Luminant

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

March 4, 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 Ash Ponds No. 2 and No. 4; IEPA ID # W1550100002-04 and # W1550100002-07

Dear Mr. LeCrone:

In accordance with Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.610(b)(3)(D), Dynegy Midwest Generation, LLC is submitting groundwater monitoring data for the Quarter 4, 2023 sampling event at the Hennepin Power Plant Ash Ponds No. 2 and No. 4, identified by Illinois Environmental Protection Agency (IEPA) ID No. W1550100002-04 and No. W1550100002-07. 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.

Sincerely,

Dianna Tickner

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

Enclosures

Groundwater Monitoring Data and Detected Exceedances, Quarter 4, 2023, Ash Ponds No. 2 and No. 4, Hennepin Power Plant, Hennepin, Illinois

RAMBOLL

ENVIRONMENT
& HEALTH

35 I.A.C. § 845.610(B)(3)(D)
GROUNDWATER MONITORING DATA AND DETECTED EXCEEDANCES
QUARTER 4, 2023
ASH PONDS NO. 2 AND NO. 4, HENNEPIN POWER PLANT, HENNEPIN, ILLINOIS

March 4, 2024

Samples were collected on November 16, 17, and 20, 2023 and analyzed for the parameters listed in Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.600(a), calcium, and turbidity. Final laboratory analytical data was received on January 4, 2024. Since Quarter 4, 2023 results were not available for inclusion in the 2023 Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Report), this document also serves as an addendum to the 2023 Annual Report.

The monitoring well locations are included in **Figure 1**. **Attachment A** summarizes the groundwater elevation data for the Quarter 4, 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 4, 2023 sampling event.

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 4, 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**, exceedances of the GWPS were not identified.

TABLES

FIGURES

ATTACHMENTS

[1] Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Groundwater Monitoring Plan Addendum for Ash Pond No. 2 and Ash Pond No. 4. Hennepin Power Plant. Hennepin, Illinois. October 25, 2021.*

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
07	Background	E003	11/20/2023	Antimony, total	0.0013 U	mg/L
07	Background	E003	11/20/2023	Arsenic, total	0.00043 J	mg/L
07	Background	E003	11/20/2023	Barium, total	0.130	mg/L
07	Background	E003	11/20/2023	Beryllium, total	0.00053 U	mg/L
07	Background	E003	11/20/2023	Boron, total	0.05 UJ	mg/L
07	Background	E003	11/20/2023	Cadmium, total	0.00017 U	mg/L
07	Background	E003	11/20/2023	Calcium, total	120	mg/L
07	Background	E003	11/20/2023	Chloride, total	86.0	mg/L
07	Background	E003	11/20/2023	Chromium, total	0.0018 J	mg/L
07	Background	E003	11/20/2023	Cobalt, total	0.0120	mg/L
07	Background	E003	11/20/2023	Dissolved Oxygen	4.01	mg/L
07	Background	E003	11/20/2023	Fluoride, total	0.120	mg/L
07	Background	E003	11/20/2023	Lead, total	0.00019 U	mg/L
07	Background	E003	11/20/2023	Lithium, total	0.00980	mg/L
07	Background	E003	11/20/2023	Mercury, total	0.000079 U	mg/L
07	Background	E003	11/20/2023	Molybdenum, total	0.0025 U	mg/L
07	Background	E003	11/20/2023	Oxidation Reduction Potential	171	mV
07	Background	E003	11/20/2023	pH (field)	7.0	SU
07	Background	E003	11/20/2023	Radium 226 + Radium 228, total	0.978	pCi/L
07	Background	E003	11/20/2023	Selenium, total	0.00098 U	mg/L
07	Background	E003	11/20/2023	Specific Conductance @ 25C (field)	7,298	micromhos/cm
07	Background	E003	11/20/2023	Sulfate, total	56.0	mg/L
07	Background	E003	11/20/2023	Temperature	11.4	degrees C
07	Background	E003	11/20/2023	Thallium, total	0.00057 U	mg/L
07	Background	E003	11/20/2023	Total Dissolved Solids	690	mg/L
07	Background	E003	11/20/2023	Turbidity, field	0.640	NTU
08	Background	E003	11/17/2023	Antimony, total	0.0013 U	mg/L
08	Background	E003	11/17/2023	Arsenic, total	0.0005 J	mg/L
08	Background	E003	11/17/2023	Barium, total	0.140	mg/L
08	Background	E003	11/17/2023	Beryllium, total	0.00053 U	mg/L
08	Background	E003	11/17/2023	Boron, total	0.0950 J+	mg/L
08	Background	E003	11/17/2023	Cadmium, total	0.000500	mg/L
08	Background	E003	11/17/2023	Calcium, total	200	mg/L
08	Background	E003	11/17/2023	Chloride, total	260	mg/L
08	Background	E003	11/17/2023	Chromium, total	0.0011 U	mg/L
08	Background	E003	11/17/2023	Cobalt, total	0.00460	mg/L
08	Background	E003	11/17/2023	Dissolved Oxygen	1.36	mg/L
08	Background	E003	11/17/2023	Fluoride, total	0.089 J	mg/L
08	Background	E003	11/17/2023	Lead, total	0.000660	mg/L
08	Background	E003	11/17/2023	Lithium, total	0.0110	mg/L
08	Background	E003	11/17/2023	Mercury, total	0.000079 U	mg/L
08	Background	E003	11/17/2023	Molybdenum, total	0.0025 U	mg/L
08	Background	E003	11/17/2023	Oxidation Reduction Potential	169	mV
08	Background	E003	11/17/2023	pH (field)	6.9	SU
08	Background	E003	11/17/2023	Radium 226 + Radium 228, total	1.03	pCi/L
08	Background	E003	11/17/2023	Selenium, total	0.00098 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
08	Background	E003	11/17/2023	Specific Conductance @ 25C (field)	2,132	micromhos/cm
08	Background	E003	11/17/2023	Sulfate, total	120	mg/L
08	Background	E003	11/17/2023	Temperature	13.6	degrees C
08	Background	E003	11/17/2023	Thallium, total	0.00057 U	mg/L
08	Background	E003	11/17/2023	Total Dissolved Solids	1,100	mg/L
08	Background	E003	11/17/2023	Turbidity, field	0.0300	NTU
08D	Background	E003	11/17/2023	Antimony, total	0.0013 U	mg/L
08D	Background	E003	11/17/2023	Arsenic, total	0.00031 J	mg/L
08D	Background	E003	11/17/2023	Barium, total	0.100	mg/L
08D	Background	E003	11/17/2023	Beryllium, total	0.00053 U	mg/L
08D	Background	E003	11/17/2023	Boron, total	0.0710 J+	mg/L
08D	Background	E003	11/17/2023	Cadmium, total	0.00049 J	mg/L
08D	Background	E003	11/17/2023	Calcium, total	180	mg/L
08D	Background	E003	11/17/2023	Chloride, total	250	mg/L
08D	Background	E003	11/17/2023	Chromium, total	0.0017 J	mg/L
08D	Background	E003	11/17/2023	Cobalt, total	0.00410	mg/L
08D	Background	E003	11/17/2023	Dissolved Oxygen	0.120	mg/L
08D	Background	E003	11/17/2023	Fluoride, total	0.097 J	mg/L
08D	Background	E003	11/17/2023	Lead, total	0.00035 J	mg/L
08D	Background	E003	11/17/2023	Lithium, total	0.00920	mg/L
08D	Background	E003	11/17/2023	Mercury, total	0.000079 U	mg/L
08D	Background	E003	11/17/2023	Molybdenum, total	0.0025 U	mg/L
08D	Background	E003	11/17/2023	Oxidation Reduction Potential	152	mV
08D	Background	E003	11/17/2023	pH (field)	6.8	SU
08D	Background	E003	11/17/2023	Radium 226 + Radium 228, total	1.12	pCi/L
08D	Background	E003	11/17/2023	Selenium, total	0.00098 U	mg/L
08D	Background	E003	11/17/2023	Specific Conductance @ 25C (field)	11,218	micromhos/cm
08D	Background	E003	11/17/2023	Sulfate, total	130	mg/L
08D	Background	E003	11/17/2023	Temperature	13.6	degrees C
08D	Background	E003	11/17/2023	Thallium, total	0.00057 U	mg/L
08D	Background	E003	11/17/2023	Total Dissolved Solids	1,300	mg/L
08D	Background	E003	11/17/2023	Turbidity, field	1.86	NTU
03R	Compliance	E003	11/16/2023	Antimony, total	0.0013 U	mg/L
03R	Compliance	E003	11/16/2023	Arsenic, total	0.00042 J	mg/L
03R	Compliance	E003	11/16/2023	Barium, total	0.0580	mg/L
03R	Compliance	E003	11/16/2023	Beryllium, total	0.00053 U	mg/L
03R	Compliance	E003	11/16/2023	Boron, total	0.500	mg/L
03R	Compliance	E003	11/16/2023	Cadmium, total	0.00017 U	mg/L
03R	Compliance	E003	11/16/2023	Calcium, total	86.0	mg/L
03R	Compliance	E003	11/16/2023	Chloride, total	80.0 J-	mg/L
03R	Compliance	E003	11/16/2023	Chromium, total	0.0011 U	mg/L
03R	Compliance	E003	11/16/2023	Cobalt, total	0.00042 J	mg/L
03R	Compliance	E003	11/16/2023	Dissolved Oxygen	0.110	mg/L
03R	Compliance	E003	11/16/2023	Fluoride, total	0.290	mg/L
03R	Compliance	E003	11/16/2023	Lead, total	0.00019 U	mg/L
03R	Compliance	E003	11/16/2023	Lithium, total	0.0140	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
03R	Compliance	E003	11/16/2023	Mercury, total	0.000079 U	mg/L
03R	Compliance	E003	11/16/2023	Molybdenum, total	0.0780	mg/L
03R	Compliance	E003	11/16/2023	Oxidation Reduction Potential	200	mV
03R	Compliance	E003	11/16/2023	pH (field)	7.2	SU
03R	Compliance	E003	11/16/2023	Radium 226 + Radium 228, total	0.659 U*	pCi/L
03R	Compliance	E003	11/16/2023	Selenium, total	0.003 UJ	mg/L
03R	Compliance	E003	11/16/2023	Specific Conductance @ 25C (field)	1,727	micromhos/cm
03R	Compliance	E003	11/16/2023	Sulfate, total	72.0 J-	mg/L
03R	Compliance	E003	11/16/2023	Temperature	17.2	degrees C
03R	Compliance	E003	11/16/2023	Thallium, total	0.00057 U	mg/L
03R	Compliance	E003	11/16/2023	Total Dissolved Solids	540	mg/L
03R	Compliance	E003	11/16/2023	Turbidity, field	2.34	NTU
18S	Compliance	E003	11/16/2023	Antimony, total	0.0013 U	mg/L
18S	Compliance	E003	11/16/2023	Arsenic, total	0.00068 J	mg/L
18S	Compliance	E003	11/16/2023	Barium, total	0.0560	mg/L
18S	Compliance	E003	11/16/2023	Beryllium, total	0.00053 U	mg/L
18S	Compliance	E003	11/16/2023	Boron, total	1.90	mg/L
18S	Compliance	E003	11/16/2023	Cadmium, total	0.00017 U	mg/L
18S	Compliance	E003	11/16/2023	Calcium, total	88.0	mg/L
18S	Compliance	E003	11/16/2023	Chloride, total	75.0	mg/L
18S	Compliance	E003	11/16/2023	Chromium, total	0.0011 U	mg/L
18S	Compliance	E003	11/16/2023	Cobalt, total	0.0004 U	mg/L
18S	Compliance	E003	11/16/2023	Dissolved Oxygen	0.170	mg/L
18S	Compliance	E003	11/16/2023	Fluoride, total	0.180	mg/L
18S	Compliance	E003	11/16/2023	Lead, total	0.00019 U	mg/L
18S	Compliance	E003	11/16/2023	Lithium, total	0.0470	mg/L
18S	Compliance	E003	11/16/2023	Mercury, total	0.000079 U	mg/L
18S	Compliance	E003	11/16/2023	Molybdenum, total	0.140	mg/L
18S	Compliance	E003	11/16/2023	Oxidation Reduction Potential	121	mV
18S	Compliance	E003	11/16/2023	pH (field)	7.4	SU
18S	Compliance	E003	11/16/2023	Radium 226 + Radium 228, total	0.572 U*	pCi/L
18S	Compliance	E003	11/16/2023	Selenium, total	0.0150	mg/L
18S	Compliance	E003	11/16/2023	Specific Conductance @ 25C (field)	1,648	micromhos/cm
18S	Compliance	E003	11/16/2023	Sulfate, total	110	mg/L
18S	Compliance	E003	11/16/2023	Temperature	17.0	degrees C
18S	Compliance	E003	11/16/2023	Thallium, total	0.00057 U	mg/L
18S	Compliance	E003	11/16/2023	Total Dissolved Solids	530	mg/L
18S	Compliance	E003	11/16/2023	Turbidity, field	0.910	NTU
18D	Compliance	E003	11/16/2023	Antimony, total	0.0013 U	mg/L
18D	Compliance	E003	11/16/2023	Arsenic, total	0.00056 J	mg/L
18D	Compliance	E003	11/16/2023	Barium, total	0.0670	mg/L
18D	Compliance	E003	11/16/2023	Beryllium, total	0.00053 U	mg/L
18D	Compliance	E003	11/16/2023	Boron, total	1.30	mg/L
18D	Compliance	E003	11/16/2023	Cadmium, total	0.00037 J	mg/L
18D	Compliance	E003	11/16/2023	Calcium, total	92.0	mg/L
18D	Compliance	E003	11/16/2023	Chloride, total	73.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
18D	Compliance	E003	11/16/2023	Chromium, total	0.0011 U	mg/L
18D	Compliance	E003	11/16/2023	Cobalt, total	0.00180	mg/L
18D	Compliance	E003	11/16/2023	Dissolved Oxygen	4.80	mg/L
18D	Compliance	E003	11/16/2023	Fluoride, total	0.150	mg/L
18D	Compliance	E003	11/16/2023	Lead, total	0.00038 J	mg/L
18D	Compliance	E003	11/16/2023	Lithium, total	0.0250	mg/L
18D	Compliance	E003	11/16/2023	Mercury, total	0.000079 U	mg/L
18D	Compliance	E003	11/16/2023	Molybdenum, total	0.0310	mg/L
18D	Compliance	E003	11/16/2023	Oxidation Reduction Potential	75.5	mV
18D	Compliance	E003	11/16/2023	pH (field)	6.7	SU
18D	Compliance	E003	11/16/2023	Radium 226 + Radium 228, total	0.782	pCi/L
18D	Compliance	E003	11/16/2023	Selenium, total	0.00098 U	mg/L
18D	Compliance	E003	11/16/2023	Specific Conductance @ 25C (field)	14.8	micromhos/cm
18D	Compliance	E003	11/16/2023	Sulfate, total	95.0	mg/L
18D	Compliance	E003	11/16/2023	Temperature	18.5	degrees C
18D	Compliance	E003	11/16/2023	Thallium, total	0.00057 U	mg/L
18D	Compliance	E003	11/16/2023	Total Dissolved Solids	580	mg/L
18D	Compliance	E003	11/16/2023	Turbidity, field	10.3	NTU
45S	Compliance	E003	11/20/2023	Antimony, total	0.0013 U	mg/L
45S	Compliance	E003	11/20/2023	Arsenic, total	0.00073 J	mg/L
45S	Compliance	E003	11/20/2023	Barium, total	0.0830	mg/L
45S	Compliance	E003	11/20/2023	Beryllium, total	0.00053 U	mg/L
45S	Compliance	E003	11/20/2023	Boron, total	0.250 J+	mg/L
45S	Compliance	E003	11/20/2023	Cadmium, total	0.000990	mg/L
45S	Compliance	E003	11/20/2023	Calcium, total	90.0	mg/L
45S	Compliance	E003	11/20/2023	Chloride, total	98.0	mg/L
45S	Compliance	E003	11/20/2023	Chromium, total	0.0012 J	mg/L
45S	Compliance	E003	11/20/2023	Cobalt, total	0.00120	mg/L
45S	Compliance	E003	11/20/2023	Dissolved Oxygen	0.0900	mg/L
45S	Compliance	E003	11/20/2023	Fluoride, total	0.250	mg/L
45S	Compliance	E003	11/20/2023	Lead, total	0.000800	mg/L
45S	Compliance	E003	11/20/2023	Lithium, total	0.0120	mg/L
45S	Compliance	E003	11/20/2023	Mercury, total	0.000079 U	mg/L
45S	Compliance	E003	11/20/2023	Molybdenum, total	0.0540	mg/L
45S	Compliance	E003	11/20/2023	Oxidation Reduction Potential	188	mV
45S	Compliance	E003	11/20/2023	pH (field)	7.2	SU
45S	Compliance	E003	11/20/2023	Radium 226 + Radium 228, total	0.808	pCi/L
45S	Compliance	E003	11/20/2023	Selenium, total	0.00098 U	mg/L
45S	Compliance	E003	11/20/2023	Specific Conductance @ 25C (field)	5,961	micromhos/cm
45S	Compliance	E003	11/20/2023	Sulfate, total	79.0	mg/L
45S	Compliance	E003	11/20/2023	Temperature	18.2	degrees C
45S	Compliance	E003	11/20/2023	Thallium, total	0.00057 U	mg/L
45S	Compliance	E003	11/20/2023	Total Dissolved Solids	550	mg/L
45S	Compliance	E003	11/20/2023	Turbidity, field	40.3	NTU

