Luminant

Dynegy Midwest Generation, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234

January 15, 2024

Illinois Environmental Protection Agency
DWPC – Permits MC#15
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62794

Re: Hennepin Power Plant West Ash Pond System; IEPA ID # W1550100002-01 and # W1550100002-03

Dear Mr. LeCrone:

In accordance with Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.610(b)(3)(D), Dynegy Midwest Generation, LLC is submitting groundwater monitoring data for the Quarter 3, 2023 sampling event at the Hennepin Power Plant West Ash Pond System, identified by Illinois Environmental Protection Agency (IEPA) ID No. W1550100002-01 and No. W1550100002-03. This data is being submitted and placed in the facility's operating record as required by 35 I.A.C. § 845.800(d)(15) within 60 days of receiving final laboratory analytical data. Results were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS.

The date of this submittal is considered to be the date that exceedances of the GWPS were detected. This notification of exceedances of the GWPSs in 35 I.A.C. § 845.600 will be placed in the facility's operating record within 30 days as required by 35 I.A.C. § 845.800(d)(16).

As allowed in 35 I.A.C. § 845.650(e), an alternative source demonstration (ASD) was submitted on November 10, 2023 for the exceedance of the cadmium GWPS detected during the Quarter 2, 2023 sampling event and the ASD was approved by the IEPA on December 11, 2023. Exceedances of arsenic, boron, and sulfate were detected in the same monitoring wells identified in the approved ASD. The approved ASD for cadmium remains to be valid for the Quarter 3, 2023 GWPS exceedances. A Corrective Measures Assessment (CMA) for the remaining GWPS exceedances was initiated on December 10, 2023 in accordance with 35 I.A.C. § 845.660.

As allowed in 35 I.A.C. § 845.650(e), an ASD will be evaluated for the detected exceedances of the lithium and total dissolved solids GWPS and, if successfully completed, the ASD will be submitted to IEPA within 60 days of this transmittal.

Sincerely,

Dianna Tickner

Dianna Tickner, PE, PMP
Senior Director, Demolition and Decommission

Enclosures

Groundwater Monitoring Data and Detected Exceedances, Quarter 3, 2023, West Ash Pond System, Hennepin Power Plant, Hennepin, Illinois

35 I.A.C. § 845.610(B)(3)(D)
GROUNDWATER MONITORING DATA AND DETECTED EXCEEDANCES
QUARTER 3, 2023
WEST ASH POND SYSTEM, HENNEPIN POWER PLANT, HENNEPIN, ILLINOIS

January 15, 2024

Samples were collected on August 22, August 24, and August 25, 2023 and analyzed for the parameters listed in Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.600(a), calcium, and turbidity. Final laboratory analytical data was received on November 16, 2023.

The monitoring well locations are included in **Figure 1**. **Attachment A** summarizes the groundwater elevation data for the Quarter 3, 2023 sampling event. **Table 1** is a summary of the field parameters and analytical results. **Attachment B** contains the associated laboratory analytical reports and field data sheets for the Quarter 3, 2023 sampling event. Groundwater elevation data was inadvertently not recorded during this sampling event at well 50.

Statistical procedures used to evaluate groundwater results are provided in the Addendum to the Groundwater Monitoring Plan[1] provided in the operating permit application. In accordance with 35 I.A.C. § 845.610(b)(3)(B), the Quarter 3, 2023 groundwater monitoring data were evaluated for statistical exceedances over background levels for the constituents listed in 35 I.A.C. § 845.600. **Attachment C** shows the statistically derived values compared to background levels.

In accordance with 35 I.A.C. § 845.610(b)(3)(C), the statistically derived values identified as Statistical Results in **Table 2** were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS, as shown in **Table 2**. The date of this submittal is considered to be the date that the exceedances were detected.

As allowed in 35 I.A.C. § 845.650(e), an alternative source demonstration[2] (ASD) was submitted on November 10, 2023 for the exceedance of the cadmium GWPS detected during the Quarter 2, 2023 sampling event and the ASD was approved by the Illinois Environmental Protection Agency (IEPA) on December 11, 2023[3]. Exceedances of arsenic, boron, and sulfate were detected in the same monitoring wells identified in the approved ASD. The approved ASD for cadmium remains to be valid for the Quarter 3, 2023 GWPS exceedances. A Corrective Measures Assessment (CMA) for the remaining GWPS exceedances was initiated on December 10, 2023 in accordance with 35 I.A.C. § 845.660.

As allowed in 35 I.A.C. § 845.650(e), an ASD will be evaluated for the detected exceedances of the lithium and total dissolved solids GWPS and, if successfully completed, the ASD will be submitted to IEPA within 60 days of this transmittal.

[1] Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Groundwater Monitoring Plan Addendum for the West Ash Pond System. Hennepin Power Plant. Hennepin, Illinois. October 25, 2021.*

[2] Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023. 35 I.A.C. § 845.650(E): *Alternative Source Demonstration, West Ash Pond System, Hennepin Power Plant, Hennepin, IL, IEPA ID: W1550100002-01 and W1550100002-03*. November 10, 2023.

[3] Illinois Environmental Protection Agency (IEPA), 2023. *Letter from Michael Summers (IEPA) to Phil Morris (Dynegy Midwest Generation, LLC): Re: Hennepin Power Plant West Ash Pond System; W1550100002-01 & 03, Alternative Soruce Demonstration (ASD) Submittal*. December 11, 2023.

TABLES

FIGURES

ATTACHMENTS

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
32	Background	E002	08/22/2023	Antimony, total	0.0013 U	mg/L
32	Background	E002	08/22/2023	Arsenic, total	0.00049 J	mg/L
32	Background	E002	08/22/2023	Barium, total	0.0390	mg/L
32	Background	E002	08/22/2023	Beryllium, total	0.00053 U	mg/L
32	Background	E002	08/22/2023	Boron, total	0.140	mg/L
32	Background	E002	08/22/2023	Cadmium, total	0.00021 J	mg/L
32	Background	E002	08/22/2023	Calcium, total	100	mg/L
32	Background	E002	08/22/2023	Chloride, total	68.0	mg/L
32	Background	E002	08/22/2023	Chromium, total	0.0011 U	mg/L
32	Background	E002	08/22/2023	Cobalt, total	0.00140	mg/L
32	Background	E002	08/22/2023	Dissolved Oxygen	0.0900	mg/L
32	Background	E002	08/22/2023	Fluoride, total	0.22 J	mg/L
32	Background	E002	08/22/2023	Lead, total	0.00019 U	mg/L
32	Background	E002	08/22/2023	Lithium, total	0.0048 J	mg/L
32	Background	E002	08/22/2023	Mercury, total	0.000079 U	mg/L
32	Background	E002	08/22/2023	Molybdenum, total	0.0025 U	mg/L
32	Background	E002	08/22/2023	Oxidation Reduction Potential	152	mV
32	Background	E002	08/22/2023	pH (field)	7.1	SU
32	Background	E002	08/22/2023	Radium 226 + Radium 228, total	0.636	pCi/L
32	Background	E002	08/22/2023	Selenium, total	0.00098 U	mg/L
32	Background	E002	08/22/2023	Specific Conductance @ 25C (field)	715	micromhos/cm
32	Background	E002	08/22/2023	Sulfate, total	66.0	mg/L
32	Background	E002	08/22/2023	Temperature	13.8	degrees C
32	Background	E002	08/22/2023	Thallium, total	0.00057 U	mg/L
32	Background	E002	08/22/2023	Total Dissolved Solids	570	mg/L
32	Background	E002	08/22/2023	Turbidity, field	5.33	NTU
34	Background	E002	08/25/2023	Antimony, total	0.0013 U	mg/L
34	Background	E002	08/25/2023	Arsenic, total	0.001 UJ	mg/L
34	Background	E002	08/25/2023	Barium, total	0.110	mg/L
34	Background	E002	08/25/2023	Beryllium, total	0.00053 U	mg/L
34	Background	E002	08/25/2023	Boron, total	0.0750	mg/L
34	Background	E002	08/25/2023	Cadmium, total	0.00017 U	mg/L
34	Background	E002	08/25/2023	Calcium, total	150	mg/L
34	Background	E002	08/25/2023	Chloride, total	69.0	mg/L
34	Background	E002	08/25/2023	Chromium, total	0.0011 U	mg/L
34	Background	E002	08/25/2023	Cobalt, total	0.0004 U	mg/L
34	Background	E002	08/25/2023	Dissolved Oxygen	0.200	mg/L
34	Background	E002	08/25/2023	Fluoride, total	0.19 J	mg/L
34	Background	E002	08/25/2023	Lead, total	0.00019 U	mg/L
34	Background	E002	08/25/2023	Lithium, total	0.0130	mg/L
34	Background	E002	08/25/2023	Mercury, total	0.0002 UJ	mg/L
34	Background	E002	08/25/2023	Molybdenum, total	0.0025 U	mg/L
34	Background	E002	08/25/2023	Oxidation Reduction Potential	-111	mV
34	Background	E002	08/25/2023	pH (field)	7.1	SU
34	Background	E002	08/25/2023	Radium 226 + Radium 228, total	0.823	pCi/L
34	Background	E002	08/25/2023	Selenium, total	0.00098 U	mg/L

TABLE 1.
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WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
34	Background	E002	08/25/2023	Specific Conductance @ 25C (field)	972	micromhos/cm
34	Background	E002	08/25/2023	Sulfate, total	46.0	mg/L
34	Background	E002	08/25/2023	Temperature	12.8	degrees C
34	Background	E002	08/25/2023	Thallium, total	0.00057 U	mg/L
34	Background	E002	08/25/2023	Total Dissolved Solids	760	mg/L
34	Background	E002	08/25/2023	Turbidity, field	4.81	NTU
21R	Compliance	E002	08/22/2023	Antimony, total	0.0013 U	mg/L
21R	Compliance	E002	08/22/2023	Arsenic, total	0.0230	mg/L
21R	Compliance	E002	08/22/2023	Barium, total	0.300	mg/L
21R	Compliance	E002	08/22/2023	Beryllium, total	0.00053 U	mg/L
21R	Compliance	E002	08/22/2023	Boron, total	1.70	mg/L
21R	Compliance	E002	08/22/2023	Cadmium, total	0.00017 U	mg/L
21R	Compliance	E002	08/22/2023	Calcium, total	120	mg/L
21R	Compliance	E002	08/22/2023	Chloride, total	95.0	mg/L
21R	Compliance	E002	08/22/2023	Chromium, total	0.0026 J	mg/L
21R	Compliance	E002	08/22/2023	Cobalt, total	0.00140	mg/L
21R	Compliance	E002	08/22/2023	Dissolved Oxygen	0.210	mg/L
21R	Compliance	E002	08/22/2023	Fluoride, total	0.23 J	mg/L
21R	Compliance	E002	08/22/2023	Lead, total	0.00280	mg/L
21R	Compliance	E002	08/22/2023	Lithium, total	0.0260 J	mg/L
21R	Compliance	E002	08/22/2023	Mercury, total	0.000079 U	mg/L
21R	Compliance	E002	08/22/2023	Molybdenum, total	0.00970	mg/L
21R	Compliance	E002	08/22/2023	Oxidation Reduction Potential	-136	mV
21R	Compliance	E002	08/22/2023	pH (field)	7.5	SU
21R	Compliance	E002	08/22/2023	Radium 226 + Radium 228, total	0.855	pCi/L
21R	Compliance	E002	08/22/2023	Selenium, total	0.00098 U	mg/L
21R	Compliance	E002	08/22/2023	Specific Conductance @ 25C (field)	762	micromhos/cm
21R	Compliance	E002	08/22/2023	Sulfate, total	94.0	mg/L
21R	Compliance	E002	08/22/2023	Temperature	16.6	degrees C
21R	Compliance	E002	08/22/2023	Thallium, total	0.00057 U	mg/L
21R	Compliance	E002	08/22/2023	Total Dissolved Solids	730	mg/L
21R	Compliance	E002	08/22/2023	Turbidity, field	34.8	NTU
22	Compliance	E002	08/25/2023	Antimony, total	0.0013 U	mg/L
22	Compliance	E002	08/25/2023	Arsenic, total	0.00023 U	mg/L
22	Compliance	E002	08/25/2023	Barium, total	0.0130	mg/L
22	Compliance	E002	08/25/2023	Beryllium, total	0.00053 U	mg/L
22	Compliance	E002	08/25/2023	Boron, total	0.130	mg/L
22	Compliance	E002	08/25/2023	Cadmium, total	0.0005 UJ	mg/L
22	Compliance	E002	08/25/2023	Calcium, total	23.0	mg/L
22	Compliance	E002	08/25/2023	Chloride, total	89.0	mg/L
22	Compliance	E002	08/25/2023	Chromium, total	0.0011 U	mg/L
22	Compliance	E002	08/25/2023	Cobalt, total	0.00076 J	mg/L
22	Compliance	E002	08/25/2023	Dissolved Oxygen	0.120	mg/L
22	Compliance	E002	08/25/2023	Fluoride, total	0.22 J	mg/L
22	Compliance	E002	08/25/2023	Lead, total	0.00019 U	mg/L
22	Compliance	E002	08/25/2023	Lithium, total	0.0490	mg/L

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845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
22	Compliance	E002	08/25/2023	Mercury, total	0.000079 U	mg/L
22	Compliance	E002	08/25/2023	Molybdenum, total	0.00500	mg/L
22	Compliance	E002	08/25/2023	Oxidation Reduction Potential	77.8	mV
22	Compliance	E002	08/25/2023	pH (field)	7.7	SU
22	Compliance	E002	08/25/2023	Radium 226 + Radium 228, total	0.492	pCi/L
22	Compliance	E002	08/25/2023	Selenium, total	0.0150	mg/L
22	Compliance	E002	08/25/2023	Specific Conductance @ 25C (field)	653	micromhos/cm
22	Compliance	E002	08/25/2023	Sulfate, total	120	mg/L
22	Compliance	E002	08/25/2023	Temperature	16.1	degrees C
22	Compliance	E002	08/25/2023	Thallium, total	0.00057 U	mg/L
22	Compliance	E002	08/25/2023	Total Dissolved Solids	640	mg/L
22	Compliance	E002	08/25/2023	Turbidity, field	4.31	NTU
22D	Compliance	E002	08/22/2023	Antimony, total	0.0013 U	mg/L
22D	Compliance	E002	08/22/2023	Arsenic, total	0.00130	mg/L
22D	Compliance	E002	08/22/2023	Barium, total	0.0660	mg/L
22D	Compliance	E002	08/22/2023	Beryllium, total	0.00053 U	mg/L
22D	Compliance	E002	08/22/2023	Boron, total	1.30	mg/L
22D	Compliance	E002	08/22/2023	Cadmium, total	0.00017 U	mg/L
22D	Compliance	E002	08/22/2023	Calcium, total	120	mg/L
22D	Compliance	E002	08/22/2023	Chloride, total	97.0	mg/L
22D	Compliance	E002	08/22/2023	Chromium, total	0.0011 U	mg/L
22D	Compliance	E002	08/22/2023	Cobalt, total	0.0004 U	mg/L
22D	Compliance	E002	08/22/2023	Dissolved Oxygen	0.910	mg/L
22D	Compliance	E002	08/22/2023	Fluoride, total	0.22 J	mg/L
22D	Compliance	E002	08/22/2023	Lead, total	0.00019 U	mg/L
22D	Compliance	E002	08/22/2023	Lithium, total	0.0170	mg/L
22D	Compliance	E002	08/22/2023	Mercury, total	0.000079 U	mg/L
22D	Compliance	E002	08/22/2023	Molybdenum, total	0.00670	mg/L
22D	Compliance	E002	08/22/2023	Oxidation Reduction Potential	-82.1	mV
22D	Compliance	E002	08/22/2023	pH (field)	7.3	SU
22D	Compliance	E002	08/22/2023	Radium 226 + Radium 228, total	1.26	pCi/L
22D	Compliance	E002	08/22/2023	Selenium, total	0.00098 U	mg/L
22D	Compliance	E002	08/22/2023	Specific Conductance @ 25C (field)	731	micromhos/cm
22D	Compliance	E002	08/22/2023	Sulfate, total	96.0	mg/L
22D	Compliance	E002	08/22/2023	Temperature	18.0	degrees C
22D	Compliance	E002	08/22/2023	Thallium, total	0.00057 U	mg/L
22D	Compliance	E002	08/22/2023	Total Dissolved Solids	690	mg/L
22D	Compliance	E002	08/22/2023	Turbidity, field	24.8	NTU
23	Compliance	E002	08/22/2023	Antimony, total	0.0013 U	mg/L
23	Compliance	E002	08/22/2023	Arsenic, total	0.00089 J	mg/L
23	Compliance	E002	08/22/2023	Barium, total	0.0420	mg/L
23	Compliance	E002	08/22/2023	Beryllium, total	0.00053 U	mg/L
23	Compliance	E002	08/22/2023	Boron, total	8.10	mg/L
23	Compliance	E002	08/22/2023	Cadmium, total	0.00017 U	mg/L
23	Compliance	E002	08/22/2023	Calcium, total	110	mg/L
23	Compliance	E002	08/22/2023	Chloride, total	53.0	mg/L

