54
Mo [µg/g]	26-Mar-21	17:52	0.5	0.9	1.8	3.4
Na [µg/g]	26-Mar-21	17:52	4100	3200	3600	3900
Ni [µg/g]	26-Mar-21	17:52	8.2	14	7.4	11
Pb [µg/g]	26-Mar-21	17:52	5.2	6.5	5.3	17
P [µg/g]	26-Mar-21	17:52	130	210	160	200
Sb [µg/g]	26-Mar-21	17:52	< 0.8	< 0.8	< 0.8	1.0
Se [µg/g]	26-Mar-21	17:52	< 0.7	< 0.7	< 0.7	< 0.7
Si [µg/g]	26-Mar-21	17:52	8500	25000	34000	31000
Sn [µg/g]	26-Mar-21	17:52	2.9	3.6	2.9	4.3
Tl [µg/g]	26-Mar-21	17:52	0.23	0.34	0.15	0.29
U [µg/g]	26-Mar-21	17:52	0.84	1.4	1.0	1.3
V [µg/g]	26-Mar-21	17:52	28	49	25	78
W [µg/g]	26-Mar-21	17:52	0.24	0.40	0.15	0.23
Y [µg/g]	26-Mar-21	17:52	4.1	4.1	3.3	3.1
Zn [µg/g]	26-Mar-21	17:52	24	39	33	62

Fraction 5 Residual metals

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ATTACHMENT 3

X-Ray Diffraction
Laboratory Analytical Report

Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental Services*
Project Number/ LIMS No.	*Custom XRD/MI4516-MAR21*
Sample Receipt:	*March 12, 2021*
Sample Analysis:	*March 25, 2021*
Reporting Date:	*April 8, 2021*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 35 kV, 40 mA Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: http://palcan.scc.ca/SpecsSearch/GLSearchForm.do.

Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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Member of the SGS Group (SGS SA)

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	SB-34 32-33' MAR4516-01 (wt %)	SB-51 42-43' MAR4516-02 (wt %)	SB-22 26-27' MAR4516-03 (wt %)	SB-22 29-30' MAR4516-04 (wt %)
Quartz	53.0	33.1	57.0	54.5
Microcline	5.1	9.8	5.2	5.2
Chlorite	3.4	6.8	1.9	2.7
Kaolinite	3.4	3.4	0.6	2.5
Muscovite	7.9	12.5	2.1	7.4
Calcite	11.1	20.9	7.2	3.3
Dolomite	2.6	5.0	14.4	11.4
Ankerite	6.0	1.3	2.9	2.8
Pyrite	0.2	0.3	-	-
Magnetite	0.4	0.2	0.5	0.4
Albite	7.1	6.6	7.3	9.8
Actinolite	-	-	0.8	-
TOTAL	100	100	100	100