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

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 low.
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 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
03R	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.006	Standard	No Exceedance
03R	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.001	0.010	Standard	No Exceedance
03R	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CI around geomean	0.0617	2.0	Standard	No Exceedance
03R	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
03R	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	0.456	2	Standard	No Exceedance
03R	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	92	CI around median	0.001	0.005	Standard	No Exceedance
03R	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	76.7	435	Background	No Exceedance
03R	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	25	92	CB around T-S line	0.0015	0.1	Standard	No Exceedance
03R	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	26	96	CI around median	0.001	0.0380	Background	No Exceedance
03R	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	4	CI around median	0.27	4.0	Standard	No Exceedance
03R	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
03R	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CI around mean	0.0238	0.04	Standard	No Exceedance
03R	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
03R	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0867	0.1	Standard	No Exceedance
03R	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CB around T-S line	7.1/7.2	6.5/9.0	Standard/Standard	No Exceedance
03R	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around median	0.27	5	Standard	No Exceedance
03R	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	27	4	CI around mean	0.00475	0.05	Standard	No Exceedance
03R	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	74.3	400	Standard	No Exceedance
03R	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.002	Standard	No Exceedance
03R	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CI around mean	510	1,620	Background	No Exceedance
18S	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.006	Standard	No Exceedance
18S	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.010	Standard	No Exceedance
18S	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CB around linear reg	0.0501	2.0	Standard	No Exceedance
18S	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
18S	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	0.731	2	Standard	No Exceedance
18S	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	77	CB around T-S line	0.0006	0.005	Standard	No Exceedance
18S	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	69.6	435	Background	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
18S	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	26	57	CI around median	0.0015	0.1	Standard	No Exceedance
18S	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	26	83	CI around median	0.001	0.0380	Background	No Exceedance
18S	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	3	CB around T-S line	0.172	4.0	Standard	No Exceedance
18S	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
18S	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0362	0.04	Standard	No Exceedance
18S	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
18S	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0876	0.1	Standard	No Exceedance
18S	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CI around median	7.3/7.4	6.5/9.0	Standard/Standard	No Exceedance
18S	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around mean	0.328	5	Standard	No Exceedance
18S	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	27	3	CB around T-S line	0.000201	0.05	Standard	No Exceedance
18S	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	76.7	400	Standard	No Exceedance
18S	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.002	Standard	No Exceedance
18S	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	464	1,620	Background	No Exceedance
18D	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.006	Standard	No Exceedance
18D	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.010	Standard	No Exceedance
18D	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CB around T-S line	0.0633	2.0	Standard	No Exceedance
18D	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
18D	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	1.23	2	Standard	No Exceedance
18D	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	93	CI around median	0.001	0.005	Standard	No Exceedance
18D	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CI around mean	76.1	435	Background	No Exceedance
18D	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	25	93	CB around T-S line	0.0015	0.1	Standard	No Exceedance
18D	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	27	3	CB around linear reg	0.000178	0.0380	Background	No Exceedance
18D	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	3	CI around median	0.15	4.0	Standard	No Exceedance
18D	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.0075	Standard	No Exceedance
18D	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.023	0.04	Standard	No Exceedance
18D	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
18D	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CI around median	0.0315	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
18D	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CB around T-S line	7.0/7.1	6.5/9.0	Standard/Standard	No Exceedance
18D	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around mean	0.529	5	Standard	No Exceedance
18D	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	26	93	CB around T-S line	0.001	0.05	Standard	No Exceedance
18D	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	87.7	400	Standard	No Exceedance
18D	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.002	Standard	No Exceedance
18D	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	465	1,620	Background	No Exceedance
45S	UA	E003	Antimony, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.003	0.006	Standard	No Exceedance
45S	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/20/23	25	96	CI around median	0.001	0.010	Standard	No Exceedance
45S	UA	E003	Barium, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0781	2.0	Standard	No Exceedance
45S	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
45S	UA	E003	Boron, total	mg/L	12/09/15 - 11/20/23	28	0	CB around linear reg	0.209	2	Standard	No Exceedance
45S	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/20/23	26	46	CB around linear reg	0.000558	0.005	Standard	No Exceedance
45S	UA	E003	Chloride, total	mg/L	12/09/15 - 11/20/23	28	0	CB around linear reg	86.7	435	Background	No Exceedance
45S	UA	E003	Chromium, total	mg/L	12/09/15 - 11/20/23	26	92	CB around T-S line	0.0015	0.1	Standard	No Exceedance
45S	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/20/23	27	15	CI around geomean	0.00137	0.0380	Background	No Exceedance
45S	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/20/23	28	4	CB around T-S line	0.248	4.0	Standard	No Exceedance
45S	UA	E003	Lead, total	mg/L	12/09/15 - 11/20/23	25	84	CI around median	0.001	0.0075	Standard	No Exceedance
45S	UA	E003	Lithium, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0107	0.04	Standard	No Exceedance
45S	UA	E003	Mercury, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
45S	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0423	0.1	Standard	No Exceedance
45S	UA	E003	pH (field)	SU	12/09/15 - 11/20/23	28	0	CI around mean	7.1/7.2	6.5/9.0	Standard/Standard	No Exceedance
45S	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/20/23	25	0	CI around geomean	0.518	5	Standard	No Exceedance
45S	UA	E003	Selenium, total	mg/L	12/09/15 - 11/20/23	26	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
45S	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/20/23	28	0	CI around median	70	400	Standard	No Exceedance
45S	UA	E003	Thallium, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.002	0.002	Standard	No Exceedance
45S	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/20/23	28	0	CI around mean	524	1,620	Background	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Notes:
Compliance Result:

No Exceedance: the statistical result did not exceed 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

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

0 200 400
Feet

MONITORING WELL LOCATION MAP

ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\845_Operating_Permit\Hennepin\GMP_802\Figure 2-1_Proposed Monitoring Well Network.mxd

PROJECT: 169000XXXX | DATED: 9/29/2021 | DESIGNER: STOLZSD

ATTACHMENTS

ATTACHMENT A
SUMMARY OF GROUNDWATER ELEVATION DATA
QUARTER 4, 2023

ATTACHMENT A.
GROUNDWATER ELEVATION DATA - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	Well Type	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
03R	Compliance	11/13/2023	35.50	446.42
07	Background	11/13/2023	68.54	449.73
08	Background	11/13/2023	54.02	447.36
08D	Background	11/13/2023	54.23	447.11
18S	Compliance	11/13/2023	40.85	446.85
18D	Compliance	11/13/2023	40.95	446.65
45S	Compliance	11/13/2023	21.45	446.03

Notes:
Only wells with groundwater elevations measured are included.
BMP = below measuring point
NAVD88 = North American Vertical Datum of 1988

ATTACHMENT B
LABORATORY REPORTS AND FIELD DATA SHEETS
QUARTER 4, 2023

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Voelker
Vistra Energy Corp
133 S 4th, Suite 206
Springfield, Illinois 62701

Generated 01/04/24 15:56:12 Revision 1

JOB DESCRIPTION

HEN-23Q4
HEN_845_802-805

JOB NUMBER

500-242591-10

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Eurofins Chicago

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Generated
01/04/24 15:56:12
Revision 1

Authorized for release by
Dirk Nelson, Project Management Assistant II
Dirk.Nelson@et.eurofinsus.com
Designee for
Donna Campbell, Manager of Project Management
Donna.Campbell@et.eurofinsus.com
(217)519-2114

Table of Contents

Case Narrative

Client: Vistra Energy Corp
Project: HEN-23Q4

Job ID: 500-242591-10

Job ID: 500-242591-10 — Eurofins Chicago

Job Narrative
500-242591-10

Revision
The report being provided is a revision of the original report sent on 12/27/23. The report (revision 1) is being revised due to: Client revision requests:
Add HEN_13 turbidity per revised purge forms, attach revised purge forms.
Revise the sample times for the following wells:
HEN_18S 11:32

Receipt
The samples were received on 11/15/2023 11:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 15 coolers at receipt time were 1.8º C, 2.3º C, 2.4º C, 3.0º C, 3.2º C, 4.2º C, 4.4º C, 4.6º C, 4.6º C, 4.9º C, 4.9º C, 5.0º C, 5.0º C, 5.6º C and 5.7º C.

Receipt Exceptions
The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Sample #14 no sample time listed on COC, logged per container labels. HEN_03R (500-242591-14), HEN_03R_MS (500-242591-14[MS]) and HEN_03R_MSD (500-242591-14[MSD])

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 747971 was above the upper control limit for Be. Sample results were non-detects, and have been reported as qualified data.

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

General Chemistry
Method 300.0: The matrix spike (MS) recoveries for analytical batch 500-743297 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_03R — Lab Sample ID: 500-242591-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.014		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00042	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.058		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.50	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	86		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.00042	J	0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Magnesium	26		0.20	0.049	mg/L	1		6020B	Total Recoverable
Molybdenum	0.078		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Potassium	8.0		0.50	0.11	mg/L	1		6020B	Total Recoverable
Selenium	0.0016	J	0.0025	0.00098	mg/L	1		6020B	Total Recoverable
Sodium	52		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	80	F1	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	72	F1	5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	540		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.29		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	34.97				ft	1		Field Sampling	Total/NA
Field pH	7.25				SU	1		Field Sampling	Total/NA
Field Temperature	17.18				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	200.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.11				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1727.1				umhos/cm	1		Field Sampling	Total/NA
Turbidity	2.34				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_18#S — Lab Sample ID: 500-242591-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.047		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00068	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.056		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.9		0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	88	B	0.20	0.044	mg/L	1		6020B	Total Recoverable
Magnesium	23		0.20	0.049	mg/L	1		6020B	Total Recoverable
Molybdenum	0.14		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Potassium	9.6		0.50	0.11	mg/L	1		6020B	Total Recoverable
Selenium	0.015		0.0025	0.00098	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_18#S (Continued) — Lab Sample ID: 500-242591-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	49		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	75		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	110		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	530		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.18		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	40.72				ft	1		Field Sampling	Total/NA
Field pH	7.45				SU	1		Field Sampling	Total/NA
Field Temperature	17.01				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	121.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.17				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1648.2				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.91				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_18&D — Lab Sample ID: 500-242591-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.025		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00056	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.067		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	1.3		0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00037	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	92	B	0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0018		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00038	J	0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Magnesium	28		0.20	0.049	mg/L	1		6020B	Total Recoverable
Molybdenum	0.031		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Potassium	8.4		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	48		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	73		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	95		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	580		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.15		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	40.80				ft	1		Field Sampling	Total/NA
Field pH	6.74				SU	1		Field Sampling	Total/NA
Field Temperature	18.54				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	75.5				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.80				mg/L	1		Field Sampling	Total/NA
Specific Conductance	14.81				umhos/cm	1		Field Sampling	Total/NA
Turbidity	10.28				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08&D — Lab Sample ID: 500-242591-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0092		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00031	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.10		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.071	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00049	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	180		0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0017	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0041		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00035	J	0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Magnesium	52		0.20	0.049	mg/L	1		6020B	Total Recoverable
Potassium	3.5		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	150		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	250		10	1.2	mg/L	10		300.0	Total/NA
Sulfate	130		10	2.1	mg/L	10		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	540		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1300		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.097	J	0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.05				ft	1		Field Sampling	Total/NA
Field pH	6.76				SU	1		Field Sampling	Total/NA
Field Temperature	13.63				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	152.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.12				mg/L	1		Field Sampling	Total/NA
Specific Conductance	11218				umhos/cm	1		Field Sampling	Total/NA
Turbidity	1.86				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_08 — Lab Sample ID: 500-242591-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.011		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00050	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.14		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.095	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00050		0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	200		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0046		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00066		0.00050	0.00019	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08 (Continued) — Lab Sample ID: 500-242591-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	54		0.20	0.049	mg/L	1		6020B	Total Recoverable
Potassium	9.6		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	150		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	260		10	1.2	mg/L	10		300.0	Total/NA
Sulfate	120		10	2.1	mg/L	10		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1100		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.089	J	0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	53.85				ft	1		Field Sampling	Total/NA
Field pH	6.89				SU	1		Field Sampling	Total/NA
Field Temperature	13.63				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	168.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.36				mg/L	1		Field Sampling	Total/NA
Specific Conductance	2132.0				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.03				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_08_FD — Lab Sample ID: 500-242591-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.010		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00040	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.11		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.091	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00035	J	0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	180		0.20	0.044	mg/L	1		6020B	Total Recoverable
Cobalt	0.0041		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00049	J	0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Magnesium	48		0.20	0.049	mg/L	1		6020B	Total Recoverable
Potassium	8.5		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	130		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	260		10	1.2	mg/L	10		300.0	Total/NA
Sulfate	120		10	2.1	mg/L	10		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1200		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.087	J	0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	53.85				ft	1		Field Sampling	Total/NA
Field pH	6.89				SU	1		Field Sampling	Total/NA
Field Temperature	13.63				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	168.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.36				mg/L	1		Field Sampling	Total/NA
Specific Conductance	2132.0				umhos/cm	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08_FD (Continued) — Lab Sample ID: 500-242591-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Turbidity	0.03				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_45#S — Lab Sample ID: 500-242591-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.012		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00073	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.083		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.25	B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Cadmium	0.00099		0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	90	B	0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0012	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0012		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00080		0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Magnesium	30		0.20	0.049	mg/L	1		6020B	Total Recoverable
Molybdenum	0.054		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Potassium	6.1		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	59	B	0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	98		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	79		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	550		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.25		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	20.55				ft	1		Field Sampling	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA
Field Temperature	18.22				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	188.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.09				mg/L	1		Field Sampling	Total/NA
Specific Conductance	5961.3				umhos/cm	1		Field Sampling	Total/NA
Turbidity	40.3				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_45#S_FD — Lab Sample ID: 500-242591-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.015		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00077	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.083		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.26	B	0.050	0.013	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_45#S_FD (Continued) — Lab Sample ID: 500-242591-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00098		0.00050	0.00017	mg/L	1		6020B	Total Recoverable
Calcium	91	B	0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0016	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.0012		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Lead	0.00083		0.00050	0.00019	mg/L	1		6020B	Total Recoverable
Magnesium	30		0.20	0.049	mg/L	1		6020B	Total Recoverable
Molybdenum	0.054		0.0050	0.0025	mg/L	1		6020B	Total Recoverable
Potassium	6.1		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	59	B	0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	83		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	67		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	510		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.25		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	20.55				ft	1		Field Sampling	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA
Field Temperature	18.22				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	188.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.09				mg/L	1		Field Sampling	Total/NA
Specific Conductance	5961.3				umhos/cm	1		Field Sampling	Total/NA
Turbidity	40.3				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_07 — Lab Sample ID: 500-242591-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0098		0.0050	0.0020	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.00043	J	0.0010	0.00023	mg/L	1		6020B	Total Recoverable
Barium	0.13		0.0025	0.00073	mg/L	1		6020B	Total Recoverable
Boron	0.038	J B	0.050	0.013	mg/L	1		6020B	Total Recoverable
Calcium	120	B	0.20	0.044	mg/L	1		6020B	Total Recoverable
Chromium	0.0018	J	0.0050	0.0011	mg/L	1		6020B	Total Recoverable
Cobalt	0.012		0.0010	0.00040	mg/L	1		6020B	Total Recoverable
Magnesium	42		0.20	0.049	mg/L	1		6020B	Total Recoverable
Potassium	3.1		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	64	B	0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	86		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	56		5.0	1.0	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_07 (Continued) — Lab Sample ID: 500-242591-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bicarbonate Alkalinity as CaCO3	370		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	690		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.12		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	68.55				ft	1		Field Sampling	Total/NA
Field pH	6.96				SU	1		Field Sampling	Total/NA
Field Temperature	11.42				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	171.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.01				mg/L	1		Field Sampling	Total/NA
Specific Conductance	7297.8				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.64				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN_YSG_ILRIVER — Lab Sample ID: 500-242591-56