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845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
23	Compliance	E002	08/22/2023	Chromium, total	0.0011 U	mg/L
23	Compliance	E002	08/22/2023	Cobalt, total	0.00047 J	mg/L
23	Compliance	E002	08/22/2023	Dissolved Oxygen	0.180	mg/L
23	Compliance	E002	08/22/2023	Fluoride, total	0.23 J	mg/L
23	Compliance	E002	08/22/2023	Lead, total	0.00019 U	mg/L
23	Compliance	E002	08/22/2023	Lithium, total	0.00630	mg/L
23	Compliance	E002	08/22/2023	Mercury, total	0.000079 U	mg/L
23	Compliance	E002	08/22/2023	Molybdenum, total	0.0150	mg/L
23	Compliance	E002	08/22/2023	Oxidation Reduction Potential	-124	mV
23	Compliance	E002	08/22/2023	pH (field)	7.4	SU
23	Compliance	E002	08/22/2023	Radium 226 + Radium 228, total	0.658	pCi/L
23	Compliance	E002	08/22/2023	Selenium, total	0.00098 U	mg/L
23	Compliance	E002	08/22/2023	Specific Conductance @ 25C (field)	832	micromhos/cm
23	Compliance	E002	08/22/2023	Sulfate, total	460	mg/L
23	Compliance	E002	08/22/2023	Temperature	15.0	degrees C
23	Compliance	E002	08/22/2023	Thallium, total	0.00057 U	mg/L
23	Compliance	E002	08/22/2023	Total Dissolved Solids	950	mg/L
23	Compliance	E002	08/22/2023	Turbidity, field	9.10	NTU
27	Compliance	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
27	Compliance	E002	08/24/2023	Arsenic, total	0.00100	mg/L
27	Compliance	E002	08/24/2023	Barium, total	0.0840	mg/L
27	Compliance	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
27	Compliance	E002	08/24/2023	Boron, total	2.00	mg/L
27	Compliance	E002	08/24/2023	Cadmium, total	0.00025 J	mg/L
27	Compliance	E002	08/24/2023	Calcium, total	120	mg/L
27	Compliance	E002	08/24/2023	Chloride, total	91.0	mg/L
27	Compliance	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
27	Compliance	E002	08/24/2023	Cobalt, total	0.00260	mg/L
27	Compliance	E002	08/24/2023	Dissolved Oxygen	0.0700	mg/L
27	Compliance	E002	08/24/2023	Fluoride, total	0.22 J	mg/L
27	Compliance	E002	08/24/2023	Lead, total	0.0002 J+	mg/L
27	Compliance	E002	08/24/2023	Lithium, total	0.0240	mg/L
27	Compliance	E002	08/24/2023	Mercury, total	0.0002 UJ	mg/L
27	Compliance	E002	08/24/2023	Molybdenum, total	0.0047 J	mg/L
27	Compliance	E002	08/24/2023	Oxidation Reduction Potential	-33.7	mV
27	Compliance	E002	08/24/2023	pH (field)	7.3	SU
27	Compliance	E002	08/24/2023	Radium 226 + Radium 228, total	0.589	pCi/L
27	Compliance	E002	08/24/2023	Selenium, total	0.00098 U	mg/L
27	Compliance	E002	08/24/2023	Specific Conductance @ 25C (field)	816	micromhos/cm
27	Compliance	E002	08/24/2023	Sulfate, total	110	mg/L
27	Compliance	E002	08/24/2023	Temperature	12.5	degrees C
27	Compliance	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
27	Compliance	E002	08/24/2023	Total Dissolved Solids	660	mg/L
27	Compliance	E002	08/24/2023	Turbidity, field	48.9	NTU
35	Compliance	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
35	Compliance	E002	08/24/2023	Arsenic, total	0.001 UJ	mg/L

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845 QUARTERLY REPORT
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WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
35	Compliance	E002	08/24/2023	Barium, total	0.0470	mg/L
35	Compliance	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
35	Compliance	E002	08/24/2023	Boron, total	12.0	mg/L
35	Compliance	E002	08/24/2023	Cadmium, total	0.0005 UJ	mg/L
35	Compliance	E002	08/24/2023	Calcium, total	320	mg/L
35	Compliance	E002	08/24/2023	Chloride, total	37.0	mg/L
35	Compliance	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
35	Compliance	E002	08/24/2023	Cobalt, total	0.00120	mg/L
35	Compliance	E002	08/24/2023	Dissolved Oxygen	1.47	mg/L
35	Compliance	E002	08/24/2023	Fluoride, total	0.2 J	mg/L
35	Compliance	E002	08/24/2023	Lead, total	0.00019 U	mg/L
35	Compliance	E002	08/24/2023	Lithium, total	0.0340	mg/L
35	Compliance	E002	08/24/2023	Mercury, total	0.000079 U	mg/L
35	Compliance	E002	08/24/2023	Molybdenum, total	0.0760	mg/L
35	Compliance	E002	08/24/2023	Oxidation Reduction Potential	162	mV
35	Compliance	E002	08/24/2023	pH (field)	7.0	SU
35	Compliance	E002	08/24/2023	Radium 226 + Radium 228, total	0.626	pCi/L
35	Compliance	E002	08/24/2023	Selenium, total	0.00098 U	mg/L
35	Compliance	E002	08/24/2023	Specific Conductance @ 25C (field)	1,358	micromhos/cm
35	Compliance	E002	08/24/2023	Sulfate, total	890	mg/L
35	Compliance	E002	08/24/2023	Temperature	16.2	degrees C
35	Compliance	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
35	Compliance	E002	08/24/2023	Total Dissolved Solids	1,600	mg/L
35	Compliance	E002	08/24/2023	Turbidity, field	2.81	NTU
49	Compliance	E002	08/25/2023	Antimony, total	0.0013 U	mg/L
49	Compliance	E002	08/25/2023	Arsenic, total	0.00049 J	mg/L
49	Compliance	E002	08/25/2023	Barium, total	0.0620	mg/L
49	Compliance	E002	08/25/2023	Beryllium, total	0.00053 U	mg/L
49	Compliance	E002	08/25/2023	Boron, total	0.690	mg/L
49	Compliance	E002	08/25/2023	Cadmium, total	0.00130	mg/L
49	Compliance	E002	08/25/2023	Calcium, total	99.0	mg/L
49	Compliance	E002	08/25/2023	Chloride, total	95.0	mg/L
49	Compliance	E002	08/25/2023	Chromium, total	0.0011 U	mg/L
49	Compliance	E002	08/25/2023	Cobalt, total	0.00330	mg/L
49	Compliance	E002	08/25/2023	Dissolved Oxygen	0.110	mg/L
49	Compliance	E002	08/25/2023	Fluoride, total	0.24 J	mg/L
49	Compliance	E002	08/25/2023	Lead, total	0.0005 UJ	mg/L
49	Compliance	E002	08/25/2023	Lithium, total	0.0230	mg/L
49	Compliance	E002	08/25/2023	Mercury, total	0.000079 U	mg/L
49	Compliance	E002	08/25/2023	Molybdenum, total	0.0230	mg/L
49	Compliance	E002	08/25/2023	Oxidation Reduction Potential	58.2	mV
49	Compliance	E002	08/25/2023	pH (field)	7.1	SU
49	Compliance	E002	08/25/2023	Radium 226 + Radium 228, total	0.793	pCi/L
49	Compliance	E002	08/25/2023	Selenium, total	0.00098 U	mg/L
49	Compliance	E002	08/25/2023	Specific Conductance @ 25C (field)	698	micromhos/cm
49	Compliance	E002	08/25/2023	Sulfate, total	78.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
49	Compliance	E002	08/25/2023	Temperature	15.3	degrees C
49	Compliance	E002	08/25/2023	Thallium, total	0.00057 U	mg/L
49	Compliance	E002	08/25/2023	Total Dissolved Solids	620	mg/L
49	Compliance	E002	08/25/2023	Turbidity, field	124	NTU
50	Compliance	E002	08/25/2023	Antimony, total	0.0013 U	mg/L
50	Compliance	E002	08/25/2023	Arsenic, total	0.001 UJ	mg/L
50	Compliance	E002	08/25/2023	Barium, total	0.0640	mg/L
50	Compliance	E002	08/25/2023	Beryllium, total	0.00053 U	mg/L
50	Compliance	E002	08/25/2023	Boron, total	0.590	mg/L
50	Compliance	E002	08/25/2023	Cadmium, total	0.00140 J+	mg/L
50	Compliance	E002	08/25/2023	Calcium, total	100	mg/L
50	Compliance	E002	08/25/2023	Chloride, total	87.0	mg/L
50	Compliance	E002	08/25/2023	Chromium, total	0.0011 U	mg/L
50	Compliance	E002	08/25/2023	Cobalt, total	0.00350	mg/L
50	Compliance	E002	08/25/2023	Dissolved Oxygen	0.120	mg/L
50	Compliance	E002	08/25/2023	Fluoride, total	0.2 J	mg/L
50	Compliance	E002	08/25/2023	Lead, total	0.0005 UJ	mg/L
50	Compliance	E002	08/25/2023	Lithium, total	0.0250	mg/L
50	Compliance	E002	08/25/2023	Mercury, total	0.000079 U	mg/L
50	Compliance	E002	08/25/2023	Molybdenum, total	0.0250	mg/L
50	Compliance	E002	08/25/2023	Oxidation Reduction Potential	88.0	mV
50	Compliance	E002	08/25/2023	pH (field)	7.5	SU
50	Compliance	E002	08/25/2023	Radium 226 + Radium 228, total	0.752	pCi/L
50	Compliance	E002	08/25/2023	Selenium, total	0.00098 U	mg/L
50	Compliance	E002	08/25/2023	Specific Conductance @ 25C (field)	665	micromhos/cm
50	Compliance	E002	08/25/2023	Sulfate, total	93.0	mg/L
50	Compliance	E002	08/25/2023	Temperature	16.7	degrees C
50	Compliance	E002	08/25/2023	Thallium, total	0.00057 U	mg/L
50	Compliance	E002	08/25/2023	Total Dissolved Solids	610	mg/L
50	Compliance	E002	08/25/2023	Turbidity, field	3.98	NTU
51	Compliance	E002	08/22/2023	Antimony, total	0.0013 U	mg/L
51	Compliance	E002	08/22/2023	Arsenic, total	0.0190	mg/L
51	Compliance	E002	08/22/2023	Barium, total	0.100	mg/L
51	Compliance	E002	08/22/2023	Beryllium, total	0.00053 U	mg/L
51	Compliance	E002	08/22/2023	Boron, total	1.30	mg/L
51	Compliance	E002	08/22/2023	Cadmium, total	0.00017 U	mg/L
51	Compliance	E002	08/22/2023	Calcium, total	110	mg/L
51	Compliance	E002	08/22/2023	Chloride, total	94.0	mg/L
51	Compliance	E002	08/22/2023	Chromium, total	0.0011 J	mg/L
51	Compliance	E002	08/22/2023	Cobalt, total	0.00086 J	mg/L
51	Compliance	E002	08/22/2023	Dissolved Oxygen	0.270	mg/L
51	Compliance	E002	08/22/2023	Fluoride, total	0.23 J	mg/L
51	Compliance	E002	08/22/2023	Lead, total	0.00120 J+	mg/L
51	Compliance	E002	08/22/2023	Lithium, total	0.0250	mg/L
51	Compliance	E002	08/22/2023	Mercury, total	0.000079 U	mg/L
51	Compliance	E002	08/22/2023	Molybdenum, total	0.00890	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
51	Compliance	E002	08/22/2023	Oxidation Reduction Potential	-129	mV
51	Compliance	E002	08/22/2023	pH (field)	7.4	SU
51	Compliance	E002	08/22/2023	Radium 226 + Radium 228, total	1.03	pCi/L
51	Compliance	E002	08/22/2023	Selenium, total	0.00098 U	mg/L
51	Compliance	E002	08/22/2023	Specific Conductance @ 25C (field)	730	micromhos/cm
51	Compliance	E002	08/22/2023	Sulfate, total	90.0	mg/L
51	Compliance	E002	08/22/2023	Temperature	17.3	degrees C
51	Compliance	E002	08/22/2023	Thallium, total	0.00057 U	mg/L
51	Compliance	E002	08/22/2023	Total Dissolved Solids	680	mg/L
51	Compliance	E002	08/22/2023	Turbidity, field	26.2	NTU

Notes:
C = Celsius
cm = centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
pCi/L = picocuries per liter
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.
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.