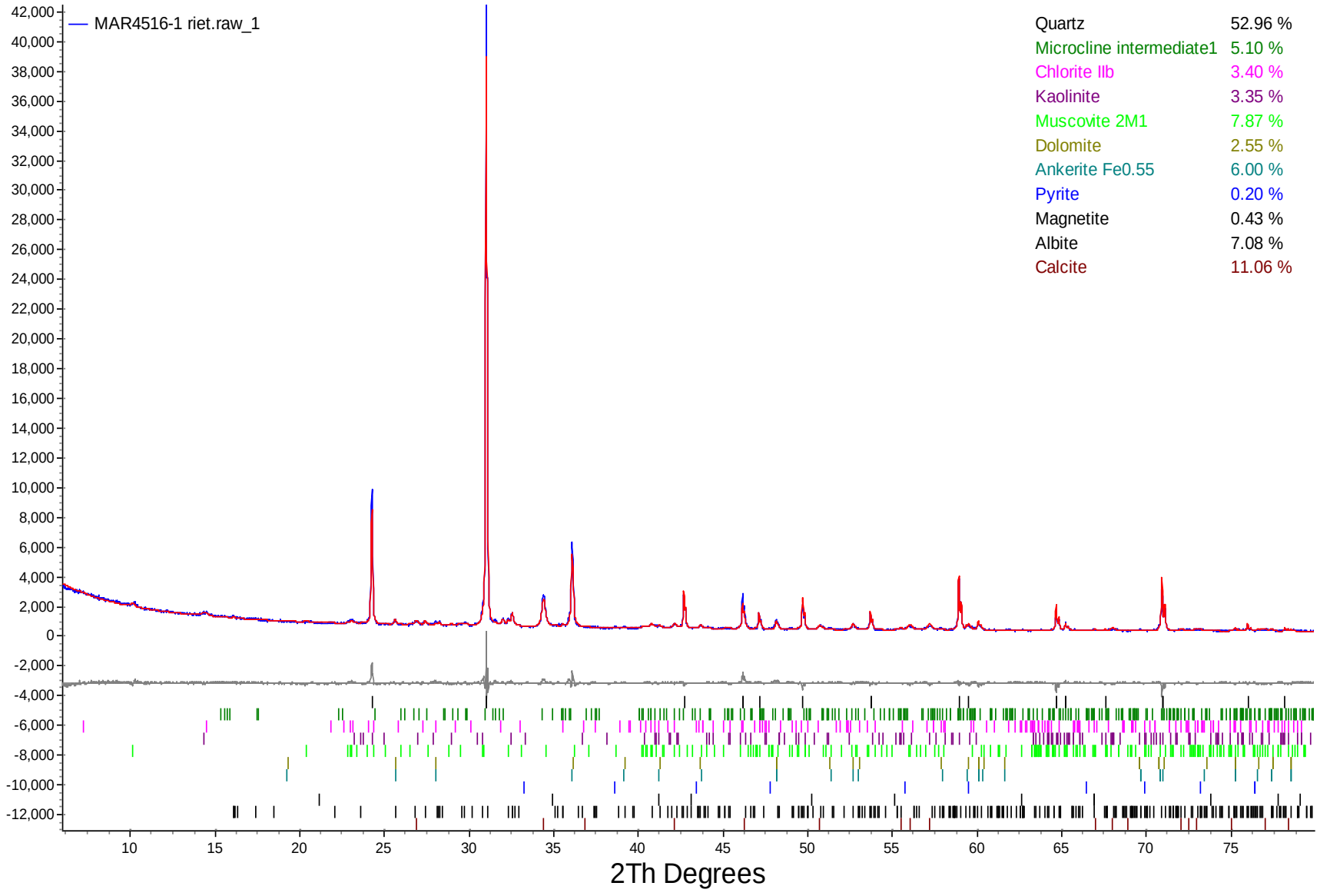
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