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Groundwater Elevation	441.0				ft	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	EET CHI
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 4500 F C	Fluoride	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-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-242591-14	HEN_03R	Water	11/16/23 09:25	11/17/23 11:27
500-242591-15	HEN_18#S	Water	11/16/23 11:32	11/17/23 11:27
500-242591-16	HEN_18&D	Water	11/16/23 11:55	11/17/23 11:27
500-242591-26	HEN_08&D	Water	11/17/23 12:31	11/17/23 18:00
500-242591-27	HEN_08	Water	11/17/23 12:32	11/17/23 18:00
500-242591-28	HEN_08_FD	Water	11/17/23 12:37	11/17/23 18:00
500-242591-32	HEN_45#S	Water	11/20/23 09:15	11/21/23 08:06
500-242591-33	HEN_45#S_FD	Water	11/20/23 09:20	11/21/23 08:06
500-242591-38	HEN_07	Water	11/20/23 13:12	11/21/23 08:06
500-242591-56	HEN_YSG_ILRIVER	Water	11/13/23 00:00	12/06/23 07:24

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_03R

Date Collected: 11/16/23 09:25
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-14

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	**0.014**		0.0050	0.0020	mg/L		11/22/23 17:00	11/27/23 13:09	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		12/06/23 09:21	12/21/23 15:05	1
Arsenic	**0.00042**	**J**	0.0010	0.00023	mg/L		12/06/23 09:21	12/21/23 15:05	1
Barium	**0.058**		0.0025	0.00073	mg/L		12/06/23 09:21	12/21/23 15:05	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 15:05	1
Boron	**0.50**	**B**	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 11:00	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		12/06/23 09:21	12/21/23 15:05	1
Calcium	**86**		0.20	0.044	mg/L		12/06/23 09:21	12/21/23 15:05	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/06/23 09:21	12/21/23 15:05	1
Cobalt	**0.00042**	**J**	0.0010	0.00040	mg/L		12/06/23 09:21	12/21/23 15:05	1
Lead	<0.00050		0.00050	0.00019	mg/L		12/06/23 09:21	12/21/23 15:05	1
Magnesium	**26**		0.20	0.049	mg/L		12/06/23 09:21	12/21/23 15:05	1
Molybdenum	**0.078**		0.0050	0.0025	mg/L		12/06/23 09:21	12/21/23 15:05	1
Potassium	**8.0**		0.50	0.11	mg/L		12/06/23 09:21	12/21/23 15:05	1
Selenium	**0.0016**	**J**	0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 15:05	1
Sodium	**52**		0.20	0.077	mg/L		12/06/23 09:21	12/21/23 15:05	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/21/23 15:05	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		12/01/23 13:25	12/04/23 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**80**	**F1**	5.0	0.58	mg/L			11/21/23 13:56	5
Sulfate (EPA 300.0)	**72**	**F1**	5.0	1.0	mg/L			11/21/23 13:56	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**270**		5.0	3.7	mg/L			11/21/23 13:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 13:22	1
Total Dissolved Solids (SM 2540C)	**540**		10	4.3	mg/L			11/19/23 22:52	1
Fluoride (SM 4500 F C)	**0.29**		0.10	0.056	mg/L			12/06/23 16:57	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	**34.97**				ft			11/16/23 09:25	1
Field pH	**7.25**				SU			11/16/23 09:25	1
Field Temperature	**17.18**				Degrees C			11/16/23 09:25	1
Oxidation Reduction Potential	**200.1**				millivolts			11/16/23 09:25	1
Oxygen, Dissolved	**0.11**				mg/L			11/16/23 09:25	1
Specific Conductance	**1727.1**				umhos/cm			11/16/23 09:25	1
Turbidity	**2.34**				NTU			11/16/23 09:25	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_18#S
Date Collected: 11/16/23 11:32
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-15
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	**0.047**		0.0050	0.0020	mg/L		11/20/23 17:49	11/21/23 17:58	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		12/07/23 09:15	12/21/23 14:46	1
Arsenic	**0.00068**	**J**	0.0010	0.00023	mg/L		12/07/23 09:15	12/21/23 14:46	1
Barium	**0.056**		0.0025	0.00073	mg/L		12/07/23 09:15	12/21/23 14:46	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/07/23 09:15	12/21/23 14:46	1
Boron	**1.9**		0.050	0.013	mg/L		12/07/23 09:15	12/21/23 14:46	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		12/07/23 09:15	12/21/23 14:46	1
Calcium	**88**	**B**	0.20	0.044	mg/L		12/07/23 09:15	12/21/23 14:46	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/07/23 09:15	12/21/23 14:46	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		12/07/23 09:15	12/21/23 14:46	1
Lead	<0.00050		0.00050	0.00019	mg/L		12/07/23 09:15	12/21/23 14:46	1
Magnesium	**23**		0.20	0.049	mg/L		12/07/23 09:15	12/21/23 14:46	1
Molybdenum	**0.14**		0.0050	0.0025	mg/L		12/07/23 09:15	12/21/23 14:46	1
Potassium	**9.6**		0.50	0.11	mg/L		12/07/23 09:15	12/21/23 14:46	1
Selenium	**0.015**		0.0025	0.00098	mg/L		12/07/23 09:15	12/21/23 14:46	1
Sodium	**49**		0.20	0.077	mg/L		12/07/23 09:15	12/21/23 14:46	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/07/23 09:15	12/21/23 14:46	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		12/01/23 13:25	12/04/23 10:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**75**		5.0	0.58	mg/L			11/21/23 14:41	5
Sulfate (EPA 300.0)	**110**		5.0	1.0	mg/L			11/21/23 14:41	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**220**		5.0	3.7	mg/L			11/21/23 13:31	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 13:31	1
Total Dissolved Solids (SM 2540C)	**530**		10	4.3	mg/L			11/19/23 23:00	1
Fluoride (SM 4500 F C)	**0.18**		0.10	0.056	mg/L			12/01/23 15:22	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	**40.72**				ft			11/16/23 11:55	1
Field pH	**7.45**				SU			11/16/23 11:55	1
Field Temperature	**17.01**				Degrees C			11/16/23 11:55	1
Oxidation Reduction Potential	**121.2**				millivolts			11/16/23 11:55	1
Oxygen, Dissolved	**0.17**				mg/L			11/16/23 11:55	1
Specific Conductance	**1648.2**				umhos/cm			11/16/23 11:55	1
Turbidity	**0.91**				NTU			11/16/23 11:55	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_18&D

Date Collected: 11/16/23 11:55
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-16

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		11/20/23 17:49	11/21/23 18:03	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		12/07/23 09:15	12/21/23 14:50	1
Arsenic	0.00056	J	0.0010	0.00023	mg/L		12/07/23 09:15	12/21/23 14:50	1
Barium	0.067		0.0025	0.00073	mg/L		12/07/23 09:15	12/21/23 14:50	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/07/23 09:15	12/21/23 14:50	1
Boron	1.3		0.050	0.013	mg/L		12/07/23 09:15	12/21/23 14:50	1
Cadmium	0.00037	J	0.00050	0.00017	mg/L		12/07/23 09:15	12/21/23 14:50	1
Calcium	92	B	0.20	0.044	mg/L		12/07/23 09:15	12/21/23 14:50	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/07/23 09:15	12/21/23 14:50	1
Cobalt	0.0018		0.0010	0.00040	mg/L		12/07/23 09:15	12/21/23 14:50	1
Lead	0.00038	J	0.00050	0.00019	mg/L		12/07/23 09:15	12/21/23 14:50	1
Magnesium	28		0.20	0.049	mg/L		12/07/23 09:15	12/21/23 14:50	1
Molybdenum	0.031		0.0050	0.0025	mg/L		12/07/23 09:15	12/21/23 14:50	1
Potassium	8.4		0.50	0.11	mg/L		12/07/23 09:15	12/21/23 14:50	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/07/23 09:15	12/21/23 14:50	1
Sodium	48		0.20	0.077	mg/L		12/07/23 09:15	12/21/23 14:50	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/07/23 09:15	12/21/23 14:50	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		12/01/23 13:25	12/04/23 10:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	73		5.0	0.58	mg/L			11/21/23 14:56	5
Sulfate (EPA 300.0)	95		5.0	1.0	mg/L			11/21/23 14:56	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	270		5.0	3.7	mg/L			11/21/23 13:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 13:40	1
Total Dissolved Solids (SM 2540C)	580		10	4.3	mg/L			11/19/23 23:05	1
Fluoride (SM 4500 F C)	0.15		0.10	0.056	mg/L			12/01/23 15:27	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	40.80				ft			11/16/23 11:55	1
Field pH	6.74				SU			11/16/23 11:55	1
Field Temperature	18.54				Degrees C			11/16/23 11:55	1
Oxidation Reduction Potential	75.5				millivolts			11/16/23 11:55	1
Oxygen, Dissolved	4.80				mg/L			11/16/23 11:55	1
Specific Conductance	14.81				umhos/cm			11/16/23 11:55	1
Turbidity	10.28				NTU			11/16/23 11:55	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08&D

Date Collected: 11/17/23 12:31
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-26

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	0.0092		0.0050	0.0020	mg/L		11/22/23 17:00	11/27/23 13:50	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		12/06/23 09:21	12/21/23 15:48	1
Arsenic	0.00031	J	0.0010	0.00023	mg/L		12/06/23 09:21	12/21/23 15:48	1
Barium	0.10		0.0025	0.00073	mg/L		12/06/23 09:21	12/21/23 15:48	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 15:48	1
Boron	0.071	B	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 11:34	1
Cadmium	0.00049	J	0.00050	0.00017	mg/L		12/06/23 09:21	12/21/23 15:48	1
Calcium	180		0.20	0.044	mg/L		12/06/23 09:21	12/21/23 15:48	1
Chromium	0.0017	J	0.0050	0.0011	mg/L		12/06/23 09:21	12/21/23 15:48	1
Cobalt	0.0041		0.0010	0.00040	mg/L		12/06/23 09:21	12/21/23 15:48	1
Lead	0.00035	J	0.00050	0.00019	mg/L		12/06/23 09:21	12/21/23 15:48	1
Magnesium	52		0.20	0.049	mg/L		12/06/23 09:21	12/21/23 15:48	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/06/23 09:21	12/21/23 15:48	1
Potassium	3.5		0.50	0.11	mg/L		12/06/23 09:21	12/21/23 15:48	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 15:48	1
Sodium	150		0.20	0.077	mg/L		12/06/23 09:21	12/21/23 15:48	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/21/23 15:48	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		12/04/23 09:40	12/05/23 07:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	250		10	1.2	mg/L			11/21/23 16:12	10
Sulfate (EPA 300.0)	130		10	2.1	mg/L			11/21/23 16:12	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	540		5.0	3.7	mg/L			11/21/23 15:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 15:40	1
Total Dissolved Solids (SM 2540C)	1300		10	4.3	mg/L			11/19/23 23:28	1
Fluoride (SM 4500 F C)	0.097	J	0.10	0.056	mg/L			12/01/23 16:22	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.05				ft			11/17/23 12:31	1
Field pH	6.76				SU			11/17/23 12:31	1
Field Temperature	13.63				Degrees C			11/17/23 12:31	1
Oxidation Reduction Potential	152.3				millivolts			11/17/23 12:31	1
Oxygen, Dissolved	0.12				mg/L			11/17/23 12:31	1
Specific Conductance	11218				umhos/cm			11/17/23 12:31	1
Turbidity	1.86				NTU			11/17/23 12:31	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08

Date Collected: 11/17/23 12:32
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-27

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	**0.011**		0.0050	0.0020	mg/L		11/22/23 17:00	11/27/23 13:55	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		12/06/23 09:21	12/21/23 16:12	1
Arsenic	**0.00050**	**J**	0.0010	0.00023	mg/L		12/06/23 09:21	12/21/23 16:12	1
Barium	**0.14**		0.0025	0.00073	mg/L		12/06/23 09:21	12/21/23 16:12	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 16:12	1
Boron	**0.095**	**B**	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 11:46	1
Cadmium	**0.00050**		0.00050	0.00017	mg/L		12/06/23 09:21	12/21/23 16:12	1
Calcium	**200**		0.20	0.044	mg/L		12/06/23 09:21	12/21/23 16:12	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/06/23 09:21	12/21/23 16:12	1
Cobalt	**0.0046**		0.0010	0.00040	mg/L		12/06/23 09:21	12/21/23 16:12	1
Lead	**0.00066**		0.00050	0.00019	mg/L		12/06/23 09:21	12/21/23 16:12	1
Magnesium	**54**		0.20	0.049	mg/L		12/06/23 09:21	12/21/23 16:12	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/06/23 09:21	12/21/23 16:12	1
Potassium	**9.6**		0.50	0.11	mg/L		12/06/23 09:21	12/21/23 16:12	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 16:12	1
Sodium	**150**		0.20	0.077	mg/L		12/06/23 09:21	12/21/23 16:12	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/21/23 16:12	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		12/04/23 09:40	12/05/23 07:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**260**		10	1.2	mg/L			11/21/23 16:58	10
Sulfate (EPA 300.0)	**120**		10	2.1	mg/L			11/21/23 16:58	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**520**		5.0	3.7	mg/L			11/21/23 15:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 15:51	1
Total Dissolved Solids (SM 2540C)	**1100**		10	4.3	mg/L			11/19/23 23:31	1
Fluoride (SM 4500 F C)	**0.089**	**J**	0.10	0.056	mg/L			12/01/23 16:27	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	**53.85**				ft			11/17/23 12:32	1
Field pH	**6.89**				SU			11/17/23 12:32	1
Field Temperature	**13.63**				Degrees C			11/17/23 12:32	1
Oxidation Reduction Potential	**168.7**				millivolts			11/17/23 12:32	1
Oxygen, Dissolved	**1.36**				mg/L			11/17/23 12:32	1
Specific Conductance	**2132.0**				umhos/cm			11/17/23 12:32	1
Turbidity	**0.03**				NTU			11/17/23 12:32	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08_FD

Date Collected: 11/17/23 12:37
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-28

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	0.010		0.0050	0.0020	mg/L		11/22/23 17:00	11/27/23 13:59	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		12/06/23 09:21	12/21/23 16:24	1
Arsenic	0.00040	J	0.0010	0.00023	mg/L		12/06/23 09:21	12/21/23 16:24	1
Barium	0.11		0.0025	0.00073	mg/L		12/06/23 09:21	12/21/23 16:24	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 16:24	1
Boron	0.091	B	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 11:49	1
Cadmium	0.00035	J	0.00050	0.00017	mg/L		12/06/23 09:21	12/21/23 16:24	1
Calcium	180		0.20	0.044	mg/L		12/06/23 09:21	12/21/23 16:24	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/06/23 09:21	12/21/23 16:24	1
Cobalt	0.0041		0.0010	0.00040	mg/L		12/06/23 09:21	12/21/23 16:24	1
Lead	0.00049	J	0.00050	0.00019	mg/L		12/06/23 09:21	12/21/23 16:24	1
Magnesium	48		0.20	0.049	mg/L		12/06/23 09:21	12/21/23 16:24	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/06/23 09:21	12/21/23 16:24	1
Potassium	8.5		0.50	0.11	mg/L		12/06/23 09:21	12/21/23 16:24	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 16:24	1
Sodium	130		0.20	0.077	mg/L		12/06/23 09:21	12/21/23 16:24	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/21/23 16:24	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		12/04/23 09:40	12/05/23 07:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	260		10	1.2	mg/L			11/21/23 17:13	10
Sulfate (EPA 300.0)	120		10	2.1	mg/L			11/21/23 17:13	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	520		5.0	3.7	mg/L			11/21/23 16:01	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/21/23 16:01	1
Total Dissolved Solids (SM 2540C)	1200		10	4.3	mg/L			11/19/23 23:33	1
Fluoride (SM 4500 F C)	0.087	J	0.10	0.056	mg/L			12/06/23 16:34	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	53.85				ft			11/17/23 12:37	1
Field pH	6.89				SU			11/17/23 12:37	1
Field Temperature	13.63				Degrees C			11/17/23 12:37	1
Oxidation Reduction Potential	168.7				millivolts			11/17/23 12:37	1
Oxygen, Dissolved	1.36				mg/L			11/17/23 12:37	1
Specific Conductance	2132.0				umhos/cm			11/17/23 12:37	1
Turbidity	0.03				NTU			11/17/23 12:37	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_45#S

Date Collected: 11/20/23 09:15
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-32