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
21/21R	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.003	0.006	Standard	No Exceedance
21/21R	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	28	0	CB around T-S line	0.0194	0.010	Standard	Exceedance
21/21R	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	28	0	CB around linear reg	0.318	2.0	Standard	No Exceedance
21/21R	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.001	0.004	Standard	No Exceedance
21/21R	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	29	0	CB around T-S line	1.96	2	Standard	No Exceedance
21/21R	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
21/21R	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	31	0	CB around linear reg	98.6	200	Standard	No Exceedance
21/21R	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	28	60	CB around T-S line	0.0015	0.1	Standard	No Exceedance
21/21R	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	28	73	CB around T-S line	0.001	0.006	Standard	No Exceedance
21/21R	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	29	9	CI around median	0.14	4.0	Standard	No Exceedance
21/21R	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	28	53	CB around T-S line	0.00111	0.0075	Standard	No Exceedance
21/21R	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	28	0	CB around linear reg	0.0203	0.04	Standard	No Exceedance
21/21R	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	28	97	CI around median	0.0002	0.002	Standard	No Exceedance
21/21R	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	28	4	CI around mean	0.00666	0.1	Standard	No Exceedance
21/21R	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	31	0	CI around mean	7.3/7.5	6.5/9.0	Standard/Standard	No Exceedance
21/21R	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	21	0	CI around mean	0.807	5	Standard	No Exceedance
21/21R	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
21/21R	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	31	0	CB around linear reg	56.5	400	Standard	No Exceedance
21/21R	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.002	0.002	Standard	No Exceedance
21/21R	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	29	0	CB around T-S line	622	1,200	Standard	No Exceedance
22	UA	E002	Antimony, total	mg/L	12/10/15 - 08/25/23	31	91	CI around median	0.001	0.006	Standard	No Exceedance
22	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/25/23	35	73	CI around median	0.001	0.010	Standard	No Exceedance
22	UA	E002	Barium, total	mg/L	12/10/15 - 08/25/23	31	0	CI around median	0.0635	2.0	Standard	No Exceedance
22	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.001	0.004	Standard	No Exceedance
22	UA	E002	Boron, total	mg/L	12/10/15 - 08/25/23	36	0	CB around T-S line	3.15	2	Standard	Exceedance
22	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/25/23	31	9	CB around T-S line	0.00567	0.005	Standard	Exceedance
22	UA	E002	Chloride, total	mg/L	12/10/15 - 08/25/23	38	0	CB around T-S line	89.1	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
22	UA	E002	Chromium, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.005	0.1	Standard	No Exceedance
22	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/25/23	31	9	CI around mean	0.00191	0.006	Standard	No Exceedance
22	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/25/23	31	6	CI around median	0.15	4.0	Standard	No Exceedance
22	UA	E002	Lead, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
22	UA	E002	Lithium, total	mg/L	12/10/15 - 08/25/23	35	0	CB around T-S line	0.0405	0.04	Standard	Exceedance
22	UA	E002	Mercury, total	mg/L	12/10/15 - 08/25/23	29	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
22	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/25/23	35	0	CB around T-S line	0.0754	0.1	Standard	No Exceedance
22	UA	E002	pH (field)	SU	12/10/15 - 08/25/23	34	0	CI around mean	7.5/7.7	6.5/9.0	Standard/Standard	No Exceedance
22	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/25/23	22	0	CI around mean	0.352	5	Standard	No Exceedance
22	UA	E002	Selenium, total	mg/L	12/10/15 - 08/25/23	31	6	CB around linear reg	0.0158	0.05	Standard	No Exceedance
22	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/25/23	38	0	CB around linear reg	106	400	Standard	No Exceedance
22	UA	E002	Thallium, total	mg/L	12/10/15 - 08/25/23	31	94	CB around T-S line	0.002	0.002	Standard	No Exceedance
22	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/25/23	38	0	CB around linear reg	591	1,200	Standard	No Exceedance
22D	UA	E002	Antimony, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.003	0.006	Standard	No Exceedance
22D	UA	E002	Arsenic, total	mg/L	09/17/19 - 08/22/23	15	7	CI around median	0.0012	0.010	Standard	No Exceedance
22D	UA	E002	Barium, total	mg/L	09/17/19 - 08/22/23	15	0	CB around T-S line	0.0653	2.0	Standard	No Exceedance
22D	UA	E002	Beryllium, total	mg/L	09/17/19 - 08/22/23	14	100	All ND - Last	0.001	0.004	Standard	No Exceedance
22D	UA	E002	Boron, total	mg/L	09/17/19 - 08/22/23	15	0	CB around linear reg	1.22	2	Standard	No Exceedance
22D	UA	E002	Cadmium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
22D	UA	E002	Chloride, total	mg/L	09/17/19 - 08/22/23	15	0	CB around linear reg	101	200	Standard	No Exceedance
22D	UA	E002	Chromium, total	mg/L	09/17/19 - 08/22/23	15	87	CI around median	0.0015	0.1	Standard	No Exceedance
22D	UA	E002	Cobalt, total	mg/L	09/17/19 - 08/22/23	15	93	CI around median	0.001	0.006	Standard	No Exceedance
22D	UA	E002	Fluoride, total	mg/L	09/17/19 - 08/22/23	15	13	CI around median	0.11	4.0	Standard	No Exceedance
22D	UA	E002	Lead, total	mg/L	09/17/19 - 08/22/23	15	93	CI around median	0.001	0.0075	Standard	No Exceedance
22D	UA	E002	Lithium, total	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	0.0145	0.04	Standard	No Exceedance
22D	UA	E002	Mercury, total	mg/L	12/11/19 - 08/22/23	14	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
22D	UA	E002	Molybdenum, total	mg/L	09/17/19 - 08/22/23	15	7	CI around mean	0.00655	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
22D	UA	E002	pH (field)	SU	09/17/19 - 08/22/23	18	0	CI around mean	7.2/7.3	6.5/9.0	Standard/Standard	No Exceedance
22D	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/17/19 - 08/22/23	12	0	CI around mean	0.589	5	Standard	No Exceedance
22D	UA	E002	Selenium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
22D	UA	E002	Sulfate, total	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	102	400	Standard	No Exceedance
22D	UA	E002	Thallium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
22D	UA	E002	Total Dissolved Solids	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	599	1,200	Standard	No Exceedance
23	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.003	0.006	Standard	No Exceedance
23	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	35	95	CB around T-S line	0.001	0.010	Standard	No Exceedance
23	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	31	0	CB around T-S line	0.0352	2.0	Standard	No Exceedance
23	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.001	0.004	Standard	No Exceedance
23	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	36	0	CB around T-S line	8.3	2	Standard	Exceedance
23	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
23	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	38	1	CB around T-S line	51.7	200	Standard	No Exceedance
23	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.005	0.1	Standard	No Exceedance
23	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.001	0.006	Standard	No Exceedance
23	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	31	6	CI around median	0.15	4.0	Standard	No Exceedance
23	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
23	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	35	6	CI around mean	0.00458	0.04	Standard	No Exceedance
23	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
23	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	35	0	CI around median	0.0146	0.1	Standard	No Exceedance
23	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	33	0	CI around mean	7.4/7.5	6.5/9.0	Standard/Standard	No Exceedance
23	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	22	0	CI around mean	0.27	5	Standard	No Exceedance
23	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
23	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	38	0	CI around mean	423	400	Standard	Exceedance
23	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.002	0.002	Standard	No Exceedance
23	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	38	0	CI around mean	885	1,200	Standard	No Exceedance
24/51	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
24/51	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	33	0	CI around mean	0.0204	0.010	Standard	Exceedance
24/51	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	29	0	CB around linear reg	0.11	2.0	Standard	No Exceedance
24/51	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.001	0.004	Standard	No Exceedance
24/51	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	34	0	CB around linear reg	1.43	2	Standard	No Exceedance
24/51	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
24/51	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	36	0	CB around linear reg	107	200	Standard	No Exceedance
24/51	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	29	77	CB around T-S line	0.0015	0.1	Standard	No Exceedance
24/51	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	29	74	CI around median	0.001	0.006	Standard	No Exceedance
24/51	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	29	6	CI around median	0.14	4.0	Standard	No Exceedance
24/51	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	29	68	CI around median	0.001	0.0075	Standard	No Exceedance
24/51	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	33	0	CB around T-S line	0.0229	0.04	Standard	No Exceedance
24/51	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
24/51	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	33	3	CI around mean	0.00988	0.1	Standard	No Exceedance
24/51	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	31	0	CB around linear reg	7.1/7.4	6.5/9.0	Standard/Standard	No Exceedance
24/51	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	21	0	CB around linear reg	1.07	5	Standard	No Exceedance
24/51	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
24/51	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	36	0	CB around linear reg	84.4	400	Standard	No Exceedance
24/51	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.002	0.002	Standard	No Exceedance
24/51	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	36	0	CI around mean	618	1,200	Standard	No Exceedance
27	UA	E002	Antimony, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.003	0.006	Standard	No Exceedance
27	UA	E002	Arsenic, total	mg/L	09/12/18 - 08/24/23	18	65	CI around median	0.001	0.010	Standard	No Exceedance
27	UA	E002	Barium, total	mg/L	09/12/18 - 08/24/23	18	0	CI around geomean	0.0837	2.0	Standard	No Exceedance
27	UA	E002	Beryllium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.001	0.004	Standard	No Exceedance
27	UA	E002	Boron, total	mg/L	09/12/18 - 08/24/23	18	0	CB around linear reg	1.36	2	Standard	No Exceedance
27	UA	E002	Cadmium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
27	UA	E002	Chloride, total	mg/L	03/08/16 - 08/24/23	23	0	CB around linear reg	102	200	Standard	No Exceedance
27	UA	E002	Chromium, total	mg/L	09/12/18 - 08/24/23	18	80	CI around median	0.0015	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
27	UA	E002	Cobalt, total	mg/L	09/12/18 - 08/24/23	18	10	CI around mean	0.00189	0.006	Standard	No Exceedance
27	UA	E002	Fluoride, total	mg/L	09/12/18 - 08/24/23	18	4	CI around median	0.12	4.0	Standard	No Exceedance
27	UA	E002	Lead, total	mg/L	09/12/18 - 08/24/23	18	60	CI around median	0.001	0.0075	Standard	No Exceedance
27	UA	E002	Lithium, total	mg/L	09/12/18 - 08/24/23	18	0	CI around mean	0.0213	0.04	Standard	No Exceedance
27	UA	E002	Mercury, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
27	UA	E002	Molybdenum, total	mg/L	09/12/18 - 08/24/23	18	11	CI around mean	0.00413	0.1	Standard	No Exceedance
27	UA	E002	pH (field)	SU	03/08/16 - 08/24/23	23	0	CI around mean	7.1/7.2	6.5/9.0	Standard/Standard	No Exceedance
27	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/12/18 - 08/24/23	12	0	CI around geomean	0.211	5	Standard	No Exceedance
27	UA	E002	Selenium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
27	UA	E002	Sulfate, total	mg/L	03/08/16 - 08/24/23	23	0	CB around linear reg	87.9	400	Standard	No Exceedance
27	UA	E002	Thallium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.002	0.002	Standard	No Exceedance
27	UA	E002	Total Dissolved Solids	mg/L	03/08/16 - 08/24/23	23	0	CI around median	638	1,200	Standard	No Exceedance
35	UA	E002	Antimony, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.003	0.006	Standard	No Exceedance
35	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/24/23	30	80	CI around median	0.001	0.010	Standard	No Exceedance
35	UA	E002	Barium, total	mg/L	12/09/15 - 08/24/23	30	0	CI around geomean	0.0396	2.0	Standard	No Exceedance
35	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.001	0.004	Standard	No Exceedance
35	UA	E002	Boron, total	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	12.3	2	Standard	Exceedance
35	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
35	UA	E002	Chloride, total	mg/L	12/09/15 - 08/24/23	31	0	CI around mean	38.4	200	Standard	No Exceedance
35	UA	E002	Chromium, total	mg/L	12/09/15 - 08/24/23	30	97	CB around T-S line	0.0015	0.1	Standard	No Exceedance
35	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/24/23	30	43	CI around median	0.001	0.006	Standard	No Exceedance
35	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/24/23	31	3	CI around median	0.17	4.0	Standard	No Exceedance
35	UA	E002	Lead, total	mg/L	12/09/15 - 08/24/23	30	90	CI around median	0.001	0.0075	Standard	No Exceedance
35	UA	E002	Lithium, total	mg/L	12/09/15 - 08/24/23	30	0	CI around mean	0.0248	0.04	Standard	No Exceedance
35	UA	E002	Mercury, total	mg/L	12/09/15 - 08/24/23	29	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
35	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/24/23	30	0	CI around mean	0.0668	0.1	Standard	No Exceedance
35	UA	E002	pH (field)	SU	12/09/15 - 08/24/23	31	0	CB around linear reg	6.8/7.0	6.5/9.0	Standard/Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
35	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/24/23	23	0	CI around median	0.25	5	Standard	No Exceedance
35	UA	E002	Selenium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
35	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	649	400	Standard	Exceedance
35	UA	E002	Thallium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.002	0.002	Standard	No Exceedance
35	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	1,250	1,200	Standard	Exceedance
49	UA	E002	Antimony, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.003	0.006	Standard	No Exceedance
49	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/25/23	30	97	CI around median	0.001	0.010	Standard	No Exceedance
49	UA	E002	Barium, total	mg/L	12/10/15 - 08/25/23	30	0	CB around T-S line	0.0615	2.0	Standard	No Exceedance
49	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.001	0.004	Standard	No Exceedance
49	UA	E002	Boron, total	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	0.457	2	Standard	No Exceedance
49	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/25/23	30	30	CB around linear reg	0.00159	0.005	Standard	No Exceedance
49	UA	E002	Chloride, total	mg/L	12/10/15 - 08/25/23	31	0	CI around median	100	200	Standard	No Exceedance
49	UA	E002	Chromium, total	mg/L	12/10/15 - 08/25/23	30	97	CB around T-S line	0.0015	0.1	Standard	No Exceedance
49	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/25/23	30	0	CI around mean	0.0045	0.006	Standard	No Exceedance
49	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/25/23	31	3	CI around median	0.15	4.0	Standard	No Exceedance
49	UA	E002	Lead, total	mg/L	12/10/15 - 08/25/23	30	93	CI around median	0.001	0.0075	Standard	No Exceedance
49	UA	E002	Lithium, total	mg/L	12/10/15 - 08/25/23	30	0	CI around mean	0.024	0.04	Standard	No Exceedance
49	UA	E002	Mercury, total	mg/L	12/10/15 - 08/25/23	29	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
49	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/25/23	30	0	CB around linear reg	0.0223	0.1	Standard	No Exceedance
49	UA	E002	pH (field)	SU	12/10/15 - 08/25/23	32	0	CI around mean	7.1/7.2	6.5/9.0	Standard/Standard	No Exceedance
49	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/25/23	23	0	CI around mean	0.31	5	Standard	No Exceedance
49	UA	E002	Selenium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
49	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	69.6	400	Standard	No Exceedance
49	UA	E002	Thallium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.002	0.002	Standard	No Exceedance
49	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	576	1,200	Standard	No Exceedance
50	UA	E002	Antimony, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.003	0.006	Standard	No Exceedance
50	UA	E002	Arsenic, total	mg/L	09/17/19 - 08/25/23	15	93	CI around median	0.001	0.010	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
50	UA	E002	Barium, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	0.0859	2.0	Standard	No Exceedance
50	UA	E002	Beryllium, total	mg/L	09/17/19 - 08/25/23	14	100	All ND - Last	0.001	0.004	Standard	No Exceedance
50	UA	E002	Boron, total	mg/L	09/17/19 - 08/25/23	15	0	CI around geomean	0.682	2	Standard	No Exceedance
50	UA	E002	Cadmium, total	mg/L	09/17/19 - 08/25/23	15	7	CI around median	0.0011	0.005	Standard	No Exceedance
50	UA	E002	Chloride, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	89.7	200	Standard	No Exceedance
50	UA	E002	Chromium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.005	0.1	Standard	No Exceedance
50	UA	E002	Cobalt, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	0.0043	0.006	Standard	No Exceedance
50	UA	E002	Fluoride, total	mg/L	09/17/19 - 08/25/23	15	27	CB around T-S line	0.11	4.0	Standard	No Exceedance
50	UA	E002	Lead, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
50	UA	E002	Lithium, total	mg/L	09/17/19 - 08/25/23	15	0	CI around median	0.0197	0.04	Standard	No Exceedance
50	UA	E002	Mercury, total	mg/L	12/11/19 - 08/25/23	14	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
50	UA	E002	Molybdenum, total	mg/L	09/17/19 - 08/25/23	15	0	CI around geomean	0.0276	0.1	Standard	No Exceedance
50	UA	E002	pH (field)	SU	09/17/19 - 08/25/23	18	0	CB around linear reg	7.2/7.6	6.5/9.0	Standard/Standard	No Exceedance
50	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/17/19 - 08/25/23	11	0	CI around mean	0.527	5	Standard	No Exceedance
50	UA	E002	Selenium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
50	UA	E002	Sulfate, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	85.7	400	Standard	No Exceedance
50	UA	E002	Thallium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
50	UA	E002	Total Dissolved Solids	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	607	1,200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Notes:
Compliance Result:

No Exceedance: the statistical result did not exceed the GWPS.