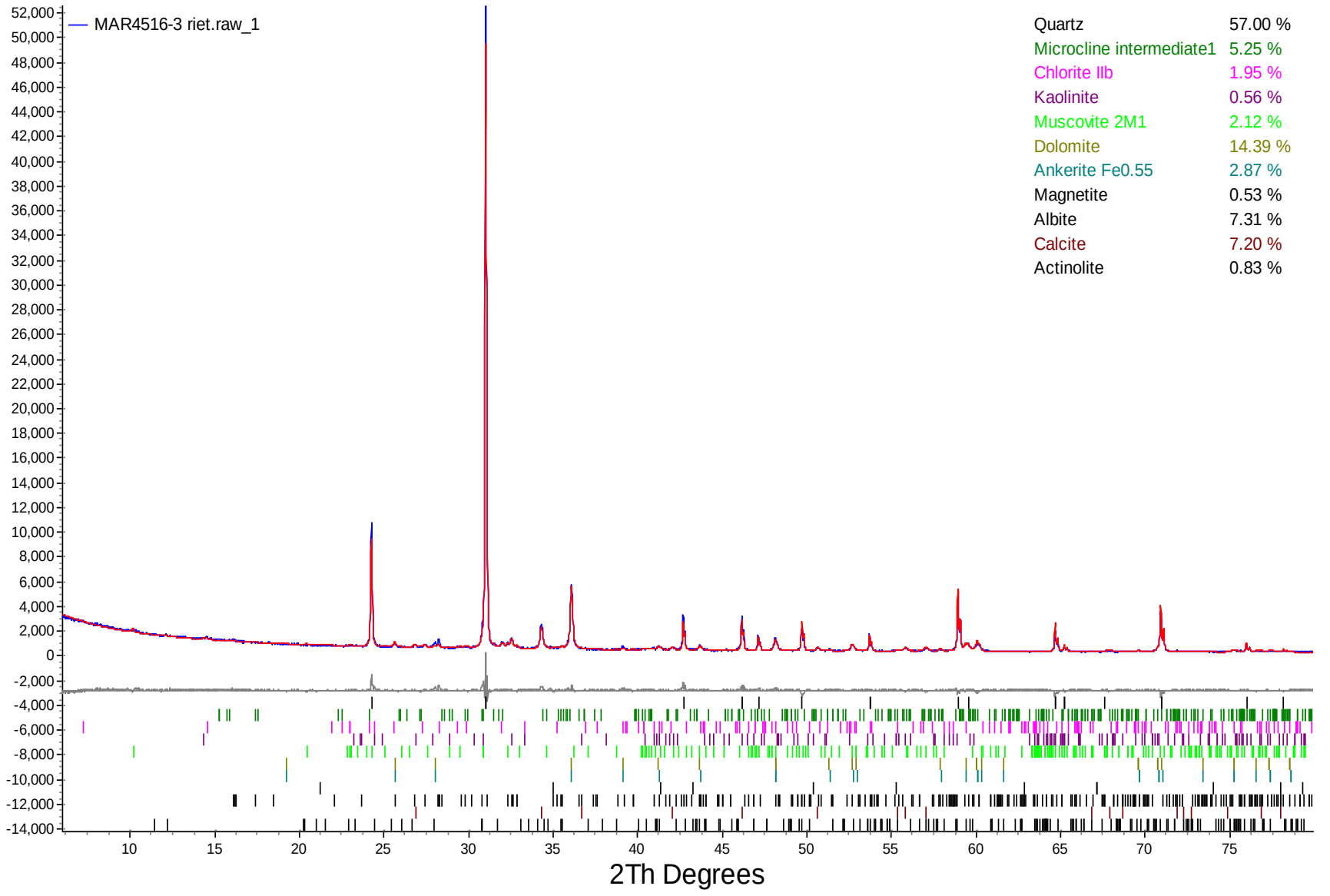
Mineral/Compound	Formula
Quartz	SiO_2
Microcline	$KAlSi_3O_8$
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$
Kaolinite	$Al_2Si_2O_5(OH)_4$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Calcite	$CaCO_3$
Dolomite	$CaMg(CO_3)_2$
Ankerite	$CaFe(CO_3)_2$
Pyrite	FeS_2
Magnetite	Fe_3O_4
Albite	$NaAlSi_3O_8$
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$

SB-34 32-33'