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	0.012		0.0050	0.0020	mg/L		12/05/23 09:07	12/06/23 13:51	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		12/06/23 09:21	12/20/23 21:57	1
Arsenic	0.00073	J	0.0010	0.00023	mg/L		12/06/23 09:21	12/20/23 21:57	1
Barium	0.083		0.0025	0.00073	mg/L		12/06/23 09:21	12/20/23 21:57	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 16:35	1
Boron	0.25	B	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 12:01	1
Cadmium	0.00099		0.00050	0.00017	mg/L		12/06/23 09:21	12/20/23 21:57	1
Calcium	90	B	0.20	0.044	mg/L		12/06/23 09:21	12/20/23 21:57	1
Chromium	0.0012	J	0.0050	0.0011	mg/L		12/06/23 09:21	12/20/23 21:57	1
Cobalt	0.0012		0.0010	0.00040	mg/L		12/06/23 09:21	12/20/23 21:57	1
Lead	0.00080		0.00050	0.00019	mg/L		12/06/23 09:21	12/20/23 21:57	1
Magnesium	30		0.20	0.049	mg/L		12/06/23 09:21	12/20/23 21:57	1
Molybdenum	0.054		0.0050	0.0025	mg/L		12/06/23 09:21	12/20/23 21:57	1
Potassium	6.1		0.50	0.11	mg/L		12/06/23 09:21	12/20/23 21:57	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 16:35	1
Sodium	59	B	0.20	0.077	mg/L		12/06/23 09:21	12/20/23 21:57	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/20/23 21:57	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		12/04/23 09:40	12/05/23 07:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	98		5.0	0.58	mg/L			11/27/23 12:34	5
Sulfate (EPA 300.0)	79		5.0	1.0	mg/L			11/27/23 12:34	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	270		5.0	3.7	mg/L			11/30/23 10:52	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/30/23 10:52	1
Total Dissolved Solids (SM 2540C)	550		10	4.3	mg/L			11/21/23 22:56	1
Fluoride (SM 4500 F C)	0.25		0.10	0.056	mg/L			12/06/23 16:40	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	20.55				ft			11/20/23 09:15	1
Field pH	7.20				SU			11/20/23 09:15	1
Field Temperature	18.22				Degrees C			11/20/23 09:15	1
Oxidation Reduction Potential	188.1				millivolts			11/20/23 09:15	1
Oxygen, Dissolved	0.09				mg/L			11/20/23 09:15	1
Specific Conductance	5961.3				umhos/cm			11/20/23 09:15	1
Turbidity	40.3				NTU			11/20/23 09:15	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_45#S_FD

Date Collected: 11/20/23 09:20
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-33

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	0.015		0.0050	0.0020	mg/L		12/05/23 09:07	12/06/23 13:55	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		12/06/23 09:21	12/20/23 22:01	1
Arsenic	0.00077	J	0.0010	0.00023	mg/L		12/06/23 09:21	12/20/23 22:01	1
Barium	0.083		0.0025	0.00073	mg/L		12/06/23 09:21	12/20/23 22:01	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 16:39	1
Boron	0.26	B	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 12:05	1
Cadmium	0.00098		0.00050	0.00017	mg/L		12/06/23 09:21	12/20/23 22:01	1
Calcium	91	B	0.20	0.044	mg/L		12/06/23 09:21	12/20/23 22:01	1
Chromium	0.0016	J	0.0050	0.0011	mg/L		12/06/23 09:21	12/20/23 22:01	1
Cobalt	0.0012		0.0010	0.00040	mg/L		12/06/23 09:21	12/20/23 22:01	1
Lead	0.00083		0.00050	0.00019	mg/L		12/06/23 09:21	12/20/23 22:01	1
Magnesium	30		0.20	0.049	mg/L		12/06/23 09:21	12/20/23 22:01	1
Molybdenum	0.054		0.0050	0.0025	mg/L		12/06/23 09:21	12/20/23 22:01	1
Potassium	6.1		0.50	0.11	mg/L		12/06/23 09:21	12/20/23 22:01	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 16:39	1
Sodium	59	B	0.20	0.077	mg/L		12/06/23 09:21	12/20/23 22:01	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/20/23 22:01	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		12/04/23 09:40	12/05/23 07:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	83		5.0	0.58	mg/L			11/27/23 12:49	5
Sulfate (EPA 300.0)	67		5.0	1.0	mg/L			11/27/23 12:49	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	270		5.0	3.7	mg/L			11/30/23 11:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/30/23 11:02	1
Total Dissolved Solids (SM 2540C)	510		10	4.3	mg/L			11/21/23 22:59	1
Fluoride (SM 4500 F C)	0.25		0.10	0.056	mg/L			12/06/23 16:45	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	20.55				ft			11/20/23 09:20	1
Field pH	7.20				SU			11/20/23 09:20	1
Field Temperature	18.22				Degrees C			11/20/23 09:20	1
Oxidation Reduction Potential	188.1				millivolts			11/20/23 09:20	1
Oxygen, Dissolved	0.09				mg/L			11/20/23 09:20	1
Specific Conductance	5961.3				umhos/cm			11/20/23 09:20	1
Turbidity	40.3				NTU			11/20/23 09:20	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_07

Date Collected: 11/20/23 13:12
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-38

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	**0.0098**		0.0050	0.0020	mg/L		12/05/23 09:07	12/06/23 14:08	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		12/06/23 09:21	12/20/23 22:11	1
Arsenic	**0.00043**	**J**	0.0010	0.00023	mg/L		12/06/23 09:21	12/20/23 22:11	1
Barium	**0.13**		0.0025	0.00073	mg/L		12/06/23 09:21	12/20/23 22:11	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 16:50	1
Boron	**0.038**	**J B**	0.050	0.013	mg/L		12/06/23 09:21	12/22/23 12:16	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		12/06/23 09:21	12/20/23 22:11	1
Calcium	**120**	**B**	0.20	0.044	mg/L		12/06/23 09:21	12/20/23 22:11	1
Chromium	**0.0018**	**J**	0.0050	0.0011	mg/L		12/06/23 09:21	12/20/23 22:11	1
Cobalt	**0.012**		0.0010	0.00040	mg/L		12/06/23 09:21	12/20/23 22:11	1
Lead	<0.00050		0.00050	0.00019	mg/L		12/06/23 09:21	12/20/23 22:11	1
Magnesium	**42**		0.20	0.049	mg/L		12/06/23 09:21	12/20/23 22:11	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/06/23 09:21	12/20/23 22:11	1
Potassium	**3.1**		0.50	0.11	mg/L		12/06/23 09:21	12/20/23 22:11	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 16:50	1
Sodium	**64**	**B**	0.20	0.077	mg/L		12/06/23 09:21	12/20/23 22:11	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/20/23 22:11	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		12/04/23 09:40	12/05/23 08:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**86**		5.0	0.58	mg/L			11/27/23 13:19	5
Sulfate (EPA 300.0)	**56**		5.0	1.0	mg/L			11/27/23 13:19	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**370**		5.0	3.7	mg/L			11/30/23 11:33	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			11/30/23 11:33	1
Total Dissolved Solids (SM 2540C)	**690**		10	4.3	mg/L			11/21/23 23:09	1
Fluoride (SM 4500 F C)	**0.12**		0.10	0.056	mg/L			12/01/23 17:42	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	**68.55**				ft			11/20/23 13:12	1
Field pH	**6.96**				SU			11/20/23 13:12	1
Field Temperature	**11.42**				Degrees C			11/20/23 13:12	1
Oxidation Reduction Potential	**171.3**				millivolts			11/20/23 13:12	1
Oxygen, Dissolved	**4.01**				mg/L			11/20/23 13:12	1
Specific Conductance	**7297.8**				umhos/cm			11/20/23 13:12	1
Turbidity	**0.64**				NTU			11/20/23 13:12	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_YSG_ILRIVER

Date Collected: 11/13/23 00:00
Date Received: 12/06/23 07:24

Lab Sample ID: 500-242591-56

Matrix: Water

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	441.0				ft			11/13/23 00:00	1

Definitions/Glossary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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.
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
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-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Metals

Prep Batch: 743163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total Recoverable	Water	200.7	
500-242591-16	HEN_18&D	Total Recoverable	Water	200.7	
MB 500-743163/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 500-743163/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 743512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total Recoverable	Water	200.7 Rev 4.4	743163
500-242591-16	HEN_18&D	Total Recoverable	Water	200.7 Rev 4.4	743163
MB 500-743163/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	743163
LCS 500-743163/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	743163

Prep Batch: 743616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total Recoverable	Water	200.7	
500-242591-26	HEN_08&D	Total Recoverable	Water	200.7	
500-242591-27	HEN_08	Total Recoverable	Water	200.7	
500-242591-28	HEN_08_FD	Total Recoverable	Water	200.7	
MB 500-743616/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 500-743616/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
500-242591-14 MS	HEN_03R_MS	Total Recoverable	Water	200.7	
500-242591-14 MSD	HEN_03R_MSD	Total Recoverable	Water	200.7	
500-242591-14 DU	HEN_03R	Total Recoverable	Water	200.7	

Analysis Batch: 743952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-26	HEN_08&D	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-27	HEN_08	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-28	HEN_08_FD	Total Recoverable	Water	200.7 Rev 4.4	743616
MB 500-743616/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	743616
LCS 500-743616/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-14 MS	HEN_03R_MS	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-14 MSD	HEN_03R_MSD	Total Recoverable	Water	200.7 Rev 4.4	743616
500-242591-14 DU	HEN_03R	Total Recoverable	Water	200.7 Rev 4.4	743616

Prep Batch: 744714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	7470A	
500-242591-15	HEN_18#S	Total/NA	Water	7470A	
500-242591-16	HEN_18&D	Total/NA	Water	7470A	
MB 500-744714/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-744714/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	7470A	
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	7470A	
500-242591-14 DU	HEN_03R	Total/NA	Water	7470A	

Prep Batch: 744964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-26	HEN_08&D	Total/NA	Water	7470A	
500-242591-27	HEN_08	Total/NA	Water	7470A	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Metals (Continued)

Prep Batch: 744964 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-28	HEN_08_FD	Total/NA	Water	7470A	
500-242591-32	HEN_45#S	Total/NA	Water	7470A	
500-242591-33	HEN_45#S_FD	Total/NA	Water	7470A	
500-242591-38	HEN_07	Total/NA	Water	7470A	
MB 500-744964/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-744964/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-242591-33 MS	HEN_45#S_FD	Total/NA	Water	7470A	
500-242591-33 MSD	HEN_45#S_FD	Total/NA	Water	7470A	
500-242591-33 DU	HEN_45#S_FD	Total/NA	Water	7470A	

Analysis Batch: 745000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	7470A	744714
500-242591-15	HEN_18#S	Total/NA	Water	7470A	744714
500-242591-16	HEN_18&D	Total/NA	Water	7470A	744714
MB 500-744714/12-A	Method Blank	Total/NA	Water	7470A	744714
LCS 500-744714/13-A	Lab Control Sample	Total/NA	Water	7470A	744714
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	7470A	744714
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	7470A	744714
500-242591-14 DU	HEN_03R	Total/NA	Water	7470A	744714

Prep Batch: 745158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total Recoverable	Water	200.7	
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	200.7	
500-242591-38	HEN_07	Total Recoverable	Water	200.7	
MB 500-745158/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 500-745158/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 745181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-26	HEN_08&D	Total/NA	Water	7470A	744964
500-242591-27	HEN_08	Total/NA	Water	7470A	744964
500-242591-28	HEN_08_FD	Total/NA	Water	7470A	744964
500-242591-32	HEN_45#S	Total/NA	Water	7470A	744964
500-242591-33	HEN_45#S_FD	Total/NA	Water	7470A	744964
500-242591-38	HEN_07	Total/NA	Water	7470A	744964
MB 500-744964/12-A	Method Blank	Total/NA	Water	7470A	744964
LCS 500-744964/13-A	Lab Control Sample	Total/NA	Water	7470A	744964
500-242591-33 MS	HEN_45#S_FD	Total/NA	Water	7470A	744964
500-242591-33 MSD	HEN_45#S_FD	Total/NA	Water	7470A	744964
500-242591-33 DU	HEN_45#S_FD	Total/NA	Water	7470A	744964

Prep Batch: 745370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total Recoverable	Water	3005A	
500-242591-26	HEN_08&D	Total Recoverable	Water	3005A	
500-242591-27	HEN_08	Total Recoverable	Water	3005A	
500-242591-28	HEN_08_FD	Total Recoverable	Water	3005A	
500-242591-32	HEN_45#S	Total Recoverable	Water	3005A	
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	3005A	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Metals (Continued)

Prep Batch: 745370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-38	HEN_07	Total Recoverable	Water	3005A	
MB 500-745370/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-745370/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-242591-14 MS	HEN_03R_MS	Total Recoverable	Water	3005A	
500-242591-14 MSD	HEN_03R_MSD	Total Recoverable	Water	3005A	
500-242591-14 DU	HEN_03R	Total Recoverable	Water	3005A	

Analysis Batch: 745468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total Recoverable	Water	200.7 Rev 4.4	745158
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	200.7 Rev 4.4	745158
500-242591-38	HEN_07	Total Recoverable	Water	200.7 Rev 4.4	745158
MB 500-745158/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	745158
LCS 500-745158/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	745158

Prep Batch: 745613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total Recoverable	Water	3005A	
500-242591-16	HEN_18&D	Total Recoverable	Water	3005A	
MB 500-745613/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-745613/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 747720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total Recoverable	Water	6020B	745370
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	6020B	745370
500-242591-38	HEN_07	Total Recoverable	Water	6020B	745370

Analysis Batch: 747971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total Recoverable	Water	6020B	745370
500-242591-15	HEN_18#S	Total Recoverable	Water	6020B	745613
500-242591-16	HEN_18&D	Total Recoverable	Water	6020B	745613
500-242591-26	HEN_08&D	Total Recoverable	Water	6020B	745370
500-242591-27	HEN_08	Total Recoverable	Water	6020B	745370
500-242591-28	HEN_08_FD	Total Recoverable	Water	6020B	745370
500-242591-32	HEN_45#S	Total Recoverable	Water	6020B	745370
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	6020B	745370
500-242591-38	HEN_07	Total Recoverable	Water	6020B	745370
MB 500-745370/1-A	Method Blank	Total Recoverable	Water	6020B	745370
MB 500-745613/1-A	Method Blank	Total Recoverable	Water	6020B	745613
LCS 500-745370/2-A	Lab Control Sample	Total Recoverable	Water	6020B	745370
LCS 500-745613/2-A	Lab Control Sample	Total Recoverable	Water	6020B	745613
500-242591-14 MS	HEN_03R_MS	Total Recoverable	Water	6020B	745370
500-242591-14 MSD	HEN_03R_MSD	Total Recoverable	Water	6020B	745370
500-242591-14 DU	HEN_03R	Total Recoverable	Water	6020B	745370

Analysis Batch: 748042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total Recoverable	Water	6020B	745370
500-242591-26	HEN_08&D	Total Recoverable	Water	6020B	745370

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Metals (Continued)

Analysis Batch: 748042 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-27	HEN_08	Total Recoverable	Water	6020B	745370
500-242591-28	HEN_08_FD	Total Recoverable	Water	6020B	745370
500-242591-32	HEN_45#S	Total Recoverable	Water	6020B	745370
500-242591-33	HEN_45#S_FD	Total Recoverable	Water	6020B	745370
500-242591-38	HEN_07	Total Recoverable	Water	6020B	745370
500-242591-14 MS	HEN_03R_MS	Total Recoverable	Water	6020B	745370
500-242591-14 MSD	HEN_03R_MSD	Total Recoverable	Water	6020B	745370
500-242591-14 DU	HEN_03R	Total Recoverable	Water	6020B	745370

General Chemistry

Analysis Batch: 742951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	SM 2540C	
500-242591-15	HEN_18#S	Total/NA	Water	SM 2540C	
500-242591-16	HEN_18&D	Total/NA	Water	SM 2540C	
500-242591-26	HEN_08&D	Total/NA	Water	SM 2540C	
500-242591-27	HEN_08	Total/NA	Water	SM 2540C	
500-242591-28	HEN_08_FD	Total/NA	Water	SM 2540C	
MB 500-742951/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-742951/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	SM 2540C	
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	SM 2540C	
500-242591-15 DU	HEN_18#S	Total/NA	Water	SM 2540C	

Analysis Batch: 743297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	300.0	
500-242591-15	HEN_18#S	Total/NA	Water	300.0	
500-242591-16	HEN_18&D	Total/NA	Water	300.0	
500-242591-26	HEN_08&D	Total/NA	Water	300.0	
500-242591-27	HEN_08	Total/NA	Water	300.0	
500-242591-28	HEN_08_FD	Total/NA	Water	300.0	
MB 500-743297/3	Method Blank	Total/NA	Water	300.0	
LCS 500-743297/4	Lab Control Sample	Total/NA	Water	300.0	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	300.0	
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	300.0	