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
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

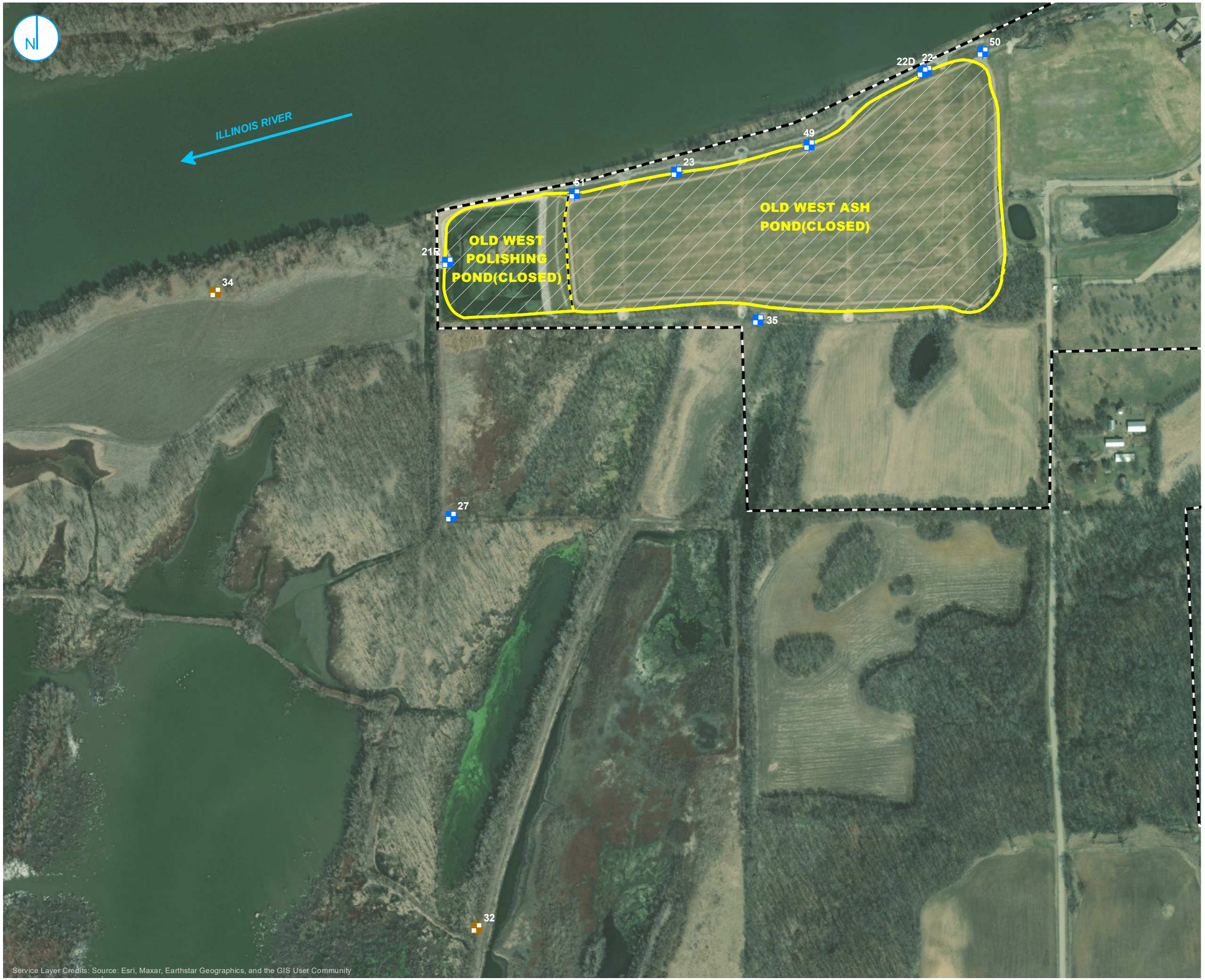
CI around median = Confidence interval around the median

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range
For pH, the values presented are the lower / upper limits
GWPS = Groundwater Protection Standard
GWPS Source:

Standard = standard specified in 35 I.A.C. § 845.600(a)(1)

Background = background concentration (see cover page for additional information)

FIGURES



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

0 200 400
Feet

35 I.A.C. § 845 MONITORING WELL LOCATION MAP

WEST ASH POND SYSTEM
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

ATTACHMENTS

ATTACHMENT A
GROUNDWATER ELEVATION DATA
QUARTER 3, 2023

ATTACHMENT A.
GROUNDWATER ELEVATION DATA - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	Well Type	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
21R	Compliance	08/21/2023	6.36	445.68
22	Compliance	08/21/2023	18.68	445.76
22D	Compliance	08/21/2023	19.40	446.02
23	Compliance	08/21/2023	17.08	446.30
27	Compliance	08/21/2023	4.56	446.02
32	Background	08/21/2023	5.60	445.78
34	Background	08/25/2023	[8.98]	[440.58]
35	Compliance	08/21/2023	8.87	445.96
49	Compliance	08/25/2023	[19.65]	[448.52]
51	Compliance	08/21/2023	18.92	445.87

Notes:
Only wells with groundwater elevations measured are included.
BMP = below measuring point
Bracketing [ ] indicates that the measurement was obtained outside of the 24-hour period from initiation of depth to groundwater measurements.
NA = not available/not applicable
NAVD88 = North American Vertical Datum of 1988

ATTACHMENT B
LABORATORY REPORTS AND FIELD DATA SHEETS
QUARTER 3, 2023

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 11:04:56 Revision 1

JOB DESCRIPTION

HEN-23Q3
HEN_845_804

JOB NUMBER

500-238579-3

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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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization

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Revision 1

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Table of Contents

Case Narrative

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Job ID: 500-238579-3

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-238579-3

Revision
The report being provided is a revision of the original report sent on 11/07/23. The report (revision 1) is being revised due to: COC issues. COCs missing signature/date/time.

Comments
No additional comments.

Receipt
The samples were received on 08/23/23 10:00. 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
No analytical or quality issues were noted, other than those described 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: 500-238579-3
SDG: HEN_845_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 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

Protocol References:

EPA = US Environmental Protection Agency

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: 500-238579-3
SDG: HEN_845_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
500-238579-26	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

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.0097**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.0067**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.015**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	0.016		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	<0.0050		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.0089**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.0047**	**J**	0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.076**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	<0.0050		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.023**		0.0050	0.0025	mg/L		10/09/23 18:08	10/10/23 12:58	1
Selenium	<0.0025		0.0025	0.00098	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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.0050**		0.0050	0.0025	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
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
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: 500-238579-3
SDG: HEN_845_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
Molybdenum	**0.025**		0.0050	0.0025	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
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
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

Definitions/Glossary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 590-238579-3
SDG: HEN_845_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.
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: 500-238579-3
SDG: HEN_845_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	

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	

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
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

Metals (Continued)

Analysis Batch: 730327 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-730135/13-A	Lab Control Sample	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	

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	
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

Metals (Continued)

Analysis Batch: 730809 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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

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	
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

Metals (Continued)

Analysis Batch: 734227 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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

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	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Metals

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	
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	

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	

General Chemistry (Continued)

Analysis Batch: 729793 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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: 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	
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	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

General Chemistry (Continued)

Analysis Batch: 730218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-238579-44 DU	HEN_34	Total/NA	Water	SM 2540C	

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	

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	
500-238579-26	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	

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 500-729478/1-A
Matrix: Water
Analysis Batch: 733174

Client Sample ID: Method Blank
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 733174

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 733174

Client Sample ID: HEN_21R
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 733174

Client Sample ID: HEN_21R
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 735077

Client Sample ID: HEN_49_MSD
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 734227

Client Sample ID: Method Blank
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 734227

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

Lab Sample ID: 500-238579-45 MS
Matrix: Water
Analysis Batch: 734227

Client Sample ID: HEN_49_MS
Prep Type: Total Recoverable
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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Method: 200.7 Rev 4.4 - Metals (ICP)

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
Molybdenum	<0.0050		0.0050	0.0025	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

Lab Sample ID: MB 500-729866/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 735519 — **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

Lab Sample ID: LCS 500-729866/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 731002 — **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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 590-238579-3
SDG: HEN_845_804

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

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
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
Molybdenum	1.00	0.986		mg/L		99	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

Lab Sample ID: MB 500-730528/1-A
Matrix: Water
Analysis Batch: 735519

Client Sample ID: Method Blank
Prep Type: Total Recoverable
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
Molybdenum	<0.0050		0.0050	0.0025	mg/L		09/01/23 08:58	10/05/23 02:29	1

Lab Sample ID: MB 500-730528/1-A
Matrix: Water
Analysis Batch: 736032

Client Sample ID: Method Blank
Prep Type: Total Recoverable
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
Matrix: Water
Analysis Batch: 736227

Client Sample ID: Method Blank
Prep Type: Total Recoverable
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

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
Molybdenum	1.00	0.975		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: 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
Selenium	<0.0025		0.100	0.0977		mg/L		98	75 - 125

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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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
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
Selenium	<0.0025		0.100	0.0982		mg/L		98	75 - 125	0	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
Selenium	<0.0025		<0.0025		mg/L		NC	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

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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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: 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

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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-730135/12-A
Matrix: Water
Analysis Batch: 730327

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730327

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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: MB 500-730358/12-A
Matrix: Water
Analysis Batch: 730570

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

Lab Sample ID: LCS 500-730358/13-A
Matrix: Water
Analysis Batch: 730570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730809

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730809

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730809

Client Sample ID: HEN_49_MS
Prep Type: Total/NA
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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 500-238579-45 MSD
Matrix: Water
Analysis Batch: 730809

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 730809

Client Sample ID: HEN_49
Prep Type: Total/NA
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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-729689/34
Matrix: Water
Analysis Batch: 729689

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

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
Matrix: Water
Analysis Batch: 729689

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

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: MB 500-729898/3
Matrix: Water
Analysis Batch: 729898

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

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
Sulfate	<1.0		1.0	0.21	mg/L			08/29/23 10:28	1

Lab Sample ID: MB 500-729898/44
Matrix: Water
Analysis Batch: 729898

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

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

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-729898/4
Matrix: Water
Analysis Batch: 729898

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

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
Matrix: Water
Analysis Batch: 729898

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

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
Matrix: Water
Analysis Batch: 729898

Client Sample ID: HEN_49
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 729898

Client Sample ID: HEN_49_MS
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 729898

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA

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

Lab Sample ID: 500-238579-45 MSD
Matrix: Water
Analysis Batch: 729898

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 730144

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

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

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-730144/4
Matrix: Water
Analysis Batch: 730144

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

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
Matrix: Water
Analysis Batch: 730144

Client Sample ID: HEN_49_MS
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 730144

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 731549

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

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
Matrix: Water
Analysis Batch: 731549

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

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		

Lab Sample ID: 500-238579-45 MS
Matrix: Water
Analysis Batch: 731549

Client Sample ID: HEN_49_MS
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 731549

Client Sample ID: 500-238579-L-45 MSD
Prep Type: Dissolved

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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

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

Lab Sample ID: MB 500-729793/1
Matrix: Water
Analysis Batch: 729793

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/28/23 18:23	1

Lab Sample ID: LCS 500-729793/2
Matrix: Water
Analysis Batch: 729793

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	248		mg/L		99	80 - 120

Lab Sample ID: MB 500-729794/1
Matrix: Water
Analysis Batch: 729794

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/28/23 20:37	1

Lab Sample ID: LCS 500-729794/2
Matrix: Water
Analysis Batch: 729794

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	232		mg/L		93	80 - 120

Lab Sample ID: MB 500-730218/1
Matrix: Water
Analysis Batch: 730218

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			08/30/23 19:32	1

Lab Sample ID: LCS 500-730218/2
Matrix: Water
Analysis Batch: 730218

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	242		mg/L		97	80 - 120

Lab Sample ID: 500-238579-45 MS
Matrix: Water
Analysis Batch: 730218

Client Sample ID: HEN_49_MS
Prep Type: Total/NA

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
Matrix: Water
Analysis Batch: 730218

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA

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

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_804

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

Lab Sample ID: 500-238579-44 DU
Matrix: Water
Analysis Batch: 730218

Client Sample ID: HEN_34
Prep Type: Total/NA

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: 500-238579-3
SDG: HEN_845_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

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 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
Date Collected: 08/22/23 09:10
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-2
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 15:12
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 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
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 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
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

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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	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 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 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 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

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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

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 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_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
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 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

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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

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 07:47
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 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
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 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

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-3
SDG: HEN_845_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

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
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
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
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 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 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

[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: 590-238579-3
SDG: HEN_845_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

500-238579 COC

CHAIN-OF-CUSTODY / Analytical Request Document

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500-238529 8/23/23

Page: 1 of 1

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 Rd, 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

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_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	[signature]	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	7	12	

500-23A525 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

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

Valid Matrix Codes

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	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																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														

2

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0	Allison Beckett	8/22/23	1700	Shir Scott	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			

500-238579
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

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_23			8/22/23	1120															X				X		X	X		X		
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

3

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
HEN-23Q3 Rev 0	Allison Beckett	8/22/23	1700	Stephanie Hernandez EEIA	8/23/23	1000	0.9+0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beckett

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/22/23

500-239579
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	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_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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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
HEN-23Q3 Rev 0	Allison Becklett	8/22/23	1700	Stephanie Hernandez EEI	8/23/23	1000	0.9+0.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Becklett

SIGNATURE of SAMPLER: Becklett

DATE Signed (MM/DD/YY): 8/22/23

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_32			8/2/23	1115															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
6																															
7																															
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15																															
16																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
HEN-23Q3 Rev 0		8/22/23	1700	Stephanie Hernandez EEIA	8/23/23	1000	1.1+0.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CHRIS TREMBLAY

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/22/23

500-23857-2
8/23/23

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

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:	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 Name:	Project Manager:
Requested Due Date/TAT: 10 day	Project Number: 2285	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_51			8/22/23	1556															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
5																															
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
HEN-23Q3 Rev 0	Allison Beck-Ott,	8/22/23	1700	Stephanie Hernandez EEIA	8/23/23	1000	1.1+0.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Beck-Ott

SIGNATURE of SAMPLER: Beck-Ott DATE Signed (MM/DD/YY): 8/22/23

CHAIN-OF-CUSTODY / Analytical Request Document

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Page 1 of 1

Section A Required Client Information

Company:	Vistra Corp/A3
Address:	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	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_27			8/24/23	0800															X				X	X	X		X		
2																														
3																														
4																														
5																														
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16																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HEN-23Q3 Rev 0	S.J. Ellis EETA	8/24/23	1700	S.J. Ellis EETA	8/25/23	0925		Y	Y	Y
	S.J. Ellis EETA	8/25/23	0932	Stephanie Hernandez EETA	8/25/23	0932				

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Chris Trembley	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:		0.5+0.2			
DATE Signed (MM/DD/YY):	8/24/23				

500-238579

CHAIN-OF-CUSTODY / Analytical Request Document

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Page 1 of 1

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:	Copy To: Jason Stuckey	Company Name: Vistra Corp
		Address: see Section A
Email To: Brian.Voelke.@VistraCorp.com	Purchase Order No:	Quote Reference:
Phone: (217) 753-8911 Fax:	Project Name:	Project Manager:
Requested Due Date/TAT: 10 day	Project Number: 2285	Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z 0-9 /) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX / CODE: DRINKING WATER, WATER, WASTE WATER W, PRODUCT, SOIL/SOLID, OIL, WIPE, AIR A, OTHER O, TISSUE	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_35				8/24/23	1010														X				X		X	X		X		SHORT HOLD-NO2
2																																
3																																
4																																
5																																
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q3 Rev 0		8/24/23	1700	EETA	8/25/23	0825	4 4 4
	EETA	8/25/23	0932	EETA	8/25/23	0932	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER. 8/24/23