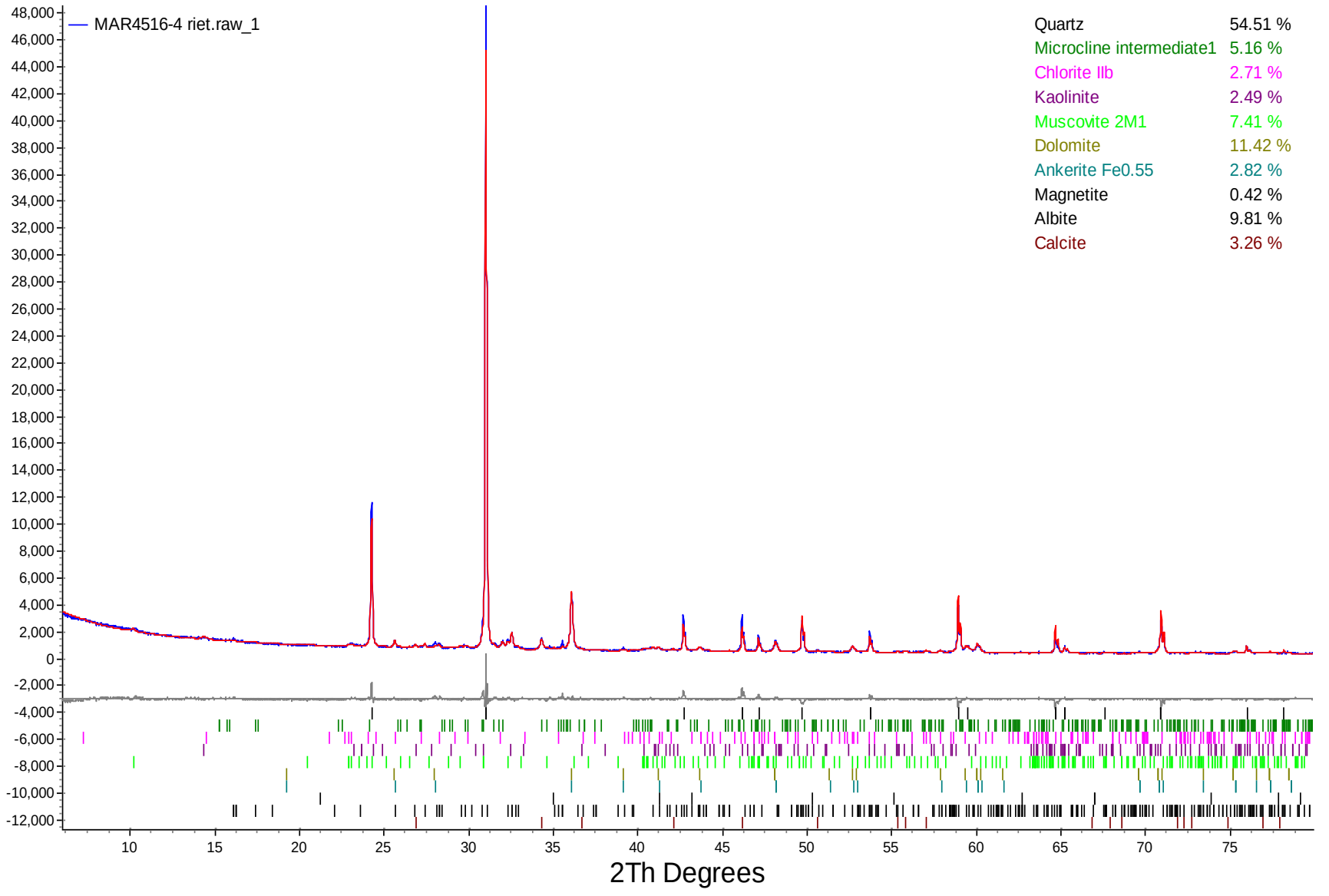
Quartz	52.96 %
Microcline intermediate1	5.10 %
Chlorite IIb	3.40 %
Kaolinite	3.35 %
Muscovite 2M1	7.87 %
Dolomite	2.55 %
Ankerite Fe0.55	6.00 %
Pyrite	0.20 %
Magnetite	0.43 %
Albite	7.08 %
Calcite	11.06 %

SB-22 26-27'



Quartz	57.00 %
Microcline intermediate1	5.25 %
Chlorite IIb	1.95 %
Kaolinite	0.56 %
Muscovite 2M1	2.12 %
Dolomite	14.39 %
Ankerite Fe0.55	2.87 %
Magnetite	0.53 %
Albite	7.31 %
Calcite	7.20 %
Actinolite	0.83 %

SB-22 29-30'



Quartz	54.51 %
Microcline intermediate1	5.16 %
Chlorite IIb	2.71 %
Kaolinite	2.49 %
Muscovite 2M1	7.41 %
Dolomite	11.42 %
Ankerite Fe0.55	2.82 %
Magnetite	0.42 %
Albite	9.81 %
Calcite	3.26 %