Analysis Batch: 743427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total/NA	Water	SM 2540C	
500-242591-33	HEN_45#S_FD	Total/NA	Water	SM 2540C	
500-242591-38	HEN_07	Total/NA	Water	SM 2540C	
MB 500-743427/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-743427/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 743513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	SM 2320B	
500-242591-15	HEN_18#S	Total/NA	Water	SM 2320B	
500-242591-16	HEN_18&D	Total/NA	Water	SM 2320B	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

General Chemistry (Continued)

Analysis Batch: 743513 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-26	HEN_08&D	Total/NA	Water	SM 2320B	
500-242591-27	HEN_08	Total/NA	Water	SM 2320B	
500-242591-28	HEN_08_FD	Total/NA	Water	SM 2320B	
MB 500-743513/28	Method Blank	Total/NA	Water	SM 2320B	
MB 500-743513/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-743513/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 500-743513/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 743830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total/NA	Water	300.0	
500-242591-33	HEN_45#S_FD	Total/NA	Water	300.0	
500-242591-38	HEN_07	Total/NA	Water	300.0	
MB 500-743830/3	Method Blank	Total/NA	Water	300.0	
LCS 500-743830/5	Lab Control Sample	Total/NA	Water	300.0	
500-242591-G-32 MS	500-242591-G-32 MS	Dissolved	Water	300.0	
500-242591-G-32 MSD	500-242591-G-32 MSD	Dissolved	Water	300.0	

Analysis Batch: 744626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total/NA	Water	SM 2320B	
500-242591-33	HEN_45#S_FD	Total/NA	Water	SM 2320B	
500-242591-38	HEN_07	Total/NA	Water	SM 2320B	
MB 500-744626/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-744626/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 744922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total/NA	Water	SM 4500 F C	
500-242591-16	HEN_18&D	Total/NA	Water	SM 4500 F C	
500-242591-26	HEN_08&D	Total/NA	Water	SM 4500 F C	
500-242591-27	HEN_08	Total/NA	Water	SM 4500 F C	
500-242591-38	HEN_07	Total/NA	Water	SM 4500 F C	
MB 500-744922/31	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-744922/59	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-744922/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-744922/60	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-242591-G-14 MS	500-242591-G-14 MS	Dissolved	Water	SM 4500 F C	
500-242591-G-14 MSD	500-242591-G-14 MSD	Dissolved	Water	SM 4500 F C	

Analysis Batch: 745605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	SM 4500 F C	
500-242591-28	HEN_08_FD	Total/NA	Water	SM 4500 F C	
500-242591-32	HEN_45#S	Total/NA	Water	SM 4500 F C	
500-242591-33	HEN_45#S_FD	Total/NA	Water	SM 4500 F C	
MB 500-745605/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-745605/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-745605/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-745605/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

General Chemistry (Continued)

Analysis Batch: 745605 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 745357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	Field Sampling	
500-242591-15	HEN_18#S	Total/NA	Water	Field Sampling	
500-242591-16	HEN_18&D	Total/NA	Water	Field Sampling	
500-242591-26	HEN_08&D	Total/NA	Water	Field Sampling	
500-242591-27	HEN_08	Total/NA	Water	Field Sampling	
500-242591-28	HEN_08_FD	Total/NA	Water	Field Sampling	
500-242591-32	HEN_45#S	Total/NA	Water	Field Sampling	
500-242591-33	HEN_45#S_FD	Total/NA	Water	Field Sampling	
500-242591-38	HEN_07	Total/NA	Water	Field Sampling	
500-242591-56	HEN_YSG_ILRIVER	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 500-743163/1-A
Matrix: Water
Analysis Batch: 743512

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 743163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0050		0.0050	0.0020	mg/L		11/20/23 17:49	11/21/23 16:11	1

Lab Sample ID: LCS 500-743163/2-A
Matrix: Water
Analysis Batch: 743512

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 743163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.250	0.255		mg/L		102	85 - 115

Lab Sample ID: MB 500-743616/1-A
Matrix: Water
Analysis Batch: 743952

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 743616

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0050		0.0050	0.0020	mg/L		11/22/23 17:00	11/27/23 12:52	1

Lab Sample ID: 500-242591-14 DU
Matrix: Water
Analysis Batch: 743952

Client Sample ID: HEN_03R
Prep Type: Total Recoverable
Prep Batch: 743616

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.014		0.0145		mg/L		2	20

Lab Sample ID: MB 500-745158/1-A
Matrix: Water
Analysis Batch: 745468

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745158

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0050		0.0050	0.0020	mg/L		12/05/23 09:07	12/06/23 12:57	1

Lab Sample ID: LCS 500-745158/2-A
Matrix: Water
Analysis Batch: 745468

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745158

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.250	0.273		mg/L		109	85 - 115

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-745370/1-A
Matrix: Water
Analysis Batch: 747971

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		12/06/23 09:21	12/21/23 14:58	1
Arsenic	<0.0010		0.0010	0.00023	mg/L		12/06/23 09:21	12/21/23 14:58	1
Barium	<0.0025		0.0025	0.00073	mg/L		12/06/23 09:21	12/21/23 14:58	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/06/23 09:21	12/21/23 14:58	1
Boron	0.0298	J	0.050	0.013	mg/L		12/06/23 09:21	12/21/23 14:58	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		12/06/23 09:21	12/21/23 14:58	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: MB 500-745370/1-A
Matrix: Water
Analysis Batch: 747971

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.20		0.20	0.044	mg/L		12/06/23 09:21	12/21/23 14:58	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/06/23 09:21	12/21/23 14:58	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		12/06/23 09:21	12/21/23 14:58	1
Lead	<0.00050		0.00050	0.00019	mg/L		12/06/23 09:21	12/21/23 14:58	1
Magnesium	<0.20		0.20	0.049	mg/L		12/06/23 09:21	12/21/23 14:58	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/06/23 09:21	12/21/23 14:58	1
Potassium	<0.50		0.50	0.11	mg/L		12/06/23 09:21	12/21/23 14:58	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/06/23 09:21	12/21/23 14:58	1
Sodium	<0.20		0.20	0.077	mg/L		12/06/23 09:21	12/21/23 14:58	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/06/23 09:21	12/21/23 14:58	1

Lab Sample ID: LCS 500-745370/2-A
Matrix: Water
Analysis Batch: 747971

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.489		mg/L		98	80 - 120
Arsenic	0.100	0.0956		mg/L		96	80 - 120
Barium	0.500	0.486		mg/L		97	80 - 120
Beryllium	0.0500	0.0462	^1+	mg/L		92	80 - 120
Boron	1.00	1.02		mg/L		102	80 - 120
Cadmium	0.0500	0.0488		mg/L		98	80 - 120
Calcium	10.0	8.32		mg/L		83	80 - 120
Chromium	0.200	0.200		mg/L		100	80 - 120
Cobalt	0.500	0.500		mg/L		100	80 - 120
Lead	0.100	0.100		mg/L		100	80 - 120
Magnesium	10.0	9.56		mg/L		96	80 - 120
Molybdenum	1.00	0.906		mg/L		91	80 - 120
Potassium	10.0	9.66		mg/L		97	80 - 120
Selenium	0.100	0.0948		mg/L		95	80 - 120
Sodium	10.0	9.58		mg/L		96	80 - 120
Thallium	0.100	0.100		mg/L		100	80 - 120

Lab Sample ID: 500-242591-14 MS
Matrix: Water
Analysis Batch: 747971

Client Sample ID: HEN_03R_MS
Prep Type: Total Recoverable
Prep Batch: 745370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0030		0.500	0.482		mg/L		96	75 - 125
Arsenic	0.00042	J	0.100	0.0957		mg/L		95	75 - 125
Barium	0.058		0.500	0.544		mg/L		97	75 - 125
Beryllium	<0.0010	^1+	0.0500	0.0434	^1+	mg/L		87	75 - 125
Cadmium	<0.00050		0.0500	0.0467		mg/L		93	75 - 125
Calcium	86		10.0	92.8	4	mg/L		63	75 - 125
Chromium	<0.0050		0.200	0.192		mg/L		96	75 - 125
Cobalt	0.00042	J	0.500	0.468		mg/L		93	75 - 125
Lead	<0.00050		0.100	0.101		mg/L		101	75 - 125
Magnesium	26		10.0	34.3		mg/L		85	75 - 125
Molybdenum	0.078		1.00	0.981		mg/L		90	75 - 125

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: 500-242591-14 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Potassium	8.0		10.0	16.8		mg/L		89	75 - 125
Selenium	0.0016	J	0.100	0.0962		mg/L		95	75 - 125
Sodium	52		10.0	59.7	4	mg/L		78	75 - 125
Thallium	<0.0020		0.100	0.102		mg/L		102	75 - 125

Lab Sample ID: 500-242591-14 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 748042 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.50	B	1.00	1.43		mg/L		93	75 - 125

Lab Sample ID: 500-242591-14 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.490		mg/L		98	75 - 125	2	20
Arsenic	0.00042	J	0.100	0.0957		mg/L		95	75 - 125	0	20
Barium	0.058		0.500	0.543		mg/L		97	75 - 125	0	20
Beryllium	<0.0010	^1+	0.0500	0.0457	^1+	mg/L		91	75 - 125	5	20
Cadmium	<0.00050		0.0500	0.0471		mg/L		94	75 - 125	1	20
Calcium	86		10.0	92.4	4	mg/L		60	75 - 125	0	20
Chromium	<0.0050		0.200	0.191		mg/L		95	75 - 125	1	20
Cobalt	0.00042	J	0.500	0.465		mg/L		93	75 - 125	1	20
Lead	<0.00050		0.100	0.102		mg/L		102	75 - 125	1	20
Magnesium	26		10.0	34.0		mg/L		82	75 - 125	1	20
Molybdenum	0.078		1.00	0.987		mg/L		91	75 - 125	1	20
Potassium	8.0		10.0	16.7		mg/L		88	75 - 125	1	20
Selenium	0.0016	J	0.100	0.0963		mg/L		95	75 - 125	0	20
Sodium	52		10.0	59.9	4	mg/L		81	75 - 125	0	20
Thallium	<0.0020		0.100	0.103		mg/L		103	75 - 125	1	20

Lab Sample ID: 500-242591-14 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 748042 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.50	B	1.00	1.47		mg/L		97	75 - 125	3	20

Lab Sample ID: 500-242591-14 DU — **Client Sample ID: HEN_03R**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.00042	J	0.000417	J	mg/L		0.7	20
Barium	0.058		0.0585		mg/L		0.8	20
Beryllium	<0.0010	^1+	<0.0010	^1+	mg/L		NC	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: 500-242591-14 DU — **Client Sample ID: HEN_03R**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Calcium	86		88.6		mg/L		2	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	0.00042	J	<0.0010		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Magnesium	26		26.3		mg/L		2	20
Molybdenum	0.078		0.0765		mg/L		2	20
Potassium	8.0		8.16		mg/L		2	20
Selenium	0.0016	J	0.00171	J	mg/L		5	20
Sodium	52		53.0		mg/L		2	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Lab Sample ID: 500-242591-14 DU — **Client Sample ID: HEN_03R**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 748042 — **Prep Batch: 745370**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.50	B	0.544		mg/L		9	20

Lab Sample ID: MB 500-745613/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745613**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		12/07/23 09:15	12/21/23 13:11	1
Arsenic	<0.0010		0.0010	0.00023	mg/L		12/07/23 09:15	12/21/23 13:11	1
Barium	<0.0025		0.0025	0.00073	mg/L		12/07/23 09:15	12/21/23 13:11	1
Beryllium	<0.0010	^1+	0.0010	0.00053	mg/L		12/07/23 09:15	12/21/23 13:11	1
Boron	<0.050		0.050	0.013	mg/L		12/07/23 09:15	12/21/23 13:11	1
Cadmium	<0.00050		0.00050	0.00017	mg/L		12/07/23 09:15	12/21/23 13:11	1
Calcium	0.0541	J	0.20	0.044	mg/L		12/07/23 09:15	12/21/23 13:11	1
Chromium	<0.0050		0.0050	0.0011	mg/L		12/07/23 09:15	12/21/23 13:11	1
Cobalt	<0.0010		0.0010	0.00040	mg/L		12/07/23 09:15	12/21/23 13:11	1
Lead	<0.00050		0.00050	0.00019	mg/L		12/07/23 09:15	12/21/23 13:11	1
Magnesium	<0.20		0.20	0.049	mg/L		12/07/23 09:15	12/21/23 13:11	1
Molybdenum	<0.0050		0.0050	0.0025	mg/L		12/07/23 09:15	12/21/23 13:11	1
Potassium	<0.50		0.50	0.11	mg/L		12/07/23 09:15	12/21/23 13:11	1
Selenium	<0.0025		0.0025	0.00098	mg/L		12/07/23 09:15	12/21/23 13:11	1
Sodium	<0.20		0.20	0.077	mg/L		12/07/23 09:15	12/21/23 13:11	1
Thallium	<0.0020		0.0020	0.00057	mg/L		12/07/23 09:15	12/21/23 13:11	1

Lab Sample ID: LCS 500-745613/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745613**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.490		mg/L		98	80 - 120
Arsenic	0.100	0.0985		mg/L		98	80 - 120
Barium	0.500	0.496		mg/L		99	80 - 120
Beryllium	0.0500	0.0471	^1+	mg/L		94	80 - 120

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: LCS 500-745613/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 747971 — **Prep Batch: 745613**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.00		mg/L		100	80 - 120
Cadmium	0.0500	0.0485		mg/L		97	80 - 120
Calcium	10.0	8.64		mg/L		86	80 - 120
Chromium	0.200	0.204		mg/L		102	80 - 120
Cobalt	0.500	0.502		mg/L		100	80 - 120
Lead	0.100	0.102		mg/L		102	80 - 120
Magnesium	10.0	9.88		mg/L		99	80 - 120
Molybdenum	1.00	0.912		mg/L		91	80 - 120
Potassium	10.0	9.85		mg/L		99	80 - 120
Selenium	0.100	0.0982		mg/L		98	80 - 120
Sodium	10.0	9.81		mg/L		98	80 - 120
Thallium	0.100	0.103		mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-744714/12-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 745000 — **Prep Batch: 744714**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		12/01/23 13:25	12/04/23 09:45	1

Lab Sample ID: LCS 500-744714/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 745000 — **Prep Batch: 744714**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00201	0.00207		mg/L		103	80 - 120

Lab Sample ID: 500-242591-14 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 745000 — **Prep Batch: 744714**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.00104		mg/L		104	75 - 125

Lab Sample ID: 500-242591-14 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 745000 — **Prep Batch: 744714**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.00107		mg/L		107	75 - 125	3	20

Lab Sample ID: 500-242591-14 DU — **Client Sample ID: HEN_03R**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 745000 — **Prep Batch: 744714**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: MB 500-744964/12-A
Matrix: Water
Analysis Batch: 745181

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 744964

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000079	mg/L		12/04/23 09:40	12/05/23 07:21	1

Lab Sample ID: LCS 500-744964/13-A
Matrix: Water
Analysis Batch: 745181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 744964

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00201	0.00203		mg/L		101	80 - 120

Lab Sample ID: 500-242591-33 MS
Matrix: Water
Analysis Batch: 745181

Client Sample ID: HEN_45#S_FD
Prep Type: Total/NA
Prep Batch: 744964

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.000993		mg/L		99	75 - 125

Lab Sample ID: 500-242591-33 MSD
Matrix: Water
Analysis Batch: 745181

Client Sample ID: HEN_45#S_FD
Prep Type: Total/NA
Prep Batch: 744964

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000990		mg/L		99	75 - 125	0	20

Lab Sample ID: 500-242591-33 DU
Matrix: Water
Analysis Batch: 745181

Client Sample ID: HEN_45#S_FD
Prep Type: Total/NA
Prep Batch: 744964

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 500-743297/3
Matrix: Water
Analysis Batch: 743297

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			11/21/23 13:25	1
Sulfate	<1.0		1.0	0.21	mg/L			11/21/23 13:25	1

Lab Sample ID: LCS 500-743297/4
Matrix: Water
Analysis Batch: 743297

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	19.4		mg/L		97	90 - 110
Sulfate	20.0	19.8		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-242591-14 MS — **Client Sample ID: HEN_03R_MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743297

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	80	F1	50.0	114	F1	mg/L		67	80 - 120
Sulfate	72	F1	50.0	105	F1	mg/L		67	80 - 120

Lab Sample ID: 500-242591-14 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743297

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	80	F1	50.0	127		mg/L		92	80 - 120	10	20
Sulfate	72	F1	50.0	119		mg/L		94	80 - 120	12	20

Lab Sample ID: MB 500-743830/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743830

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	0.12	mg/L			11/27/23 11:33	1
Sulfate	<1.0		1.0	0.21	mg/L			11/27/23 11:33	1

Lab Sample ID: LCS 500-743830/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743830

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.8		mg/L		99	90 - 110
Sulfate	20.0	20.3		mg/L		102	90 - 110