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

0.5+0.2

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_34			8/25/23	1125															X				X		X	X		X		SHORT HOLD-NO2
2																															
3																															
4																															
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44

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				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Becklett

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/25/23

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

1e+13, 3.4+3.0

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																														
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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	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: Allison 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

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_802-804	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																														
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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, 2.1→1.7

500-239579

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		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 Name		Project Manager:	
Requested Due Date/TAT	10 day	Project Number:	2285	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	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_22			8/25/23	8 50															X				X		X	X		X		SHORT HOLDS-NO2
2																															
3																															
4																															
5																															
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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 EEHA	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

1671.3, 3.4+30

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@eurofinsus com	State of Origin:	Page: Page 1 of 1
Company: Vistra Energy Corp	PWSID	Analysis Requested		Job #: 500-238579
Address: Zimmer Generating Station 1781 US Rte 52	Due Date 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
City: Moscow	TAT Requested (days)			
State, Zip: OH 45153	Compliance Project: A Yes A No			
Phone: 217-412-6605(Tel)	PO #: 2382094			
Email: brian.voelker@vistraenergy.com	WO #:			
Project Name: HEN_22	Project #: 50021198			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	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_F_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		
4/0 HEN_22	8/25/23	0850		Water														

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time: 8/25/23 1700	Company	Received by	Date/Time: 8.25.23 1500	Company: EETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: A Yes A 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	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_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 D	Analysis Requested		Job #: 500-238579
Address: Zimmer Generating Station 1781 US Rte 52	Due Date Requested			Preservation Codes: A HCL; B NaOH; C Zn Acetate; D Nitric Acid; F NaHSO4; F MeOH; C Anchor; H Ascorbic Acid; I ce; J DI Water; K EDTA; L EDA; M Hexane; N None; AsNaO2; P Na2O4S; Q Na2SO3; R Na2S2O3; S H2SO4; TSP Dodecahydrate; Acetone; V MCAA; W pH 4-5; Y Trizma; Z other (specify
City: Moscow	TAT Requested (days)			
State Zip: OH 45153	Compliance Project: Yes No			
Phone: 217-412-6605(Tel)	PO #: 2382094			
mail: brian voelker@vistraenergy com	WO #:			Other:
Project Name: HEN_50	Project #: 50021987			
Site	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	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_F_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													

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
	8/25/23 1200	AEP		8-25-23 15:00	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

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-238579-3
SDG Number: HEN_845_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	47.89		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	14.14		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	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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				
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				
Downhole Condition				
12. Water level measuring point clearly marked?		X	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				
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[illegible]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?	↓			
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.	39.92 ft

	Yes	No	NA
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 9/21/23 @ 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		

	Yes	No	NA
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: 37.34 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-MW

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?		X	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.	42.78 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:

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~~		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			
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	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	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.	106.3 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:

DTW: 48.33ft

* 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				
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			
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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Field Personnel: Allison Beckett
Start Date: 8/22/23 Time: 0800
Finish Date: Time: 1015

WELL INFORMATION

Well ID: HEN-22D
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)	±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	07.28	1.07	6.02	-66.0	
	0834				17.7	7.29	0.729	0.85	10.3	-72.0	
	0839	2.0			18.2	7.29	0.730	0.84	42.41	-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	21.43	-81.7	
	0854				18.0	7.30	0.729	0.105	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		

	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:

DTW = in 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: 8/22/23 Time: 1040
Field Personnel: Allison Beckett
Finish Date: Time: 1210

WELL INFORMATION

Well ID: HEC-23
Casing ID: 2 inches

EVENT TYPE

☐ Well Development ☒ 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
	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	4.69	-126.8	
	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				
3. Are there weep holes in outer casing?		X		
4. Weep holes able to drain?			X	
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	Comments
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	Comments
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: Kamball
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			17.9	7.52	0.765	0.95	34.3	-137.2	
	1336				17.1	7.53	0.763	0.930	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

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Monitoring Well Evaluation Checklist

Site Hennepin IL
Inspection Date 8/22/23 0915
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	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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Rambol
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
	1506				18.9	7.45	0.725	5.56	10.51	-121.3	Clear
	1511				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	38.26	-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	NA	
Not dented		↓	↓	
Not cracked		↓	↓	
Not loose		↓	↓	
2. Inner casing				
Not corroded		↓	↓	
Not dented		↓	↓	
Not cracked		↓	↓	
Not loose		↓	↓	
3. Are there weep holes in outer casing?		X	↓	
4. Weep holes able to drain?		↓	NA	
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?			NA
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?			NA
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?			NA
Not deteriorated?			↓
Not heaved or below surrounding grade?			↓
20. No surface seal settling?			↓
21. Well clearly visible and labeled?	NA		

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: 8/25/23 Time: 08[illegible]15
Field Personnel: Allison Beckett
Finish Date: 8/25/23 Time: 09[illegible]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				14.2	7.68	0.456	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	77.0	
	0846	5.5			16.1	7.67	0.653	0.12	4.31	77.8	

NOTES (continued)

Samples taken @ 0850

Ferrous iron sample @ 0920 : 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 _____
Inspection Date 9/22/23
Well Number HEN 32

Major wells repairs* required to maintain well integrity?

Yes	No	NA
	X	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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?	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: 8/22/23 Time: 1135

WELL INFORMATION

Well ID: HEN-32
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	1040	1			3%	+1	3%	10%	~~FAIL~~	+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~~										

101. <10

NOTES (continued)

SAMPLER 1115

FI WORKING

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	Comments
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?				

Flushmount Monitoring Wells

	Yes	No	NA	Comments
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	Comments
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			

	Yes	No	NA	Comments
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		OVERGROWN WEEDS

Comments:

DTW 7-31
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 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			X
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.	18.6 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:
DTW 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 2/22/2023 0955
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			X
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.		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 HENNEPIN
Inspection Date 8/22 0945
Well Number HEN 25

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		↓		
3. Are there weep holes in outer casing?			X	
4. Weep holes able to drain?	(scribbled out)		X	
5. Is there a lockable cap present?	X	(scribbled out)		
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?	(lined through)		
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?		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 25.71		

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 * WHEN SET UP TO SAMPLE NOTICED BRASS
DTW 14.02 FITTING HAD 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 FORM

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		13.3*								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)

*GEOTECH PUMP
F2 - INDURING
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 9/22/23 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				
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		
	29.1 ft		
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad		X	
Slope away form casing?			
Not deteriorated?			
Not heaved or below surrounding grade?		X	
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 FIELD FORM

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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client:
Project Number:
Task #:
Start Date: 8/23/23 Time: 1155
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
☒ 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	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: 0.00

* 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 Bellwett
Finish Date: 8/23/23 Time: 1040

WELL INFORMATION

Well ID: HEN-12
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
		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	
		1108	4.0		19.5	7.30	0.558	1.88	3.0	154.1	

NOTES (continued)

Samples taken @ 1010

Ferrous 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	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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				
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				
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				
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: 8/28/23
Time: 0910
Field Personnel: Allison Beckett
Finish Date: 8/28/23
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	6.50	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	9.84	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	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 appt

* 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: 8/23/23 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
☒ 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	1314				22.7	7.36	0.516 S	6.16	5.99	113.9	clear
13	1319				23.0	7.32	0.574	3.58	24.10	128.2	
13	1324	1.0			22.7	7.31	0.577	3.016	23.14	133.1	
13	1329				22.4	7.31	0.576	2.71	19.6	136.4	
13	1334				22.3	7.31	0.577	2.49	18.41	139.0	
13	1339				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

Site Hennepin IL
Inspection Date 9/23/23 @ 1110
Well Number HEN-13

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			Oxidized & rusty
Not dented		X		
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?			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: 8/23/23 Time: 1055
Field Personnel: Allison Bickett
Finish Date: Time: 1255

WELL INFORMATION

Well ID: HEN-13
Casing ID: 2 inches

EVENT TYPE

☐ Well Development ☒ 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	1057				21.5	7.33	0.552	11.36	3.19	152.0	clear
	1102				21.6	7.37	0.502	3.67	3.18	152.7	↓
	1107	1.0			21.6	7.38	0.503	3.43	3.19	151.1	
	1112				21.6	7.38	0.503	2.33	3.20	149.9	
	1117				21.6	7.39	0.503	2.23	3.21	149.9	
25	1122	2.0			21.4	7.39	0.503	2.10	3.05	150.2	↓

NOTES (continued)

samples taken @ 1125

Ferrous iron @ 1125 : under range

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?				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: _____ Client: _____

Project Number: 2023-024 Task #: _____ Start Date: 8/23/23 Time: 1318

Field Personnel: TREMBLAY Finish Date: _____ Time: 1435

WELL INFORMATION

Well ID: 16D

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											
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				
Not dented				
Not cracked				
Not loose				
2. Inner casing				
Not corroded				
Not dented				
Not cracked				
Not loose				
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	Comments
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	Comments
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.	68.07 ft			
General Condition				
18. Concrete pad installed?				
19 . Concrete pad				
Slope away form casing?				
Not deteriorated?				
Not heaved or below surrounding grade?				
20. No surface seal settling?				
21. Well clearly visible and labeled?				

Comments:

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: 8/23/23 Time: 1305

WELL INFORMATION

Well ID: 05 DR
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	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	3.81	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, I2
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		↓		
	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.	46.05 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: 38.60 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: HENNEPP2W
Client:
Project Number: 2023-0711
Task #:
Start Date: 8/23/23 Time: 1036
Field Personnel: C. TREMBLAY
Finish Date: 8/23/23 Time: 1450

WELL INFORMATION

Well ID: 05R
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)	3% Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	±10 ORP (mV)	Visual Clarity
PRE	1036		38.69								
PURGE	1042	0.1	38.69	0			~~0.646~~	~~1.60~~	~~27.51~~	~~118.9~~	CLEAR
SAMPLE	1048	0.5	38.69	0	20.6	7.61	0.646	1.60	27.51	118.9	↓
	1053		38.69	0	20.6	7.61	0.644	0.36	18.70	136.8	
	1058		38.69	0	20.5	7.61	0.643	0.23	12.41	141.0	
	1103	1.25	38.69	0	20.8	7.61	0.643	0.19	8.77	142.8	
	1108		38.69	0	20.6	7.61	0.644	0.17	7.00	143.7	
	1113		38.69	0	20.8	7.61	0.643	0.15	5.15	144.0	
	1118	2.5	38.69	0	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 Conductance
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
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			CRICKET WEB
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 074
Task #:
Start Date: 8/23/23 Time: 0931
Field Personnel: TRW
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~~	~~0.11~~			~~20.9~~	~~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 - UNDRNG

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				
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	Comments
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	Comments
Downhole Condition				
12. Water level measuring point clearly marked?		X	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			

	Yes	No	NA	Comments
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:

37.92'
DTW: ~~[illegible]~~ ~~[illegible]~~ ft 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: MCMW-2 Client:
Project Number: 2023 0711 Task #: Start Date: 8/23/23 Time: 0820
Field Personnel: C TRUMBLY Finish Date: 8/23/23 Time: 0978

WELL INFORMATION

Well ID: 405
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	0832		37.92	0							
PURGE	0836	0.1	37.92	0							CLEAR
SAMPLE	0841		37.92	0	19.0	7.89	0.581	2.20	4.25	149.6	
	0846	1.5	37.92	0	18.8	7.89	0.579	0.41	3.29	143.4	
	0851		37.92	0	18.7	7.88	0.579	0.44	2.58	139.1	
	0856		37.92	0	18.7	7.88	0.579	0.37	2.16	135.7	
	0901	2.75	37.92	0	18.8	7.88	0.579	0.37	2.13	133.5	

NOTES (continued)

SAMPLE @ 0905

FE - HANDING

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 9/24/23
Well Number MW-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	

	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:

* 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: 0930

Field Personnel: TREMBLAY Finish Date: 8/24 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	7.78	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)

FD - ~~UNDR~~ 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 ~~HEN~~ Hennepin, IL
Inspection Date 8/24/23
Well Number HEN-52

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		

	Yes	No	NA
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: 8/24/23 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
☒ 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	0			21.5	7.10	0.1135	7.57	5.56	147.1	Clear
	0914				23.6	7.01	0.1005	2.04	5.95	152.3	↓
	0919	1.0			23.8	7.06	0.1009	1.34	4.68	149.7	
	0924				23.9	7.05	0.1012	1.21	4.27	147.2	
	0929	2.0			23.9	7.04	0.1013	1.03	4.25	146.5	
25	0934				24.0	7.04	0.1014	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			
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-88D
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
	1154				18.7	7.03	1.330	0.45	4.29	182.5	clear
	1159				17.7	6.104	1.426	2.00	4.88	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	0.63	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

Site Hennepin, IL
Inspection Date 8/24/23 1355
Well Number HEN-07

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:

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:
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
☒ 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
	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	176.6	
	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 iron sample @1430: 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		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.	— 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: Rambol
Project Number:
Task #:
Start Date: 8/21/24 Time: 1435
Field Personnel: Allison Bell, CM
Finish Date: 8/21/24 Time: 1620

WELL INFORMATION

Well ID: 08
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
	1443				14[illegible].7	6.62	1.228	1.54	3.85	194.1	clear
	1449				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	ORP - Oxidation-Reduction Potential
FT BTOC - Feet Below Top of Casing	SEC - Specific Electrical Conductance
na - Not Applicable	SU - Standard Units
nm - Not Measured	Temp - Temperature
	°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site
Inspection Date 8/24/23
Well Number 27

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?			
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			
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 ☐ 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
~~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)

FLUNDER

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			
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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/2023 Time: 1025
Field Personnel: Allison Beckett
Finish Date: 8/24/2023 Time: 1120

WELL INFORMATION

Well ID: HEN-02
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
	1032		41.17		15.4	7.12	0.1679	5.70	5.80	156.5	Clear
	1037		41.17		14.2	6.81	0.1687	0.63	5.08	172.7	↓
	1042	2.0	41.17		14.0	6.78	0.1685	0.38	5.12	174.3	
	1047		41.16		14.1	6.81	0.1684	0.31	4.34	172.3	
	1052	3.0	41.15		14.0	6.83	0.1684	0.27	3.99	170.8	
	1057				14.0	6.83	0.1686	0.27	4.17	170.1	
	1102	4.0			14.0	6.83	0.1685	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	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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: 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: 8/24/23 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
Inspection Date 8/21/23 @ 1005
Well Number ~~HenXPW01~~ - pore

Major wells repairs* required to maintain well integrity?

Yes	No	NA
	X	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
1. Outer protective Casing				
Not corroded		X		
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?		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: CKemp Finish Date: _____ Time: 1250

WELL INFORMATION

Well ID: XPW01

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	1125		9.45								
PURGE	1130	0.1	9.45	⊘							CLEAR
SAMPLE	1135	0.75	9.45	⊘	19.5	11.30	0.783	0.37	9.22	-241.6	
	1140		9.45	⊘	19.5	11.31	0.795	0.22	10.51	-242.4	
	1145	1.0	9.45	⊘	18.8	11.33	0.801	0.17	13.54	-244.1	
	1150		9.45	⊘	19.0	11.33	0.804	0.11	17.05	-248.5	
	1155		9.45	⊘	19.2	11.34	0.808	0.11	21.53	-259.5	
	1200	2.25	9.45	⊘	17.6	11.39	0.815	0.11	54.09	-271.9	
	1205		9.45	⊘	17.7	11.39	0.817	0.10	57.11	-278.6	
	1210	3.5	9.45	⊘	17.7	11.39	0.818	0.10	55.97	-279.1	

NOTES (continued)

SAMPLE @ 1215
FD - 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~~
Inspection Date 8/21/23 @ 1020
Well Number ~~HEN-XPW~~03-Pore

Major wells repairs* required to maintain well integrity?	Yes	No	NA
		X	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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.	19.11 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: 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: 8/29/23 Time: 1455

Field Personnel: [illegible] Finish Date: 8/29/23 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		4.84								
	1500	1.0	5.16	-0.3	~~16.7~~	~~11.71~~	~~1.141~~	~~0.82~~	~~5.~~		
	1506		5.16	⊘	16.7	11.71	1.141	0.82	5.92	-3.2	
	1511		5.16	⊘	16.6	11.79	1.144	0.11	13.62	-22.1	
	1516	2	5.16	⊘	16.7	11.79	1.146	0.11	9.31	-30.8	
	1521		5.16	⊘	16.8	11.78	1.149	0.10	9.28	-37.3	
	1526	2.5	5.16	⊘	16.7	11.79	1.149	0.11	9.97	-41.9	
	1531										
	1536										

NOTES (continued)

FT UNDR

SAMPLE - 1530

EB - 1530

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		
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.	48.65 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:

DTW: 48.28 ft Bottom of Casing/top of pump 48.65

* 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: 0810
Field Personnel: Allison Beckett
Finish Date: 8/24/23 Time: 6900

WELL INFORMATION

Well ID: HEN - 10
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	0810		48.15		22.8	7.15	0.619	1.52	4.08	138.6	clear
	0821		48.12		23.1	7.06	0.622	0.73	4.50	144.6	↓
	0826	2.0	48.12		23.1	7.05	0.624	0.67	7.00	144.2	
	0831		48.12		23.1	7.04	0.625	0.55	10.15	142.8	
	0836	3.0	48.11		23.2	7.04	0.625	0.53	4.50	141.8	
2.5	0841	3.5	48.11		23.2	7.04	0.625	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

Site Hennepin, IL
Inspection Date 8/21/23 @ 0930
Well Number 50

Major wells repairs* required to maintain well integrity?

Yes	No	NA
	X	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
1. Outer protective Casing				
Not corroded		✓		
Not dented		✓		
Not cracked		✓		
Not loose		✓		
2. Inner casing				
Not corroded		✓		
Not dented		✓		
Not cracked		✓		
Not loose		✓		
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				
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				
Downhole Condition			X	
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?	✓			
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 Bricker
Finish Date: 8/25/23 Time: 1200

WELL INFORMATION

Well ID: HEN-50
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
10	1158				16.8	7.53	0.064	0.01	364.79	81.2	clear
11	1203				16.7	7.56	0.063	0.59	384.0	112.5	
11	1209	2.0			16.8	7.49	0.064	0.17	4.33	109.3	
11	1213				16.9	7.49	0.065	0.14	4.31	98.5	
11	1218	4.0			16.7	7.48	0.065	0.12	4.06	87.2	
11	1223				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

	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:

* 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			~~+3.2~~	~~7.21~~	~~0.948~~	~~2.06~~	~~14.02~~	~~116.2~~	CLEAR
	1100				13.7	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 - UNDERAN

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	N/A	
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	Comments
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	Comments
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			

	Yes	No	NA	Comments
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 Blewett
Finish Date: 8/25/23 Time: 1055

WELL INFORMATION

Well ID: HEN-49
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
09	1032		19.65		15.5	7.21	0.700	1.40	72.1	-1.5	Cloudy
09	1037		19.65		15.3	7.13	0.698	0.22	92.38	38.0	Brown/murky
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	0.1098	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	ORP - Oxidation-Reduction Potential
FT BTOC - Feet Below Top of Casing	SEC - Specific Electrical Conductance
na - Not Applicable	SU - Standard Units
nm - Not Measured	Temp - Temperature
	°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site Hennepin IL
Inspection Date 8/23/23 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		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.	— ft		

General Condition	Yes	No	NA
18. Concrete pad installed?	X	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 GROUNDWATER SAMPLING FIELD 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
- ☒ 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
	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

Site Hennepin, IL
Inspection Date 8/28/23 @ 0915
Well Number ~~HEN-17~~

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		

	Yes	No	NA	
General Condition				
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 Burkett
Finish Date: Time: 1030

WELL INFORMATION

Well ID: HEN-17
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
	0911				22.4	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	10.06	4.08	144.3	
	0926	1.0			22.5	7.35	0.508	10.00	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

dupe @ 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?		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 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: 037

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	0915	0.1							~~10.85~~	~~115~~	CLEAR
SAMPLE	0920				18.2	7.22	0.655	0.81	10.85	~~[illegible]~~ 114.1	
	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 SAMPLER ODYS

ABBREVIATIONS

Cond. - Actual Conductivity	ORP - Oxidation-Reduction Potential
FT BTOC - Feet Below Top of Casing	SEC - Specific Electrical Conductance
na - Not Applicable	SU - Standard Units
nm - Not Measured	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		↓		
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	Comments
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	Comments
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		
16. Installed as total depth.		X		
17. Measured total depth of well.		X		
If present, how much sediment?	ft			
	ft			
	ft			

	Yes	No	NA	Comments
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: TRAVIS M Finish Date: _____ Time: 0905

WELL INFORMATION

Well ID: 185

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	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-455

Major wells repairs* required to maintain well integrity?

Yes	No	NA
	X	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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.	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 FIELD FORM

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
☒ 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/murky
	1054	2.5	18.98		19.1	7.17	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

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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Authorization

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Authorized for release by
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(708)325-6562

Table of Contents

Case Narrative

Client: Vistra Energy Corp
Project/Site: HEN-23Q3

Job ID: 500-238579-10
SDG: HEN_SUP_000_0 RAD

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
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	**0.311**		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

Lab Sample ID: 500-238579-30

Date Collected: 08/24/23 15:10
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	**0.241**		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 Results

Client Sample ID: HEN_08&D

Lab Sample ID: 500-238579-32
Date Collected: 08/24/23 12:25
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	**0.162**		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 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_FD

Date Collected: 08/24/23 15:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-34
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	**0.434**		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

Date Collected: 08/24/23 12:15
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-36

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

Date Collected: 08/24/23 12:15
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-37

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	0.00189	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

Date Collected: 08/24/23 13:45
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-38

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	0.144	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

Date Collected: 08/24/23 13:45
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-39

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	**0.188**		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

Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-40

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

Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-41

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

Date Collected: 08/25/23 12:00
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-42

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	

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-626172/1-A
Matrix: Water
Analysis Batch: 629490

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629491

Client Sample ID: HEN_26_MS
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629491

Client Sample ID: HEN_26_MSD
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629278

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629490

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 629490

Client Sample ID: HEN_03R_MSD
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628708

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628708

Client Sample ID: HEN_26_MS
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628708

Client Sample ID: HEN_26_MSD
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628698

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628698

Client Sample ID: HEN_49_MS
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628698

Client Sample ID: HEN_49_MSD
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628632

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 628632

Client Sample ID: HEN_03R_MSD
Prep Type: Total/NA
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
Date Collected: 08/22/23 13:45
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-1
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	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
Date Collected: 08/22/23 09:10
Date Received: 08/23/23 10:00

Lab Sample ID: 500-238579-2
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	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
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	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
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/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
Date Collected: 08/23/23 14:05
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-13
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 09:35
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
Date Collected: 08/23/23 10:10
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-15
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 09:35
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
Date Collected: 08/23/23 11:25
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-16
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 09:35
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
Date Collected: 08/23/23 08:55
Date Received: 08/24/23 09:38

Lab Sample ID: 500-238579-18
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 09:35
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
Date Collected: 08/24/23 15:10
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-34
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 18:50
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
Date Collected: 08/24/23 12:15
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-36
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 18:50
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
Date Collected: 08/24/23 12:15
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-37
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 18:50
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
Date Collected: 08/24/23 13:45
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-38
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 18:50
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
Date Collected: 08/24/23 13:45
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-39
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 18:50
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
Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-40
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_XPW03_pore_EB
Date Collected: 08/24/23 15:30
Date Received: 08/25/23 09:32

Lab Sample ID: 500-238579-41
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_257_FB
Date Collected: 08/25/23 12:00
Date Received: 08/25/23 15:00

Lab Sample ID: 500-238579-42
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

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:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephanie Hernandez	8/29/23 1500	EET	FED EX		
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:

10/11/2023

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845-804

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:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephanie Hemandez	8/29/23 1500	EEIA	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: Shanbey - Gonzalez	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: 500-178415.1
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	EEA	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company ERASTL
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 #: 500-238579-6
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:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
2	FED EX			Brianna Sharkey-Hampton	8/30/23 0900	ETASSL
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
845 QUARTERLY REPORT - QUARTER 3, 2023
HEN-845804
ATTACHMENT B.

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#:			

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_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	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hernandez	8/29/23 1700	FEDEX	FED EX		
2	FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	EASTL
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ATTACHMENT B. 2023 3RD QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845-804

10/11/2023

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: Stephanie Hernandez	Date/Time: 8/29/23 1600	Company: ~~EEN~~	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Brenda Sharkey-Gonzalez	Date/Time: 8/30/23 0500	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:

ATTACHMENT B
845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845804

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

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	

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:

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	EETAB	FED EX		
FED EX			Shaday Salazar	8/30/23 900	ETASTC

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:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	ETGJC

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ATTACHMENT B. 845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845804

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	EEIA	Briana Sharkey - Hanglers FED EX	8/30/23 0900	EEASTL
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:

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 #: 500-238579-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/14/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 50021987			
Project Name: HEN-23Q3	SSOW#:			
Site:				

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_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	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: 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 - Hazardous	Date/Time: 8/30/23 0900	Company EMVI
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 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	ETAPL

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ATTACHMENT B. 845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845804

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:	Date/Time:	Company	Received by:	Date/Time:	Company
Stephanie Hemonder FED EX	8/29/23 1500	EEHA	FED EX		
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:

ATTACHMENT B. 2023 845 QUARTERLY REPORT - QUARTER 3
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845-804

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 Hemandez	8/29/23 1500	EEIA	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey - Hargrove	Date/Time: 8/30/23 0900	Company ETAS IL
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 #: 500-238579-14
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	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
2	FED EX			Briana Sharkey-Gonzalez	8/30/23 0900	EEIA
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ATTACHMENT B. 845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845804

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 EEA	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 ETST
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:

ATTACHMENT B. 845 QUARTERLY REPORT - QUARTER 3, 2023
HENNEPIN POWER PLANT, WEST ASH POND SYSTEM
HEN-845-804

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 #: 500-238579-10
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_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	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Stephanie Hernandez	8/29/23 1700	EETA			
2	FED EX			FED EX		
3				Briana Sharkey - Manager	8/30/23 0900	ETAS
4						

Custody Seals Intact: △ Yes △ 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 - 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-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	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 Hernandez	8/29/23 1500	EETA	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: Briana Sharkey-Gonzalez	Date/Time: 8/30/23 0900	Company EEATL
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 #: 500-238579-1
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	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Stephanie Hernandez	8/29/23 1500	EEIA	FED EX		
2	FED EX			Briana Sharkey - Gonzalez	8/30/23 0900	ETSTL
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-238579-10
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)		
Lab Sample ID	Client Sample ID	Ba (30-110)	Ba (30-110)	Ba (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)				
Lab Sample ID	Client Sample ID	Ba (30-110)	Ba (30-110)	Ba (30-110)	Ba (30-110)	Ba (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**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)	Ba (30-110)	Ba (30-110)	Ba (30-110)	Ba (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**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)	Ba (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**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)	Y (30-110)	Ba (30-110)	Y (30-110)	Y (30-110)	Y (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

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	47.89		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	19.02 [illegible]	[illegible]D	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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23 @ 1140			X	
Well Number	HEN-06				

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	N
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.	31.09ft		

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[illegible]45
Well Number HEN-19S

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?	↓			
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.	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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	9/21/23 @ 1340			X	
Well Number	HEN-19D				

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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23 @ 1035			X	
Well Number	HEN-MW-R				

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?		X	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.	42.78 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:

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 CCR Rule

Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23			X	
Well Number	HEN-15				

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~~		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			
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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23 @ 0950			X	
Well Number	11				

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.	16.63 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: 48.33ft

* 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		↓		
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			
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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/22/23 Time: 0800
Field Personnel: Allison Bickett
Finish Date: Time: 1015

WELL INFORMATION

Well ID: HEN-22D
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)	±10% Temp. (°C)	±0.1 pH (SU)	±0.0 SEC or Cond. (µs/cm)	±0.3 Dissolved Oxygen (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	07.28	1.07	10.02	-66.0	
	0834				17.7	7.29	0.729	0.85	11.3	-72.0	
	0839	2.0			18.2	7.29	0.730	0.84	42.41	-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	0.105	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

	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:

DTW: in 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: 8/22/23 Time: 1040
Field Personnel: Allison Beckett
Finish Date: Time: ~~1210~~

WELL INFORMATION

Well ID: HEC-23
Casing ID: 2 inches

EVENT TYPE

☐ Well Development ☒ 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
	1041				15.8	7.39	0.8316	2.91	3.61	-94.6	clear
	1046				15.7	7.40	0.8316	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	4.69	-126.8	
	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	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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?	?			
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?		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: Ramboll
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	0.768	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	0.765	1.06	41.69	-138.9	Brownish
	1326				17.1	7.53	0.768	1.11	33.94	-134.1	
	1331	2.5			17.9	7.52	0.765	0.95	34.3	-137.2	
	1336				17.1	7.53	0.763	0.930	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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/22/23 0915			X	
Well Number	HEN-51				

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	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: Rambol
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
☒ 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	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	
	516				16.8	7.32	0.736	1.26	11.17	-105.3	
	521	1.0			17.1	7.34	0.737	0.92	31.84	-115.5	
	526				17.1	7.35	0.735	0.73	88.21	-122.1	
	531				16.6	7.35	0.737	0.63	200.2	-124.5	
30	536	2.0			17.3	7.36	0.738	0.38	22.5	-126.7	
	541				17.2	7.37	0.734	0.33	24.2	-127.4	
	546				17.1	7.37	0.733	0.30	25.7	-127.7	
	551	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		X	X	
Not corroded		↓		
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	← 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
Client: Ramboll
Project Number:
Task #:
Start Date: 8/25/23
Time: 08[illegible]15
Field Personnel: Allison Beckett
Finish Date:
Time: 09[illegible]20

WELL INFORMATION

Well ID: HEN-22
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
	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	79.8	
	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

Ferrous 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		Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/22/23			X	
Well Number	HEN 32				

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?	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:

* 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: 8/22/23 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)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PRE	1040	1			3%	+1	3%	10%	~~150~~	+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)

SAMPLER 1115

FI UNDERNG

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

			Yes	No	NA
Site	HENNEPIN	Major wells repairs* required to maintain well integrity?			
Inspection Date	8/22/23				
Well Number	33 @ 1018				

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~~	~~X~~	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?		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.	36.12 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?		X		
21. Well clearly visible and labeled?		X		OVERGROWN WEEDS

Comments:

DTW 7-8'
pump in well

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

Monitoring Well Evaluation Checklist

Site		Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/22/23 @1600				
Well Number	3D				

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

	Yes	No	NA	Comments
2. Inner casing		X		
Not corroded		↓		
Not dented				
Not cracked				
Not loose				

	Yes	No	NA	Comments
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	Comments
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	Comments
Downhole Condition			X	
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.	18.6 ft			

General Condition	Yes	No	NA	Comments
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
MNS pump

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

Monitoring Well Evaluation Checklist

Site		Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	7/26/2023 0955				
Well Number	30				

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?		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.	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	HENNEPEN
Inspection Date	8/22 0945
Well Number	HEN 25