Lab Sample ID: 500-242591-G-32 MS — **Client Sample ID: 500-242591-G-32 MS**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 743830

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	85		50.0	133		mg/L		96	80 - 120
Sulfate	69		50.0	117		mg/L		96	80 - 120

Lab Sample ID: 500-242591-G-32 MSD — **Client Sample ID: 500-242591-G-32 MSD**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 743830

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	85		50.0	132		mg/L		95	80 - 120	0	20
Sulfate	69		50.0	116		mg/L		94	80 - 120	1	20

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-743513/28
Matrix: Water
Analysis Batch: 743513

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/21/23 15:27	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/21/23 15:27	1

Lab Sample ID: MB 500-743513/3
Matrix: Water
Analysis Batch: 743513

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/21/23 11:50	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/21/23 11:50	1

Lab Sample ID: LCS 500-743513/29
Matrix: Water
Analysis Batch: 743513

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	103		mg/L		103	90 - 110

Lab Sample ID: LCS 500-743513/4
Matrix: Water
Analysis Batch: 743513

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	101		mg/L		101	90 - 110

Lab Sample ID: MB 500-744626/3
Matrix: Water
Analysis Batch: 744626

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/30/23 10:09	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			11/30/23 10:09	1

Lab Sample ID: LCS 500-744626/4
Matrix: Water
Analysis Batch: 744626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	94.6		mg/L		95	90 - 110

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

Lab Sample ID: MB 500-742951/1
Matrix: Water
Analysis Batch: 742951

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			11/19/23 22:37	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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

Lab Sample ID: LCS 500-742951/2
Matrix: Water
Analysis Batch: 742951

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	254		mg/L		102	80 - 120		

Lab Sample ID: 500-242591-14 MS
Matrix: Water
Analysis Batch: 742951

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	540		250	754		mg/L		86	75 - 125		

Lab Sample ID: 500-242591-14 MSD
Matrix: Water
Analysis Batch: 742951

Client Sample ID: HEN_03R_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	540		250	766		mg/L		91	75 - 125	2	20

Lab Sample ID: 500-242591-15 DU
Matrix: Water
Analysis Batch: 742951

Client Sample ID: HEN_18#S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	530			520		mg/L				3	5

Lab Sample ID: MB 500-743427/1
Matrix: Water
Analysis Batch: 743427

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			11/21/23 22:36	1

Lab Sample ID: LCS 500-743427/2
Matrix: Water
Analysis Batch: 743427

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	260		mg/L		104	80 - 120		

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-744922/31
Matrix: Water
Analysis Batch: 744922

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10	0.056	mg/L			12/01/23 14:18	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MB 500-744922/59
Matrix: Water
Analysis Batch: 744922

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10	0.056	mg/L			12/01/23 16:38	1

Lab Sample ID: LCS 500-744922/32
Matrix: Water
Analysis Batch: 744922

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.83		mg/L		98	90 - 119

Lab Sample ID: LCS 500-744922/60
Matrix: Water
Analysis Batch: 744922

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.94		mg/L		99	90 - 119

Lab Sample ID: MB 500-745605/3
Matrix: Water
Analysis Batch: 745605

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10	0.056	mg/L			12/06/23 14:28	1

Lab Sample ID: MB 500-745605/31
Matrix: Water
Analysis Batch: 745605

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10	0.056	mg/L			12/06/23 16:49	1

Lab Sample ID: LCS 500-745605/32
Matrix: Water
Analysis Batch: 745605

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.49		mg/L		95	90 - 119

Lab Sample ID: LCS 500-745605/4
Matrix: Water
Analysis Batch: 745605

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.74		mg/L		97	90 - 119

Lab Sample ID: 500-242591-14 MS
Matrix: Water
Analysis Batch: 745605

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.29		5.00	5.01		mg/L		94	75 - 125

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Method: SM 4500 F C - Fluoride

Lab Sample ID: 500-242591-14 MSD
Matrix: Water
Analysis Batch: 745605

Client Sample ID: HEN_03R_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	0.29		5.00	5.02		mg/L		95	75 - 125	0	20

Lab Sample ID: 500-242591-G-14 MS
Matrix: Water
Analysis Batch: 744922

Client Sample ID: 500-242591-G-14 MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.26		5.00	5.07		mg/L		96	75 - 125

Lab Sample ID: 500-242591-G-14 MSD
Matrix: Water
Analysis Batch: 744922

Client Sample ID: 500-242591-G-14 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		5.00	5.07		mg/L		96	75 - 125	0	20

Client Sample ID: HEN_03R
Date Collected: 11/16/23 09:25
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743616	MC	EET CHI	11/22/23 17:00 - 11/22/23 23:00 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743952	RN	EET CHI	11/27/23 13:09
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 15:05
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 11:00
Total/NA	Prep	7470A			744714	MJG	EET CHI	12/01/23 13:25 - 12/01/23 15:25 [1]
Total/NA	Analysis	7470A		1	745000	MJG	EET CHI	12/04/23 10:31
Total/NA	Analysis	300.0		5	743297	W1T	EET CHI	11/21/23 13:56
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 13:22
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 22:52
Total/NA	Analysis	SM 4500 F C		1	745605	SO	EET CHI	12/06/23 16:57
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/16/23 09:25

Client Sample ID: HEN_18#S
Date Collected: 11/16/23 11:32
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743163	MC	EET CHI	11/20/23 17:49 - 11/20/23 22:49 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743512	SJ	EET CHI	11/21/23 17:58
Total Recoverable	Prep	3005A			745613	BDE	EET CHI	12/07/23 09:15 - 12/07/23 09:45 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 14:46
Total/NA	Prep	7470A			744714	MJG	EET CHI	12/01/23 13:25 - 12/01/23 15:25 [1]
Total/NA	Analysis	7470A		1	745000	MJG	EET CHI	12/04/23 10:40
Total/NA	Analysis	300.0		5	743297	W1T	EET CHI	11/21/23 14:41
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 13:31
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 23:00
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 15:22
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/16/23 11:55

Client Sample ID: HEN_18&D
Date Collected: 11/16/23 11:55
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743163	MC	EET CHI	11/20/23 17:49 - 11/20/23 22:49 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743512	SJ	EET CHI	11/21/23 18:03
Total Recoverable	Prep	3005A			745613	BDE	EET CHI	12/07/23 09:15 - 12/07/23 09:45 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 14:50
Total/NA	Prep	7470A			744714	MJG	EET CHI	12/01/23 13:25 - 12/01/23 15:25 [1]
Total/NA	Analysis	7470A		1	745000	MJG	EET CHI	12/04/23 10:42
Total/NA	Analysis	300.0		5	743297	W1T	EET CHI	11/21/23 14:56
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 13:40

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_18&D
Date Collected: 11/16/23 11:55
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 23:05
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 15:27
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/16/23 11:55

Client Sample ID: HEN_08&D
Date Collected: 11/17/23 12:31
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743616	MC	EET CHI	11/22/23 17:00 - 11/22/23 23:00 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743952	RN	EET CHI	11/27/23 13:50
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 15:48
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 11:34
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 07:34
Total/NA	Analysis	300.0		10	743297	W1T	EET CHI	11/21/23 16:12
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 15:40
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 23:28
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 16:22
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/17/23 12:31

Client Sample ID: HEN_08
Date Collected: 11/17/23 12:32
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743616	MC	EET CHI	11/22/23 17:00 - 11/22/23 23:00 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743952	RN	EET CHI	11/27/23 13:55
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 16:12
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 11:46
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 07:36
Total/NA	Analysis	300.0		10	743297	W1T	EET CHI	11/21/23 16:58
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 15:51
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 23:31
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 16:27
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/17/23 12:32

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

Client Sample ID: HEN_08_FD
Date Collected: 11/17/23 12:37
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-28
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			743616	MC	EET CHI	11/22/23 17:00 - 11/22/23 23:00 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	743952	RN	EET CHI	11/27/23 13:59
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 16:24
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 11:49
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 07:38
Total/NA	Analysis	300.0		10	743297	W1T	EET CHI	11/21/23 17:13
Total/NA	Analysis	SM 2320B		1	743513	SO	EET CHI	11/21/23 16:01
Total/NA	Analysis	SM 2540C		1	742951	CLB	EET CHI	11/19/23 23:33
Total/NA	Analysis	SM 4500 F C		1	745605	SO	EET CHI	12/06/23 16:34
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/17/23 12:37

Client Sample ID: HEN_45#S
Date Collected: 11/20/23 09:15
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-32
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			745158	BDE	EET CHI	12/05/23 09:07 - 12/05/23 09:37 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	745468	RN	EET CHI	12/06/23 13:51
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747720	RN	EET CHI	12/20/23 21:57
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 16:35
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 12:01
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 07:48
Total/NA	Analysis	300.0		5	743830	NMB	EET CHI	11/27/23 12:34
Total/NA	Analysis	SM 2320B		1	744626	SO	EET CHI	11/30/23 10:52
Total/NA	Analysis	SM 2540C		1	743427	CLB	EET CHI	11/21/23 22:56
Total/NA	Analysis	SM 4500 F C		1	745605	SO	EET CHI	12/06/23 16:40
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/20/23 09:15

Client Sample ID: HEN_45#S_FD
Date Collected: 11/20/23 09:20
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-33
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			745158	BDE	EET CHI	12/05/23 09:07 - 12/05/23 09:37 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	745468	RN	EET CHI	12/06/23 13:55
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747720	RN	EET CHI	12/20/23 22:01

Client Sample ID: HEN_45#S_FD

Date Collected: 11/20/23 09:20
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-33
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 16:39
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 12:05
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 07:51
Total/NA	Analysis	300.0		5	743830	NMB	EET CHI	11/27/23 12:49
Total/NA	Analysis	SM 2320B		1	744626	SO	EET CHI	11/30/23 11:02
Total/NA	Analysis	SM 2540C		1	743427	CLB	EET CHI	11/21/23 22:59
Total/NA	Analysis	SM 4500 F C		1	745605	SO	EET CHI	12/06/23 16:45
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/20/23 09:20

Client Sample ID: HEN_07

Date Collected: 11/20/23 13:12
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-38
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	200.7			745158	BDE	EET CHI	12/05/23 09:07 - 12/05/23 09:37 [1]
Total Recoverable	Analysis	200.7 Rev 4.4		1	745468	RN	EET CHI	12/06/23 14:08
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747720	RN	EET CHI	12/20/23 22:11
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	747971	SJ	EET CHI	12/21/23 16:50
Total Recoverable	Prep	3005A			745370	BDE	EET CHI	12/06/23 09:21 - 12/06/23 09:51 [1]
Total Recoverable	Analysis	6020B		1	748042	RN	EET CHI	12/22/23 12:16
Total/NA	Prep	7470A			744964	MJG	EET CHI	12/04/23 09:40 - 12/04/23 11:40 [1]
Total/NA	Analysis	7470A		1	745181	MJG	EET CHI	12/05/23 08:03
Total/NA	Analysis	300.0		5	743830	NMB	EET CHI	11/27/23 13:19
Total/NA	Analysis	SM 2320B		1	744626	SO	EET CHI	11/30/23 11:33
Total/NA	Analysis	SM 2540C		1	743427	CLB	EET CHI	11/21/23 23:09
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 17:42
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/20/23 13:12

Client Sample ID: HEN_YSG_ILRIVER

Date Collected: 11/13/23 00:00
Date Received: 12/06/23 07:24

Lab Sample ID: 500-242591-56
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	745357	DN	EET CHI	11/13/23 00:00

[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-23Q4

Job ID: 500-242591-10
SDG: HEN_845_802-805

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	Groundwater Elevation
Field Sampling		Water	Oxidation Reduction Potential
Field Sampling		Water	Oxygen, Dissolved
Field Sampling		Water	Specific Conductance
Field Sampling		Water	Turbidity
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

COC HEN 012

500-242591 COC

500-242591

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	133 S 4th, Suite 206	Copy To	Jason Stuckey	Company Name	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To	Brian.Voelker@VistraCorp.com	Purchase Order No		Quote Reference	
Phone	(217) 753-8911 Fax:	Project Name	23Q4 GW SAMPLING	Project Manager	NIKKI PAGANO
Requested Due Date/TAT	10 day	Project Number	50022357	Profile #:	

REGULATORY AGENCY		
NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE:	IL	

Section D Required Client Information

Valid Matrix Codes: 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): HEN_257_802 Y; HEN_845_802-805 Y; HEN_000_RAD Y; HEN_WPCP_East Y

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_03R	W	G	11-16-23			14	5	1	4	3	1					X				X			X	X	X			SHORT HOLDS-NO2
2	HEN_03R MS/MSD	W	G	11-16-23			28	10	2	8	6	2					X				X			X	X	X			SHORT HOLDS-NO2
3																													TB BTEX in cooler w/ 18D
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

14
1

TJD 11-17-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	[illegible] CAMBELL	11-17-23	0900	N. J. Ellis	11/17/23	0900	
	N. J. Ellis	11/17/23	1127	Stephanie Hernandez EETA	11/17/23	1127	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: KRISTEN THEESFELD

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11-16-23

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

EUROFINS COURIER PICKUP

Temp: 1.9+1.8, 5.8+5.6, 4.8+4.6 QC TJD

HEN-013

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591

Page 1 of 1

Section A Required Client Information.

Company:	Vistra Corp
Address	133 S 4th, Suite 206
	Springfield, IL 62701
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	23Q4 GW SAMPLING
Project Number:	50022357

Section C Invoice Information:

Attention.	Jason Stuckey
Company Name	Vistra Corp
Address	see Section A
Quote Reference:	
Project Manager:	NIKKI PAGANO
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_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West		Residual Chlorine (Y/N)	Project No./ Lab I.D.
15 1	HEN_18#S	W	G	11-16-23	11:55		14	5	1	4	3	1					X				X			X	X	X				SHORT HOLDS-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-23Q4 Rev 0	RAMBILL	11.17.23	0900		11/17/23	0900	
		11/17/23	1127	Stephenie Hernandez EOH	11/17/23	1127	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TREVOR DEMPSEY

SIGNATURE of SAMPLER: Trevor Dempsey

DATE Signed (MM/DD/YY): 11-16-23

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

EUROFINS COURIER PICKUP

QC: KLT

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name:	Vistra Corp
	Springfield, IL 62701			Address:	see Section A
Email To	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone	(217) 753-8911 Fax:	Project Name	23Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	2285	Profile #:	

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER UST RCRA OTHER

Site Location STATE: IL

Requested Analysis Filtered (Y/N): SELECT KJT 11-16-23

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl 11-16-23	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West			Residual Chlorine (Y/N)	Project No./ Lab I.D.
16	1 HEN_18&D	W	G	11-16-23	11:55		14	5	1	4	3	1				X					X			X	X	X				SHORT HOLDS-NO2
17	2 TRIP BLANK01	W	G	11-16-23	—		2				2																			BTEX
	3																													
	4																													
	5																													
	6																													
	7																													
	8																													
	9																													
	10																													
	11																													
	12																													
	13																													
	14																													
	15																													
	16																													

11-16-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	RAMBOLL	11-17-23	0900		11/17/23	0900	
		11/17/23	1127	Stephanie Hemmerle EEA	11/17/23	1127	

EUROFINS COURIER PICKUP 11-16-23

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: KRISTEN THEESFELD

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11-16-23

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

QC TJD

500-242591

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information.

Company:	Vistra Corp
Address	133 S 4th, Suite 206
	Springfield, IL 62701
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:	50022357

Section C Invoice Information.