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~~		X
5. Is there a lockable cap present?	X	~~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?	~~Yes~~		
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		ft
16. Installed as total depth.				ft
17. Measured total depth of well.				15.71 ft w/o pump 25.71

	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:

WELL HAS PUMP * WHEN SET UP TO SAMPLE NOTICED BRASS FITTING HAD CRACK
DTW 14.02

* 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 FORM

PROJECT INFORMATION

Site: _____ Client: _____

Project Number: _____ Task #: _____ Start Date: 8/22/23 Time: 1335

Field Personnel: C. TROMBLEY 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								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 - UNDERRUN
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?			
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		
	29.1 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?		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 FIELD FORM

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	0.10	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	Major wells repairs* required to maintain well integrity?	Yes	No: X	NA
Inspection Date	8/23/23 @ 1350				
Well Number	HEN-47				

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?		↓		
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?		↓	
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:
Project Number:
Task #:
Start Date: 9/23/23 Time: 1155
Field Personnel: Allison Beckett
Finish Date: 9/23/23 Time: 1607

WELL INFORMATION

Well ID: HEN-47
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
	1501				22.9	6.96	0.604	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 #2	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/23/23 @ 1105			X	
Well Number	HEN-12				

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	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: 0.00

* 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: 8/23/23 Time: 1040

WELL INFORMATION

Well ID: HEN-12
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
		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

Ferrous 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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/23/23 @0825			X	
Well Number	HEN-416				

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?			
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: 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	142.1	
	0834	1.5			20.8	7.34	0.560	2.19	9.84	142.5	
	0839				20.9	7.34	0.558	2.06	14.58	142.3	
	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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/23/23 @ 1334			X	
Well Number	HEN-54				

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?			
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: 1300
Field Personnel: Allison Beckett
Finish Date: 8/23/23 Time: 1455

WELL INFORMATION

Well ID: HEN-54
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
13	1314				24.7	7.36	0.576 S	6.16	5.99	113.9	clear
13	1319				23.0	7.32	0.574	3.58	24.10	128.2	
13	1324	1.0			22.7	7.31	0.577	3.016	23.14	133.1	
13	1329				22.4	7.31	0.576	2.71	19.6	131.4	
13	1334				22.3	7.31	0.577	2.49	18.41	139.0	
13	1339				22.4	7.30	0577	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

Site	Hennepin IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	9/23/23 @ 1110			X	
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?			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: 8/23/23 Time: 1055
Field Personnel: Allison Beckett
Finish Date: Time: 1255

WELL INFORMATION

Well ID: HEN-13
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	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	3.47	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 : Under range

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?		↓		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:

* 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: 8/23/23 Time: 1435

WELL INFORMATION

Well ID: 18D
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											
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

			Yes	No	NA
Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?		X	
Inspection Date	8/21/23 @ 1115				
Well Number	HEN - 05DR				

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?		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?			↑
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.	68.10 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: 39.73 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: 8/23/23 Time: 1305

WELL INFORMATION

Well ID: 05 DC
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	1155	[illegible]	38.73	0							
PURGE	1205	[illegible]	38.73	0							CLEAR
	1210	0.75	38.73	0	21.2	7.41	0.632	0.77	2.81	169.5	
	1215		38.73	0	20.6	7.41	0.631	0.28	2.54	167.7	
	1220		38.73	0	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 - UNDRNG

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 @1105			X	
Well Number	HEN-05R				

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.	46.05 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: 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: HENNEPP2V
Client:
Project Number: 2023-0711
Task #:
Start Date: 8/23/23 Time: 1036
Field Personnel: C. TREMBLAY
Finish Date: 8/23/23 Time: 1450

WELL INFORMATION

Well ID: 05R
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)	3% Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	+10 ORP (mV)	Visual Clarity
PRE	1036		38.69								
PURGE	1042	0.1	38.69	⊘			~~0.646~~	~~1.60~~	~~27.51~~	~~118.9~~	CLEAR
SAMPLE	1048	0.5	38.69	⊘	20.6	7.61	0.646	1.60	27.51	118.9	↓
	1053		38.69	⊘	20.6	7.61	0.644	0.36	18.70	136.8	
	1058		38.69	⊘	20.5	7.61	0.643	0.23	12.41	141.0	
	1103	1.25	38.69	⊘	20.8	7.61	0.643	0.19	8.77	142.8	
	1108		38.69	⊘	20.6	7.61	0.644	0.17	7.00	143.7	
	1113		38.69	⊘	20.8	7.61	0.643	0.15	5.15	144.0	
	1118	2.5	38.69	⊘	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 Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation

Site Hennepin, IL
Inspection Date 8/22/23 @ 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	~~X~~		SMALL DENT
Not cracked		X		
Not loose	X			WELL IS LOOSE
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			
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: TRM SW
Finish Date:
Time: 1030

WELL INFORMATION

Well ID: 48
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	0937	0.11			~~20.9~~	~~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	157.0	
	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 - UNDRNG

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		Y		
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?		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.	30.92 ft		

	Yes	No	NA
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:
37.92'
DTW: ~~30.92 ft~~ 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: MEMW-2 Client:
Project Number: 2023 0711 Task #: Start Date: 8/23/23 Time: 0820
Field Personnel: C TREMBLAY Finish Date: 8/23/23 Time: 0978

WELL INFORMATION

Well ID: 405
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	0832		37.92	0							
PURGE	0836	0.1	37.92	0							CLEAR
SAMPLE	0841		37.92	0	19.0	7.89	0.581	2.20	4.25	149.6	
	0846	1.5	37.92	0	18.8	7.89	0.579	0.41	3.29	143.4	
	0851		37.92	0	18.7	7.88	0.579	0.44	2.58	139.1	
	0856		37.92	0	18.7	7.88	0.579	0.37	2.16	135.7	
	0901	2.75	37.92	0	18.8	7.88	0.579	0.37	2.13	133.5	

NOTES (continued)

SAMPLE @ 0905

FT - WATER

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 9/24/23
Well Number HGN 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		

	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:

* 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: 0930
Field Personnel: TREMBLAY Finish Date: 8/24 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	7.72	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 - ~~UNDR~~ 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	~~Hennepin~~ 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: 8/24/23 Time: 1020

WELL INFORMATION

Well ID: HEN-S2
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	0909	0			21.5	7.10	0.635	7.57	5.56	147.0	Clear
	0914				23.6	7.01	0.605	2.0	5.95	152.3	↓
	0919	1.0			23.8	7.06	0.609	1.39	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

Site HENNEPIN, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date 8/24/23 @ 1400				
Well Number HEN-8D				

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?			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?			
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?			
Not heaved or below surrounding grade?			
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: 8/24/23 Time: 1140
Field Personnel: Allison Beckett
Finish Date: 8/24/23 Time: 1311

WELL INFORMATION

Well ID: HEN-8D
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
	1154				18.7	7.03	1.336	6.45	4.29	182.5	clear
	1159				17.7	6.104	1.426	2.06	6.88	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	4.100	193.0	
	1214				17.5	6.58	1.432	0.75	4.57	192.4	
	1219	2.0			17.3	6.59	1.435	0.63	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

Site Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date 3/24/23 1355			X	
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: 0ft appr

* 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:
Project Number:
Task #:
Start Date: 8/24/23 Time: 1320
Field Personnel: Allison Beckett
Finish Date: Time: 1430

WELL INFORMATION

Well ID: HEN-07
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
	1332				14.4	6.98	0.727	5.73	5.16	184.3	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 iron sample @1430: 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				

	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?			
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: Rambol
Project Number: ____ Task #: ____
Start Date: 8/21/24 Time: 1435
Field Personnel: Allison Bell Finish Date: 8/21/24 Time: 1620

WELL INFORMATION

Well ID: 08
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
	1443				14[illegible].7	6.62	1.228	1.54	3.85	197.1	clear
	1449				14.6	6.58	1.239	1.30	3.61	194.1	↓
	1453	2.5			14.7	6.69	[illegible] 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			X	
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				
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			
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: TREMBLAY Finish Date: 8/24 Time: 0921

WELL INFORMATION

Well ID: MW-27

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
~~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	45.33	-29.8	
	0843				12.8	7.32	0.816	0.04	46.72	-31.5	
	0848	2.5			12.4	7.33	0.816	0.06	47.09	-32.9	
	0853	3.0			12.5	7.33	0.816	0.07	48.89	-33.7	
	0854										

NOTES (continued)

FIELDER

SAMPLED 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.	47.10 ft		

	Yes	No	NA
General Condition			
18. Concrete pad installed?	X		
19 . Concrete pad			
Slope away form casing?		X	N/A
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 FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/24/2023 Time: 1025
Field Personnel: Allison Beckett
Finish Date: 8/24/2023 Time: 1120

WELL INFORMATION

Well ID: HEN-02
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
	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	0.1086	0.31	4.31	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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	9/21/23 @ 1010			X	
Well Number	HEN-XPW02-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?	↓		
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.	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: 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	23.94	-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
Inspection Date 8/21/23 @ 1005
Well Number ~~HenXPW~~ 01 - 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		↓		
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?	[redacted] ft		
16. Installed as total depth.	ft		
17. Measured total depth of well.	17.13 ft		

	Yes	No	NA
General Condition			
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

DRAFT

Privileged and Confidential. Attorney Work Product. Prepared at the Request of Counsel.
Subject to Change as Information is Confirmed or Additional Information Becomes Available.

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: ______ Client: ______

Project Number: ______ Task #: ______ Start Date: 8/24/23 Time: 1125

Field Personnel: G Kempley Finish Date: 8/24/23 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	0							CLEAR
SAMPLE	1135	0.25	9.45	0	19.5	11.30	0.783	0.37	9.22	-241.6	
	1140		9.45	0	19.5	11.31	0.795	0.22	10.51	-242.4	
	1145	1.0	9.45	0	18.8	11.33	0.801	0.17	13.54	-244.1	
	1150		9.45	0	19.0	11.33	0.804	0.11	17.05	-248.5	
	1155		9.45	0	19.2	11.34	0.808	0.11	21.53	-259.5	
	1200	2.25	9.45	0	17.6	11.39	0.815	0.11	54.09	-271.9	
	1205		9.45	0	17.7	11.39	0.817	0.10	57.11	-278.6	
	1210	3.5	9.45	0	17.7	11.39	0.818	0.10	55.97	-279.1	

NOTES (continued)

SAMPLE @ 1215
FI - 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			X	
Well Number	HEN-XPW03-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?	↓			
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.	19.11 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: 9.96 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 & 8/23 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		~~4.82~~								
	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 — 1530

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	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/21/23 @0955			X	
Well Number	10				

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.	48.45 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:

PTW: 48.28 ft Bottom of casing/top of pump 48.45

* 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: 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 ☒ 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	0810		48.15		22.8	7.15	0.1019	1.52	4.08	138.6	clear
	0821		48.12		23.1	7.06	0.1022	0.73	4.50	144.6	↓
	0826	2.0	48.12		23.1	7.05	0.1024	0.57	7.00	144.2	
	0831		48.12		23.1	7.04	0.1025	0.55	10.15	142.8	
	0836	3.0	48.11		23.2	7.04	0.1025	0.53	4.50	141.8	
2.5	0841	3.5	48.11		23.2	7.04	0.1025	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

Site Hennepin, IL
Inspection Date 8/21/23 @ 0930
Well Number 50

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		✓		
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			X
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		

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

Comments:

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

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/25/23 Time: 1055
Field Personnel: Allison Beckett
Finish Date: Time: 1200

WELL INFORMATION

Well ID: HEN-50
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
10	1058				16.8	7.53	0.1044	0.101	3104.79	81.2	clear
11	1103				16.7	7.50	0.1063	0.59	384.4	112.5	↓
11	1108	2.0			16.8	7.49	0.1064	0.17	4.33	109.3	
11	1113				16.9	7.49	0.1065	0.14	4.31	98.5	
11	1118	4.0			16.7	7.48	0.1045	0.12	4.06	87.2	
11	1123				16.7	7.47	0.1045	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	
		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		X	
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: TREMBLAY 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			~~+3.2~~	~~7.21~~	~~0.448~~	~~2.06~~	~~14.02~~	~~116.2~~	CLEAR
	1100				13.7	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				12.7	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 - UNDERG

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	

	Yes	No	NA	Comments
Stick-up Monitoring Wells				
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	N/A	
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	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:

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 Blewett
Finish Date:
Time: 1055

WELL INFORMATION

Well ID: HEN-49
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
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	0.1698	0.22	92.38	38.0	Brown/murky
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	0.1097	0.13	121.9	58.8	
09	1057	5.0	19.64		15.4	7.12	0.1098	0.12	122.9	59.1	
10	1102		19.65		15.3	7.12	0.1098	0.11	123.6	58.2	

NOTES (continued)

Sample staken @ 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 2	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/23/23 0815			X	
Well Number	#EN-10				

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~~	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 GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/28/23 Time: 0800
Field Personnel: Allison Beckett
Finish Date: 8/28/23 Time: 0915

WELL INFORMATION

Well ID: HEN-16
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
	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

Site	Hennepin, IL	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	8/28/23 @ 0915			X	
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 Burkett
Finish Date: Time: 1030

WELL INFORMATION

Well ID: HEN-17
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
	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	10.06	4.08	144.3	
	0926	1.0			22.5	7.35	0.508	10.00	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

QUPE @ 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?		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 FORM

PROJECT INFORMATION

Site: _____ Client: _____

Project Number: _____ Task #: _____ Start Date: 8/28 Time: 0906

Field Personnel: TREMBLAY Finish Date: 8/28 Time: 121

WELL INFORMATION

Well ID: 03R

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	0915	0.1							~~10.85~~	~~115~~	CLEAR
SAMPLE	0920				16.2	7.22	0.655	0.81	10.85	~~115~~ 114.1	
	0925	1.0			18.2	7.21	0.653	0.32	5.46	137.8	
	0930				16.2	7.21	0.653	0.22	3.81	132.9	
	0935				18.3	7.21	0.653	0.23	2.99	129.4	
	0940	2.25			16.3	7.20	0.652	0.21	2.56	126.9	
	0945										
	0950										
	0955										

NOTES (continued)

FT - UNDER SCREEN DRY

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	Comments
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	Comments
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		
16. Installed as total depth.		X		
17. Measured total depth of well.		X		
If present, how much sediment?	ft			
	ft			
	ft			

General Condition	Yes	No	NA	Comments
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: 0805

Field Personnel: TRM/SLM Finish Date: 8/28/23 Time: 0905

WELL INFORMATION

Well ID: 185

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	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 SMPLE

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-455

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		

	Yes	No	NA
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: 18.98 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, IL
Client: Ramboll
Project Number:
Task #:
Start Date: 8/28/23 Time: 1040
Field Personnel: Allison Beckett
Finish Date: Time: 1140

WELL INFORMATION

Well ID: HEN-45S
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
	1044		18.98		19.3	7.32	0.706	3.27	9.13	57.9	clear
	1049		18.97		19.1	7.17	0.671	0.25	148.24	108.9	Brown/murky
	1054	2.5	18.98		19.1	7.17	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	55.66	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

ATTACHMENT C
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND
QUARTER 3, 2023

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
21/21R	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.003	0.001
21/21R	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	28	0	CB around T-S line	0.0194	0.001
21/21R	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	28	0	CB around linear reg	0.318	0.156
21/21R	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.001	0.001
21/21R	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	29	0	CB around T-S line	1.96	0.205
21/21R	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0005	0.001
21/21R	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	31	0	CB around linear reg	98.6	108
21/21R	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	28	60	CB around T-S line	0.0015	0.00130
21/21R	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	28	73	CB around T-S line	0.001	0.00170
21/21R	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	29	9	CI around median	0.14	0.170
21/21R	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	28	53	CB around T-S line	0.00111	0.001
21/21R	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	28	0	CB around linear reg	0.0203	0.0140
21/21R	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	28	97	CI around median	0.0002	0.0002
21/21R	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	28	4	CI around mean	0.00666	0.00200
21/21R	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	31	0	CI around mean	7.3/7.5	6.7/7.4
21/21R	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	21	0	CI around mean	0.807	2.60
21/21R	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0025	0.00110
21/21R	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	31	0	CB around linear reg	56.5	117
21/21R	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.002	0.001
21/21R	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	29	0	CB around T-S line	622	830
22	UA	E002	Antimony, total	mg/L	12/10/15 - 08/25/23	31	91	CI around median	0.001	0.001
22	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/25/23	35	73	CI around median	0.001	0.001
22	UA	E002	Barium, total	mg/L	12/10/15 - 08/25/23	31	0	CI around median	0.0635	0.156
22	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.001	0.001
22	UA	E002	Boron, total	mg/L	12/10/15 - 08/25/23	36	0	CB around T-S line	3.15	0.205
22	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/25/23	31	9	CB around T-S line	0.00567	0.001
22	UA	E002	Chloride, total	mg/L	12/10/15 - 08/25/23	38	0	CB around T-S line	89.1	108

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
22	UA	E002	Chromium, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.005	0.00130
22	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/25/23	31	9	CI around mean	0.00191	0.00170
22	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/25/23	31	6	CI around median	0.15	0.170
22	UA	E002	Lead, total	mg/L	12/10/15 - 08/25/23	31	100	All ND - Last	0.0005	0.001
22	UA	E002	Lithium, total	mg/L	12/10/15 - 08/25/23	35	0	CB around T-S line	0.0405	0.0140
22	UA	E002	Mercury, total	mg/L	12/10/15 - 08/25/23	29	100	All ND - Last	0.0002	0.0002
22	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/25/23	35	0	CB around T-S line	0.0754	0.00200
22	UA	E002	pH (field)	SU	12/10/15 - 08/25/23	34	0	CI around mean	7.5/7.7	6.7/7.4
22	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/25/23	22	0	CI around mean	0.352	2.60
22	UA	E002	Selenium, total	mg/L	12/10/15 - 08/25/23	31	6	CB around linear reg	0.0158	0.00110
22	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/25/23	38	0	CB around linear reg	106	117
22	UA	E002	Thallium, total	mg/L	12/10/15 - 08/25/23	31	94	CB around T-S line	0.002	0.001
22	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/25/23	38	0	CB around linear reg	591	830
22D	UA	E002	Antimony, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.003	0.001
22D	UA	E002	Arsenic, total	mg/L	09/17/19 - 08/22/23	15	7	CI around median	0.0012	0.001
22D	UA	E002	Barium, total	mg/L	09/17/19 - 08/22/23	15	0	CB around T-S line	0.0653	0.156
22D	UA	E002	Beryllium, total	mg/L	09/17/19 - 08/22/23	14	100	All ND - Last	0.001	0.001
22D	UA	E002	Boron, total	mg/L	09/17/19 - 08/22/23	15	0	CB around linear reg	1.22	0.205
22D	UA	E002	Cadmium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.0005	0.001
22D	UA	E002	Chloride, total	mg/L	09/17/19 - 08/22/23	15	0	CB around linear reg	101	108
22D	UA	E002	Chromium, total	mg/L	09/17/19 - 08/22/23	15	87	CI around median	0.0015	0.00130
22D	UA	E002	Cobalt, total	mg/L	09/17/19 - 08/22/23	15	93	CI around median	0.001	0.00170
22D	UA	E002	Fluoride, total	mg/L	09/17/19 - 08/22/23	15	13	CI around median	0.11	0.170
22D	UA	E002	Lead, total	mg/L	09/17/19 - 08/22/23	15	93	CI around median	0.001	0.001
22D	UA	E002	Lithium, total	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	0.0145	0.0140
22D	UA	E002	Mercury, total	mg/L	12/11/19 - 08/22/23	14	100	All ND - Last	0.0002	0.0002
22D	UA	E002	Molybdenum, total	mg/L	09/17/19 - 08/22/23	15	7	CI around mean	0.00655	0.00200

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
22D	UA	E002	pH (field)	SU	09/17/19 - 08/22/23	18	0	CI around mean	7.2/7.3	6.7/7.4
22D	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/17/19 - 08/22/23	12	0	CI around mean	0.589	2.60
22D	UA	E002	Selenium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.0025	0.00110
22D	UA	E002	Sulfate, total	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	102	117
22D	UA	E002	Thallium, total	mg/L	09/17/19 - 08/22/23	15	100	All ND - Last	0.002	0.001
22D	UA	E002	Total Dissolved Solids	mg/L	09/17/19 - 08/22/23	15	0	CI around mean	599	830
23	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.003	0.001
23	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	35	95	CB around T-S line	0.001	0.001
23	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	31	0	CB around T-S line	0.0352	0.156
23	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.001	0.001
23	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	36	0	CB around T-S line	8.3	0.205
23	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0005	0.001
23	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	38	1	CB around T-S line	51.7	108
23	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.005	0.00130
23	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.001	0.00170
23	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	31	6	CI around median	0.15	0.170
23	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0005	0.001
23	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	35	6	CI around mean	0.00458	0.0140
23	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0002	0.0002
23	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	35	0	CI around median	0.0146	0.00200
23	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	33	0	CI around mean	7.4/7.5	6.7/7.4
23	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	22	0	CI around mean	0.27	2.60
23	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.0025	0.00110
23	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	38	0	CI around mean	423	117
23	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	31	100	All ND - Last	0.002	0.001
23	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	38	0	CI around mean	885	830
24/51	UA	E002	Antimony, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.003	0.001

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
24/51	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/22/23	33	0	CI around mean	0.0204	0.001
24/51	UA	E002	Barium, total	mg/L	12/10/15 - 08/22/23	29	0	CB around linear reg	0.11	0.156
24/51	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.001	0.001
24/51	UA	E002	Boron, total	mg/L	12/10/15 - 08/22/23	34	0	CB around linear reg	1.43	0.205
24/51	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0005	0.001
24/51	UA	E002	Chloride, total	mg/L	12/10/15 - 08/22/23	36	0	CB around linear reg	107	108
24/51	UA	E002	Chromium, total	mg/L	12/10/15 - 08/22/23	29	77	CB around T-S line	0.0015	0.00130
24/51	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/22/23	29	74	CI around median	0.001	0.00170
24/51	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/22/23	29	6	CI around median	0.14	0.170
24/51	UA	E002	Lead, total	mg/L	12/10/15 - 08/22/23	29	68	CI around median	0.001	0.001
24/51	UA	E002	Lithium, total	mg/L	12/10/15 - 08/22/23	33	0	CB around T-S line	0.0229	0.0140
24/51	UA	E002	Mercury, total	mg/L	12/10/15 - 08/22/23	28	100	All ND - Last	0.0002	0.0002
24/51	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/22/23	33	3	CI around mean	0.00988	0.00200
24/51	UA	E002	pH (field)	SU	12/10/15 - 08/22/23	31	0	CB around linear reg	7.1/7.4	6.7/7.4
24/51	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/22/23	21	0	CB around linear reg	1.07	2.60
24/51	UA	E002	Selenium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.0025	0.00110
24/51	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/22/23	36	0	CB around linear reg	84.4	117
24/51	UA	E002	Thallium, total	mg/L	12/10/15 - 08/22/23	29	100	All ND - Last	0.002	0.001
24/51	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/22/23	36	0	CI around mean	618	830
27	UA	E002	Antimony, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.003	0.001
27	UA	E002	Arsenic, total	mg/L	09/12/18 - 08/24/23	18	65	CI around median	0.001	0.001
27	UA	E002	Barium, total	mg/L	09/12/18 - 08/24/23	18	0	CI around geomean	0.0837	0.156
27	UA	E002	Beryllium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.001	0.001
27	UA	E002	Boron, total	mg/L	09/12/18 - 08/24/23	18	0	CB around linear reg	1.36	0.205
27	UA	E002	Cadmium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0005	0.001
27	UA	E002	Chloride, total	mg/L	03/08/16 - 08/24/23	23	0	CB around linear reg	102	108
27	UA	E002	Chromium, total	mg/L	09/12/18 - 08/24/23	18	80	CI around median	0.0015	0.00130

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WEST ASH POND SYSTEM
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
27	UA	E002	Cobalt, total	mg/L	09/12/18 - 08/24/23	18	10	CI around mean	0.00189	0.00170
27	UA	E002	Fluoride, total	mg/L	09/12/18 - 08/24/23	18	4	CI around median	0.12	0.170
27	UA	E002	Lead, total	mg/L	09/12/18 - 08/24/23	18	60	CI around median	0.001	0.001
27	UA	E002	Lithium, total	mg/L	09/12/18 - 08/24/23	18	0	CI around mean	0.0213	0.0140
27	UA	E002	Mercury, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0002	0.0002
27	UA	E002	Molybdenum, total	mg/L	09/12/18 - 08/24/23	18	11	CI around mean	0.00413	0.00200
27	UA	E002	pH (field)	SU	03/08/16 - 08/24/23	23	0	CI around mean	7.1/7.2	6.7/7.4
27	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/12/18 - 08/24/23	12	0	CI around geomean	0.211	2.60
27	UA	E002	Selenium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.0025	0.00110
27	UA	E002	Sulfate, total	mg/L	03/08/16 - 08/24/23	23	0	CB around linear reg	87.9	117
27	UA	E002	Thallium, total	mg/L	09/12/18 - 08/24/23	18	100	All ND - Last	0.002	0.001
27	UA	E002	Total Dissolved Solids	mg/L	03/08/16 - 08/24/23	23	0	CI around median	638	830
35	UA	E002	Antimony, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.003	0.001
35	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/24/23	30	80	CI around median	0.001	0.001
35	UA	E002	Barium, total	mg/L	12/09/15 - 08/24/23	30	0	CI around geomean	0.0396	0.156
35	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.001	0.001
35	UA	E002	Boron, total	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	12.3	0.205
35	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.0005	0.001
35	UA	E002	Chloride, total	mg/L	12/09/15 - 08/24/23	31	0	CI around mean	38.4	108
35	UA	E002	Chromium, total	mg/L	12/09/15 - 08/24/23	30	97	CB around T-S line	0.0015	0.00130
35	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/24/23	30	43	CI around median	0.001	0.00170
35	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/24/23	31	3	CI around median	0.17	0.170
35	UA	E002	Lead, total	mg/L	12/09/15 - 08/24/23	30	90	CI around median	0.001	0.001
35	UA	E002	Lithium, total	mg/L	12/09/15 - 08/24/23	30	0	CI around mean	0.0248	0.0140
35	UA	E002	Mercury, total	mg/L	12/09/15 - 08/24/23	29	100	All ND - Last	0.0002	0.0002
35	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/24/23	30	0	CI around mean	0.0668	0.00200
35	UA	E002	pH (field)	SU	12/09/15 - 08/24/23	31	0	CB around linear reg	6.8/7.0	6.7/7.4

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
35	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/24/23	23	0	CI around median	0.25	2.60
35	UA	E002	Selenium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.0025	0.00110
35	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	649	117
35	UA	E002	Thallium, total	mg/L	12/09/15 - 08/24/23	30	100	All ND - Last	0.002	0.001
35	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/24/23	31	0	CB around linear reg	1,250	830
49	UA	E002	Antimony, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.003	0.001
49	UA	E002	Arsenic, total	mg/L	12/10/15 - 08/25/23	30	97	CI around median	0.001	0.001
49	UA	E002	Barium, total	mg/L	12/10/15 - 08/25/23	30	0	CB around T-S line	0.0615	0.156
49	UA	E002	Beryllium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.001	0.001
49	UA	E002	Boron, total	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	0.457	0.205
49	UA	E002	Cadmium, total	mg/L	12/10/15 - 08/25/23	30	30	CB around linear reg	0.00159	0.001
49	UA	E002	Chloride, total	mg/L	12/10/15 - 08/25/23	31	0	CI around median	100	108
49	UA	E002	Chromium, total	mg/L	12/10/15 - 08/25/23	30	97	CB around T-S line	0.0015	0.00130
49	UA	E002	Cobalt, total	mg/L	12/10/15 - 08/25/23	30	0	CI around mean	0.0045	0.00170
49	UA	E002	Fluoride, total	mg/L	12/10/15 - 08/25/23	31	3	CI around median	0.15	0.170
49	UA	E002	Lead, total	mg/L	12/10/15 - 08/25/23	30	93	CI around median	0.001	0.001
49	UA	E002	Lithium, total	mg/L	12/10/15 - 08/25/23	30	0	CI around mean	0.024	0.0140
49	UA	E002	Mercury, total	mg/L	12/10/15 - 08/25/23	29	100	All ND - Last	0.0002	0.0002
49	UA	E002	Molybdenum, total	mg/L	12/10/15 - 08/25/23	30	0	CB around linear reg	0.0223	0.00200
49	UA	E002	pH (field)	SU	12/10/15 - 08/25/23	32	0	CI around mean	7.1/7.2	6.7/7.4
49	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/10/15 - 08/25/23	23	0	CI around mean	0.31	2.60
49	UA	E002	Selenium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.0025	0.00110
49	UA	E002	Sulfate, total	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	69.6	117
49	UA	E002	Thallium, total	mg/L	12/10/15 - 08/25/23	30	100	All ND - Last	0.002	0.001
49	UA	E002	Total Dissolved Solids	mg/L	12/10/15 - 08/25/23	31	0	CB around linear reg	576	830
50	UA	E002	Antimony, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.003	0.001
50	UA	E002	Arsenic, total	mg/L	09/17/19 - 08/25/23	15	93	CI around median	0.001	0.001

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
50	UA	E002	Barium, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	0.0859	0.156
50	UA	E002	Beryllium, total	mg/L	09/17/19 - 08/25/23	14	100	All ND - Last	0.001	0.001
50	UA	E002	Boron, total	mg/L	09/17/19 - 08/25/23	15	0	CI around geomean	0.682	0.205
50	UA	E002	Cadmium, total	mg/L	09/17/19 - 08/25/23	15	7	CI around median	0.0011	0.001
50	UA	E002	Chloride, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	89.7	108
50	UA	E002	Chromium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.005	0.00130
50	UA	E002	Cobalt, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	0.0043	0.00170
50	UA	E002	Fluoride, total	mg/L	09/17/19 - 08/25/23	15	27	CB around T-S line	0.11	0.170
50	UA	E002	Lead, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.0005	0.001
50	UA	E002	Lithium, total	mg/L	09/17/19 - 08/25/23	15	0	CI around median	0.0197	0.0140
50	UA	E002	Mercury, total	mg/L	12/11/19 - 08/25/23	14	100	All ND - Last	0.0002	0.0002
50	UA	E002	Molybdenum, total	mg/L	09/17/19 - 08/25/23	15	0	CI around geomean	0.0276	0.00200
50	UA	E002	pH (field)	SU	09/17/19 - 08/25/23	18	0	CB around linear reg	7.2/7.6	6.7/7.4
50	UA	E002	Radium 226 + Radium 228, total	pCi/L	09/17/19 - 08/25/23	11	0	CI around mean	0.527	2.60
50	UA	E002	Selenium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.0025	0.00110
50	UA	E002	Sulfate, total	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	85.7	117
50	UA	E002	Thallium, total	mg/L	09/17/19 - 08/25/23	15	100	All ND - Last	0.002	0.001
50	UA	E002	Total Dissolved Solids	mg/L	09/17/19 - 08/25/23	15	0	CI around mean	607	830

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Notes:
Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value
HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
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

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range
For pH, the values presented are the lower / upper limits of the background determination