Attention	Jason Stuckey
Company Name	Vistra Corp
Address	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

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

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_C	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801		Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_08&D			11/16/23	1231		12	3	3	3						X	X		X	X	X		X	X	X		X			SHORT HOLDS -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-23Q4 Rev 0	RAMBOLL	11-17-23	1800		11/17/23	1800	

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER	DATE Signed (MM/DD/YY) 11/16/23					

26

- BTEX in cooler w/ 08

QC KLT

HEN 0-23
500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone:	(217) 753-8911 Fax:	Project Name	23Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	50022357	Profile #:	

REGULATORY AGENCY		
NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE	IL	

Section D Required Client Information

Valid Matrix Codes

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_C	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801		Residual Chlorine (Y/N)	Project No./ Lab I.D.
27 1	HEN_08	W	G	11-17-23	12:32		13	5	3	4		1					X	X		X	X	X		X	X	X		X			SHORT HOLDS -NO2
28 2	HEN_08_FD	W	G	11-17-23	12:37		13	5	3	4		1					X	X		X	X	X		X	X	X		X			SHORT HOLDS -NO3
29 3	TRIP BLANK 02	W	G	11-17-23	—																										BTEX
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

KB 11-17-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	[signature] RAMBOLL	11-17-23	1800	[signature]	11/17/23	1800	

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	KRISTEN THEESFELD		
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	11-17-23

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

DROP OFF AT LAB

QC: TJD

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

HEN 0027
500-242591

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591 COC

Page 1 of 1

Section A Required Client Information:

Company:	Vistra Corp
Address	133 S 4th, Suite 206
	Springfield, IL 62701
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:	23 Q4GW SAMPLING
Project Number:	50022357

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name	Vistra Corp
Address	see Section A
Quote Reference:	
Project Manager	NIKKI PAGANO
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_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_45#S	WG		11-20-23	09:15		14	5	1	4	3	1					X				X			X	X	X			SHORT HOLD-NO2
2	HEN_45#S_FD	WG		11-20-23	09:20		14	5	1	4	3	1					X				X			X	X	X			
3	TRIPBLANK03	WG		11-20-23	—		2				2																		BTEX
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

11-20-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	RAMBOLL	11-21-23	0800		11/21/23	0806	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Trevor Dempsey

SIGNATURE of SAMPLER: Trevor Dempsey

DATE Signed (MM/DD/YY)

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

DROP@ LAB

25→23,5:1→46,5:2→50 QC: TTD

HEN_CCR1

500-242591

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: 133 S 4th, Suite 206	Copy To: Jason Stuckey	Company Name: Vistra Corp
Springfield, IL 62701		Address: see Section A
Email To: Brian.Voelker@VistraCorp.com	Purchase Order No.	Quote Reference:
Phone: (217) 753-8911 Fax:	Project Name: 23Q4 GW SAMPLING	Project Manager: NIKKI PAGANO
Requested Due Date/TAT: 10 day	Project Number: 50022357	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

ITEM #	SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_07	WG		11-20-23	1312		#5	1	4	3	1					X	X			X	X		X	X	X		X		SHORT HOLDS-NO2
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

38

11-20-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	RAMBOLL 11-21-23		0806		11/21/23	0906	

DROP@LAB

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER: KRISTEN THEESFELD					
SIGNATURE of SAMPLER	DATE Signed (MM/DD/YY): 11-20-23	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

QC: TJD

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-10
SDG Number: HEN_845_802-805

Login Number: 242591
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	5.7,4.9,3.2,4.2,3.0,1.8,5.6,4.6,2.4,4.6,4.4,5.0,,2.3 ,4.9,5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN
Client: VISTRA
Project Number: _____ Task #: _____
Start Date: 11-17-23 Time: 09:59
Field Personnel: KLT
Finish Date: 11-17-23 Time: 11:10

WELL INFORMATION

Well ID: 13
Casing ID: _____ Inches
Screen Interval: _____
Borehole Diameter: _____ Inches
Filter Pack Interval: _____

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	51.05	10:00	51.07	10:21
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #: _____
Water Quality Probe Type and Serial # _____

WATER QUALITY INDICATOR PARAMETERS

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
initial	10:06		51.06	0.01	16.44	7.33	922.24	5.20	0.21	175.7	CLEAR
purge	10:09		51.06	0.01	17.91	7.42	915.79	2.22	0.00	173.0	↓
	10:12		51.07	0.02	17.89	7.44	918.41	1.40	0.00	172.3	↓
	10:15		51.07	0.02	17.75	7.45	920.76	1.38	~~0.76~~	171.0	↓
	10:18		51.07	0.02	17.79	7.46	921.75	1.41	0.26	169.7	↓
SAMPLE	10:21	22gal	51.07	0.02	17.76	7.46	922.23	1.42	0.26	168.3	↓

KLT 11-17-23

FLOW RATE = 375 mL/min
USED 2ND TO LAST TURB.

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-14-23 Time: 0842
Field Personnel: KLT, TJD
Finish Date: 11-14-23 Time:

WELL INFORMATION

Well ID: 50
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	18.26	0842	18.27	0947
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	0903		18.26	0.00	11.179	7.099	2.758	10.912	44.9	257.3	Milky
purge	0907		↓	↓	14.569	7.338	960.83	1.513	29.2	254.08	clear
	0911		18.25	-0.01	12.86	7.436	927.49	1.524	21.7	255.89	clear
	0915		↓	↓	12.48	7.487	214.413	1.476	22.9	254.12	clear
	0919		18.27	0.01	15.53	7.485	1014.09	0.758	13.7	244.15	clear
	0923		18.27	0.01	15.5369	7.4851	142.886	0.201	9.72	235.16	clear
	0927		↓	↓	15.611	7.53	183.95	0.201	7.52	228.39	clear
	0931		18.27	0.01	15.613	7.53	80.07	0.246	5.40	222.48	

flow - 350 mL/min

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Project Number:
Field Personnel: KLT, TJD
Task #:
Client: VISTRA
Start Date: 11-14-23
Finish Date: 11-14-23
Time: 0842
Time:

WELL INFORMATION

Well ID: 50
Casing ID: inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☒ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PURGE	0935		18.27	0.01	15.659	7.539	848.05	0.268	3.43	218.15	Clear
↓	0939		18.27	0.01	15.716	7.54	1222.49	0.2579	2.14	214.59	Clear
↓	0943		18.27	0.01	15.721	7.54	917.148	0.2438	1.60	210.44	Clear
SAMPLE	0947	~7 GAL	18.27	0.01	15.746	7.54	135.73	0.283	1.25	206.54	clear

11-14-23

NOTES (continued)

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 Celsius

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.P. Client: VISTRA
Project Number: Task #: Start Date: 8/14/23 Time: 1056
Field Personnel: KLT, TJD Finish Date: 8/14/23 Time:

WELL INFORMATION

Well ID: 34
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	8.46	1056	9.75	1126
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
Initial	1109		9.58	1.12	13.89	7.40	1,395.7	4.96	9.05 (H)	-91.6	M. Iky
purge	1112		9.07	1.21	12.66	7.15	1,312.6	0.05	11.7 (H)	-90.5	Clear
	1114		9.69	1.22	12.66	7.15	1,312.6	0.05	10.07 (H)	-98.7	Clear
	~~1120~~ 1117		9.75	1.28	12.63	7.16	1,323.4	0.02	9.12 (H)	-102.8	Clear
	1120		9.75	1.28	12.63	7.17	1,334.3	0.01	9.56 (H)	~~-98.7~~ -104.3	Clear
	1123		9.69	1.22	12.57	7.18	1,346.0	0.01	8.23 (H)	-108.6	clear
SAMPLE	1126	2.2	9.75	1.28	12.57	7.18	1,348.9	0.00	6.69	-110.6	Clear

Purge Rate: 350 mL/min
Hatch (H)

~~KLT~~ 11-14-23

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/14/23 Time: 1200
Field Personnel: KLT, TJD Finish Date: 11/14/23 Time: 1300

WELL INFORMATION

Well ID: ~~HEN-~~32
Casing ID: ~~2~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	4.82	1200	4.87	1244
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1208		4.82	0.00	15.25	7.35	1,037.4	8.12	30.4	-4.0	~~Clear~~ Milky
purge	1211		4.91	0.09	14.07	7.17	1,069.9	0.34	30	14.7	Milky
	1214		4.92	0.10	14.08	7.18	1,070	0.21	24.7	14.0	Milky
	1217		4.93	0.11	14.10	7.20	1,070.9	0.17	20.3	22.3	Clear
	1220		4.92	0.10	14.13	7.21	1,047.0	0.15	17.2	29.2	Clear
	1223		4.89	0.07	14.12	7.22	1,043.3	0.15	15.4	28.3	Clear
	1226		4.87	0.05	14.10	7.22	930.14	0.18	12.6	31.5	Clear
	1229		4.86	0.04	14.10	7.22	934.16	0.15	11.1	34.5	Clear

Purge Rate: 350 mL/min

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.P
Client: VISTRA
Project Number:
Task #:
Start Date: 11-14-23 Time: 1200
Field Personnel: KLT & TJD
Finish Date: 11-14-23 Time: 1300

WELL INFORMATION

Well ID: 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
PURGE	1232		4.86	0.04	14.09	7.22	974.46	0.16	9.8	37.3	
↓	1235		4.87	0.05	14.15	7.22	981.52	0.16	9.32	39.8	
	1238		4.87	0.05	14.14	7.21	1,070.7	0.15	8.93	42.1	
↓	1241		4.85	0.03	14.10	7.21	1,052.4	0.16	7.53	44.10	
SAMPLE	1244	23.5	4.87	0.05	14.12	7.21	957.55	0.19	6.37	46.9	

11-14-23

NOTES (continued)

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

2 of 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin POWER PLANT
Client: VISTRA
Project Number:
Task #:
Field Personnel: KLT / TJD
Start Date: 11/14/23 Time: 1320
Finish Date: 11-14-23 Time:

WELL INFORMATION

Well ID: ~~HEN~~-27
Casing ID: 2" Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	3.92	13:19	3.97	13:37
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ☐ Well Casing ☐ Borehole
Volume Per Foot:
Standing Water Column: feet
1 Well Volume: Gallons 3 Well Volumes: Gallons
5 Well Volumes: Gallons 10 Well Volumes: Gallons
Total Volumes Produced: Gallons
Well Purged Dry? ☐ Yes ☐ No
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	13:25		3.92	0.00	13.76	7.49	1197.4	2.92	~~>200~~ 3.97	-35.4	CLEAR
purge	13:28		3.96	0.04	12.94	7.31	1208.1	1.02	6.54	-35.9	CLEAR
↓	13:31		3.97	0.05	12.84	7.30	1208.9	0.51	6.24	-43.8	CLEAR
↓	13:34		3.97	0.05	12.76	7.31	1207.9	0.40	6.56	-48.6	CLEAR
SAMPLE	13:37	~1	3.97	0.05	12.74	7.32	1206.3	0.38	6.12	-50.4	CLEAR

11-14-23

PURGE RATE = 275mL/MIN

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN DP
Client: VISTRA
Project Number:
Task #:
Start Date: 11-14-23 Time: 15:40
Field Personnel: KLT / TJD
Finish Date: 11-14-23 Time:

WELL INFORMATION

Well ID: 21R
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	5.81	15:40	5.87	16:22
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1549		5.81	0.00	14.40	7.48	1,120.5	1.42	73.4	-73.1	clear-b
purge	1552		5.90	0.09	13.73	7.54	1,089.9	0.58	73.2	-131.8	brown - murky
	1555		5.92	0.11	13.71	7.56	993.59	0.50	63.4	-146.9	Milky
	1558		5.83	0.02	13.73	7.59	945.60	0.42	60.4	-152.6	slightly Murky
	1601		5.85	0.04	13.64	7.61	955.38	0.38	59.8	-156.8	slightly murky
	1604		5.85	0.04	13.67	7.64	981.4	0.22	47.5	-160.0	↓
	1607		5.84	0.03	13.62	7.66	1,010.0	0.21	45.3	-162.2	slightly murky
	1610		5.85	0.04	13.59	7.67	1,024.4	0.19	39.3	-164.0	↓

Flow Rate: ~~400~~ 350 ML/min ROTTEN EGG-LIKE ODOR

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN PP
Project Number: _____ Task #: _____ Client: VISTRA
Field Personnel: KJ TJD Start Date: 11-14-23 Time: 1540
Finish Date: 11-14-23 Time: _____

WELL INFORMATION

Well ID: 21R
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	1613		5.86	0.05	13.54	7.68	1,020.9	0.11	38.1	-163.4	Milky
↓	1616		5.86	0.05	13.54	7.68	1,064.5	0.38	38.8	-166.3	milky
	1619		5.86	0.05	13.50	7.64	1,078.8	0.23	33.3	-166.7	milky
SAMPLE	1622	~4.5	5.87	0.06	13.44	7.70	1,092.0	0.12	31.6	-167.1	milky

11-15-23

NOTES (continued)

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

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/15/23 Time: 0830
Field Personnel: KLT/TJD Finish Date: 11/15/23 Time:

WELL INFORMATION

Well ID: ~~HEN-~~35
Casing ID: ~~2~~2 Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	8.17	0830	8.20	0856
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	0844		8.17	0.00	15.46	6.75	2,416.6	0.43	16.9	239.0	Clear/Brown
purge	0847		8.18	0.01	15.464	6.81	2,414.2	0.28	7.37	236.5	Clear
↓	0850		8.19	0.02	15.47	6.84	2,394.8	0.26	3.84	233.4	Clear
↓	0853		8.19	0.02	15.53	6.85	2,402.7	0.23	1.46	230.1	Clear
SAMPLE	0856	21.5	8.20	0.03	15.56	6.86	2,410.7	0.21	0.60	227.5	Clear

11-15-23

Flow Rate: 325 mL/min
Secondary pH: 6.83

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin PP
Client: VISTRA
Project Number:
Task #:
Start Date: 11/15/23 Time: 1015
Field Personnel: KLT / TJD
Finish Date: 11/15/23 Time:

WELL INFORMATION

Well ID: HEN-51
Casing ID: 2 Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

Purge Method: [ ] Bailer [x] Pump
Bailer Type: n/a
Pump Type and Serial #: QED BLADDER
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL Depth FT BTOC	INITIAL Time (24-Hour)	FINAL Depth FT BTOC	FINAL Time (24-Hour)
LNAPL				
Groundwater	18.44	1015	18.73	1042
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #:

WATER QUALITY INDICATOR PARAMETERS

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
initial	1023		18.44	0.00	13.07	7.36	1,501.2	1.42	12.7	-67.5	Milky
purge	1026		18.50	0.06	13.00	7.38	1,507.7	0.60	12.1	-95.3	Clear
↓	1027		18.72	0.28	13.03	7.39	1,507.9	0.43	12.5	-101.7	CLEAR
↓	1030		18.73	0.29	13.02	7.41	1,505.6	0.27	17.1	-110.9	Clear
↓	1033		18.75	0.31	12.98	7.42	1,506.9	0.20	19.7	-116.6	Clear
↓	1036		18.75	0.31	13.01	7.42	1,506.0	0.16	16.4	-120.3	Clear
↓	1039		18.73	0.29	12.99	7.43	1,506.2	0.14	16.0	-123.1	clear
SAMPLE	1042	~1.5	18.73	0.29	13.01	7.43	1,505.3	0.13	14.5	-124.9	Clear

- PURGE RATE ~ 300mL/min
- DUP01 (1047)
- Secondary pH: 7.42 (1027 time), 7.33 (1036 time)

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/15/23 Time: 1215
Field Personnel: KLT & TJD Finish Date: 11/15/23 Time: 1236

WELL INFORMATION

Well ID: ~~HEN-23~~
Casing ID: 2" Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

Purge Method: [ ] Bailer [x] Pump
Bailer Type: n/a
Pump Type and Serial #: QED BLADDER
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	~~16.67~~ ~~18.67~~	~~8.67~~ 1215	16.78	1236
DNAPL	DRY			
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1230		16.78	0.11	13.61	7.46	1,674.4	6.17	1.61 (H)	-80.9	Clear
purge	1233		16.77	0.10	13.57	7.48	1,672.3	0.10	2.13 (H)	-86.2	Clear*
SAMPLE	1236	20.5	16.78	0.11	13.57	7.51	1,673.5	0.08	2.69 (H)	-88.1	Clear*

11-15-23

(H)

* w/ flocculant

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/15/23 Time: 1330
Field Personnel: KTS, TJD Finish Date: 11/15/23 Time:

WELL INFORMATION

Well ID: ~~HEN~~ 49
Casing ID: [illegible] Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	21.67	1330	21.52	1358
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1340		21.50	- 0.17	15.38	7.15	1,430.2	2.60	4.65	-33.0	Clear
purge	1343		21.51	- 0.16	15.02	7.13	1,441.7	0.07	12.1	-11.0	Clear
	1346		21.51	- 0.16	15.01	7.14	1,440.5	0.15	15.4	-3.4	Clear
	1349		21.53	- 0.14	14.94	7.16	1,442.1	0.09	13.0	1.3	clear
	1352		21.56	- 0.11	15.60	7.17	1,440.7	0.08	11.4	5.0	clear
↓	1355		21.53	- 0.14	14.94	7.18	1,442.4	0.06	9.8	8.2	clear
SAMPLE	1358	~2	21.52	- 0.15	14.92	7.19	1,440.4	0.06	9.23	11.1	clear

* Strong odor (rotten egg like)
MS/MSD01

11-15-23

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/15/23 Time: 1455
Field Personnel: KH & TJD Finish Date: 11/15/23 Time:

WELL INFORMATION

Well ID: HEN-221D
Casing ID: 2" Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	19.88	1455	19.26	1537
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1458		19.0824	0.16	16.64	7.35	1,019.4	1.34	3.24	-126.6	clear*
purge	1501		19.25	0.17	16.37	7.30	1,375.3	0.78	2.15	-115.1	clear*
↓	1504		19.25	0.17	16.32	7.32	259.97	0.69	3.34	-113.9	clear
	1507		19.25	0.17	16.21	7.33	1,218.6	0.64	4.21	-113.4	clear
	1510		19.2828	0.20	16.24	7.35	1,249.5	0.80	3.39	-112.1	clear
	1513		19.28	0.20	16.19	7.37	590.13	1.29	2.68	-113.5	clear
	1516		19.28	0.20	16.23	7.38	937.92	0.64	2.26	-113.6	clear
↓	1519		19.29	0.21	16.16	7.40	1,268.9	0.81	3.54	-112.7	clear

- Flow Rate: 325 mL/min
- (*) flocculent
- Bubbles, possibly from line in well
- Secondary pH: 7.38 (1510) time

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.D
Project Number:
Task #:
Client: VISTRA
Field Personnel: KLT & TJD
Start Date: 11-15-23 Time: 1455
Finish Date: 11-15-23 Time:

WELL INFORMATION

Well ID:
Casing ID: inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☒ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PURGE	1522		19.27	0.19	16.15	7.40	1,246.4	0.55	2.17	-113.2	clear
↓	1525		19.24	0.16	16.11	7.41	1,452.2	0.81	2.18	-112.9	clear*
	1528		19.26	0.18	16.15	7.41	1,339.8	0.81	2.66	-112.9	clear*
	1531		19.24	0.16	16.08	7.42	1,447.4	0.96	2.50	-112.3	clear*
	1534		19.24	0.16	16.08	7.42	1,333.6	0.92	2.72	-112.1	clear*
SAMPLE	1537	25	19.26	0.18	16.22	7.42	1,361.1	0.72	2.17	-112.1	clear*

11-15-23

NOTES (continued)

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

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/15/23 Time: 1540
Field Personnel: KLT / TJD Finish Date: 11/15/23 Time:

WELL INFORMATION

Well ID: HEN 22
Casing ID: 2 Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	18.45	1540	18.45	16:18
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1606		18.47	0.02	15.88	7.67	1,357.8	0.20	0.64	-52.4	clear
purge	1609		18.46	0.01	15.81	7.68	1,355.8	0.15	0.55	-51.2	clear
↓	1612		18.45	0.00	15.74	7.70	1,353.2	0.13	0.55	-50.1	clear
↓	1615		18.47	0.02	15.69	7.71	1,350.2	0.11	0.77	-49.0	clear
SAMPLE	1618	20.5	18.45	0.00	15.68	7.72	1,353.0	0.11	0.49	-48.4	clear

11-15-23

*Flow Rate: 250 mL/min

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-16-23 Time: 08:54
Field Personnel: KLT, TJD
Finish Date: 11-16-23 Time:

WELL INFORMATION

Well ID: 03R
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	34.97	08:54	34.99	9:25
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	0916		34.98	0.01	17.12	7.23	1,731.5	0.15	~~6.00~~	208.7	clear
purge	0918		34.97	0.00	17.10	7.216	1,730.9	0.13	4.30	205.0	clear
↓	0922		34.98	0.01	17.18	7.24	1,732.8	0.11	3.00	203.6	clear
SAMPLE	0925	20.5	34.99	0.02	17.18	7.25	1,727.1	0.11	2.34	203.1	clear

KLT 11-16-23

MS/MSD02

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin Power Plant
Client: VISTRA
Project Number:
Task #:
Start Date: 11/16/23 Time: 1100
Field Personnel: KLT TJD
Finish Date: 11/16/23 Time:

WELL INFORMATION

Well ID: HEN-185
Casing ID: ~~2~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

Purge Method: [ ] Bailer [x] Pump
Bailer Type: n/a
Pump Type and Serial #: BLADDER
Tube/Pump Intake Depth:
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	40.72	1100	40.76	11.32
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1123		40.74	0.02	16.45	7.47	1,6490.0	0.61	2.26	128.7	clear
purge	1126		40.76	0.04	16.99	7.44	1,648.0	0.24	1.42	126.8	clear
↓	1129		40.75	0.03	17.00	7.46	1,648.8	0.19	1.31	123.0	clear
SAMPLE	1132	20.5	40.76	0.04	17.01	7.45	1,648.2	0.17	0.91	121.2	clear

TJD 11-16-23

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11/16/23 Time:
Field Personnel: TJP
Finish Date: 11/16/23 Time:

WELL INFORMATION

Well ID: ~~HEN-~~ 051R
Casing ID: ~~2~~ 2" Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	41.25	13:30	41.26	13:49
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1340		41.25	0.00	17.07	7.66	1,592.7	1.55	3.45	69.6	Clear
purge	1343		41.26	0.01	17.07	7.69	1,589.7	0.43	3.30	69.4	Clear
↓	1346		41.26	0.01	17.06	7.71	1,588.3	0.17	3.50	68.6	Clear
SAMPLE	1349	20.5	41.26	0.01	17.06	7.72	1,589.1	0.12	2.66	68.3	Clear

Flow Rate: 375 mL/min

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: ~~HEN-10~~ Hennepin P P Client: VISTRA
Project Number: Task #: Start Date: 11/16/23 Time: 1515
Field Personnel: TJD Finish Date: 11/16/23 Time:

WELL INFORMATION

Well ID: ~~HEN-~~10
Casing ID: ~~2~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	50.607	1525 ~~1555~~ BJ	50.606	1541
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #: Water Quality Probe Type and Serial #:

WATER QUALITY INDICATOR PARAMETERS

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
initial	1529		50.606	-0.01	~~7.19~~ 19.53	7.14	1,654.2	2.07	0.68	114.9	
purge	1532		50.607	0.00	19.609	7.13	1,664.1	1.64	0.64	114.9	
↓	1535		50.606	-0.01	19.776	7.13	1,843.1	1.60	0.52	114.1	
	1538		50.605	-0.02	19.80	7.12	1,844.1	1.59	0.67	113.9	
SAMPLE	1541	20.5	50.606	-0.01	19.80	7.12	1,844.6	1.59	0.70	113.7	

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin PP
Project Number:
Field Personnel: TJD
Task #:
Client: VISTRA
Start Date: 11-17-23 Time: ~~0915~~ 0853
Finish Date: 11-17-23 Time: ~~0945~~ 0903

WELL INFORMATION

Well ID: HEN 54
Casing ID: ~~Ø2~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	53.10	0853	53.10	0902
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	0853		53.10	0.00	16.45	7.37	4,740.1	1.48	4.36	230.5	
purge	0856		53.11	0.01	17.03	7.32	4,715.8	1.01	3.59	215.6	
↓	0859		53.11	0.01	17.04	7.35	4,708.0	0.68	2.41	212.8	
SAMPLE	0902	20.5	53.10	0.00	16.47	7.36	4,702.0	0.57	3.19	208.10	
				~~TJD~~	11-17-23						

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-17-23 Time: 0955
Field Personnel: JJD
Finish Date: 11-17-23 Time:

WELL INFORMATION

Well ID: ~~HEN~~ 12
Casing ID: ~~PVC~~ 2 Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	51.03	0955	51.08	1019
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1007		51.06	-0.02	18.50	7.37	4,770	2.41	1.32	157.4	Clear
purge	1010		51.07	-0.01	18.64	7.36	4,719.0	2.36	1.09	153.6	Clear
↓	1013		51.07	-0.01	18.72	7.36	4,719.6	2.33	1.02	147.0	Clear
	1016		51.08	0.00	18.69	7.35	4,717.4	2.31	1.31	144.7	clear
SAMPLE	1019	2 /	51.08	0.00	18.67	7.35	4,713.8	2.30	1.04	140.1	Clear

Flow Rate: 300 mL/min

1 of 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin River Plant
Client: NISTRA
Project Number:
Task #:
Start Date: 11-17-23 Time: 1222
Field Personnel: TJD
Finish Date: 11-17-23 Time: 1231

WELL INFORMATION

Well ID: ~~HEN-03D~~
Casing ID: ~~2~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	54.03	1222	54.04	1231
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1222		54.04	-0.01	13.62	6.78	11,073	0.44	2.14	154.6	Clear
purge	1225		54.04	-0.01	13.60	6.76	11,033	0.32	2.25	153.8	Clear
↓	1228		54.04	-0.01	13.59	6.76	11,037	0.16	2.18	153.0	Clear
SAMPLE	1231	~1	54.04	-0.01	13.63	6.76	11,218	0.12	1.36	152.3	Clear
							TD 11-17-23				

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P. Client: VISTRA
Project Number: Task #: Start Date: 11/17/23 Time: 1400
Field Personnel: TJD Finish Date: 11/17/23 Time:

WELL INFORMATION

Well ID: ~~MW-17~~
Casing ID: ~~2~~ 2 Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

Purge Method: ☐ Bailer ☑ Pump
Bailer Type: n/a
Pump Type and Serial #: BLADDER
Tube/Pump Intake Depth: 1
Stabilized Pumping Rate:

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	55.35	1400	55.36	14:17
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1408		55.35	0.00	17.85	7.31	4,370.2	5.75	2.06	135.0	clear
purge	1411		55.35	0.00	17.84	7.34	4,734.2	5.71	1.13	130.6	↓
↓	1414		55.36	0.01	17.87	7.34	4,726.7	5.70	1.40	130.3	
SAMPLE	1417	~1	55.36	0.01	17.84	7.34	4,723.0	5.64	1.05	130.9	↓

Flow Rate = 360 ML/min

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P.P
Client: VISTRA
Project Number:
Task #:
Start Date: 11/29/23 Time:
Field Personnel: TJD
Finish Date: 11/29/23 Time:

WELL INFORMATION

Well ID: HEN-455
Casing ID: [illegible] Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	20.55	0851	20.56	0915
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	0851		20.55	0.00	14.00	7.17	6,047.3	0.31	115	203.4	Murky
purge	0854		20.55	0.00	18.12	7.19	5,999.3	0.15	98	201.5	cloudy
	0857		20.60	0.05	18.08	7.20	5,485.8	0.11	116	200.2	cloudy
	0900		20.55	0.00	18.15	7.20	5,977.5	0.10	95	198.4	cloudy
	0903		20.55	0.00	18.22	7.20	5,969.5	0.09	87.6	196.4	cloudy
	0906		20.56	0.01	17.85	7.20	5,970.3	0.11	76.8	195.0	cloudy
	0909		20.56	0.01	18.25	7.20	5,963.6	0.10	88.7	192.7	cloudy
	0912		20.56	0.01	18.27	7.20	5,963.6	0.10	48.3	189.9	cloudy

1 of 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN POWER PLANT Client: VISTRA
Project Number: _____ Task #: _____ Start Date: 11-20-23 Time: _____
Field Personnel: _____ Finish Date: 11-20-23 Time: _____

WELL INFORMATION

Well ID: 455
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
SAMPLE	0915	23	20.56	0.01	13.22	7.20	5.96k.3	0.09	40.3	138.1	cloudy

NOTES (continued)

ABBREVIATIONS

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

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Hennepin P P. Client: VISTRA
Project Number: Task #: Start Date: 11/30/23 Time:
Field Personnel: TJD Finish Date: 11/30/23 Time:

WELL INFORMATION

Well ID: HEN-802
Casing ID: ~~R22~~ Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	45.15	1119	45.14	1130
DNAPL				
Casing Base				

Water Level Serial #:

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	1119		45.15	0.00	12.10	7.02	6.053.4	2.32	1.37	146.2	Clear
purge	1122		45.15	0.00	12.07	7.03	6.045.7	2.82	1.08	146.2	↓
↓	1125		45.15	0.00	12.04	7.04	6.053.3	2.82	0.62	146.4	↓
↓	1128		45.14	-0.01	12.07	7.04	6.037.5	2.83	0.44	146.4	↓
SAMPLE	1130	21	45.14	-0.01	12.07	7.04	6.025.4	2.83	0.89	146.5	↓

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT — Client: VISTRA
Project Number: — Task #: — Start Date: 11-20-23 — Time: 12:30
Field Personnel: K. LITTLE — Finish Date: 11-20-23 — Time:

WELL INFORMATION

Well ID: 07
Casing ID: ___ Inches
Screen Interval: ___
Borehole Diameter: ___ Inches
Filter Pack Interval: ___

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	68.55	12:37	68.54	13:12
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #: ___
Water Quality Probe Type and Serial # ___

WATER QUALITY INDICATOR PARAMETERS

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
initial	1251		68.55	0.00	11.45	6.47	7,370.3	4.23	0.44	176.0	clear*
purge	1254		68.55	0.00	11.46	6.97	7,376.4	4.11	0.78	174.9	clear*
↓	1257		68.55	0.00	11.49	6.97	7,355.1	4.05	0.00	173.4	clear*
	1300		68.55	0.00	11.33	6.97	7,322.8	4.02	0.11	173.3	clear
	1303		68.55	0.00	10.99	6.97	7,330.9	4.01	0.67	173.0	clear
	1306		68.54	-0.01	11.42	6.97	7,303.0	4.03	0.51	172.1	clear
↓	1309		68.55	0.00	11.40	6.97	7,334.2	4.05	0.61	171.8	↓
SAMPLE	1312	~2.5	68.54	-0.01	11.42	6.96	7,297.8	4.01	0.64	171.3	↓

} * pump battery was changed

* w/ light brown flocculent
Flow Rate: 425 mL/min

* Turbelity measurment is (-) -0.01, even when checked w/ standard

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-16-23 Time: 10:56
Field Personnel: KLT
Finish Date: 11-16-23 Time: 12:50

WELL INFORMATION

Well ID: 18D
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	40.80	10:56	40.87	11:55
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	11:13		40.90	0.10	16.90	7.18	3.05	3.25	~~28.40~~	167.8	CLEAR
purge	11:16		40.91	0.11	16.97	7.13	56.39	2.45	14.0	151.4	CLEAR
↓	11:19		40.92	0.12	17.01	7.10	58.02	4.52	18.4	126.6	CLEAR
	11:22		40.96	0.16	17.03	7.07	2.48	4.69	17.7	103.3	CLEAR
	11:25		40.92	0.12	17.06	7.10	45.75	6.21	19.3	54.9	CLEAR
	11:28		40.87	0.07	17.05	7.00	56.35	5.54	15.4	33.8	CLEAR
↓	11:31		40.86	0.06	~~17.15~~	6.92	37.17	6.15	17.5	39.8	CLEAR
	11:34		40.86	0.06	17.21	6.90	41.52	6.06	14.8	54.3	CLEAR

SECONDARY pH READ 7.02

FLOW RATE @ 350mL/min
drop to 275 mL/min @ 11:22

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-16-23 Time: 10:56
Field Personnel: KLT
Finish Date: 11-16-23 Time: 12:50

WELL INFORMATION

Well ID: 18D
Casing ID: inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☒ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PURGE	11:37		40.86	0.06	17.39	7.03	53.42	5.64	14.2	61.1	CLEAR
	11:40		40.86	0.06	17.62	6.97	43.42	5.58	—	71.0	CLEAR
	11:43		40.87	0.07	17.80	6.88	9.32	5.24	13.5	71.8	CLEAR
	11:46		40.87	0.07	18.04	6.86	8.05	5.32	10.6	77.0	CLEAR
	11:49		40.87	0.07	18.25	6.87	14.40	4.94	12.2	82.5	CLEAR
	11:52		40.87	0.07	18.37	6.74	20.93	4.21	9.76	76.7	CLEAR
SAMPLE	11:55	14gal	40.87	0.07	18.59	6.74	14.81	4.80	10.28	75.5	CLEAR

11-16-23

NOTES (continued)

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 Celsius

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Field Personnel: KLT
Start Date: 11-16-23 Time: 13:15
Finish Date: 11-16-23 Time: 14:35

WELL INFORMATION

Well ID: 05DR
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	41.20	13:15	41.30	13:46
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	13:34		41.30	0.10	16.95	7.37	1,310.7	3.57	1.57	94.3	CLEAR
purge	13:37		41.30	0.10	17.00	7.39	1,311.3	1.98	0.80	91.1	CLEAR
↓	13:40		41.30	0.10	17.00	7.40	1,359.8	1.14	1.22	88.2	CLEAR
	13:43		41.30	0.10	17.00	7.41	13584	0.95	1.86	85.8	CLEAR
↓	13:46	~2gal	41.30	0.10	16.99	7.41	1,359.9	0.91	1.87	84.2	CLEAR

11-16-23

FLOW RATE = 200mL/min

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN P.P. Client: VISTRA
Project Number: Task #: Start Date: 11-16-23 Time: 14:50
Field Personnel: KLT Finish Date: 11-16-23 Time: 15:48

WELL INFORMATION

Well ID: 40S
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	40.45	14:55	40.47	15:19
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	15:07		40.45	0.00	17.06	7.79	1,276.6	0.89	0.50	58.5	CLEAR
purge	15:10		40.46	0.01	17.10	7.80	1,277.1	0.24	0.67	56.2	CLEAR
	15:13		40.47	0.02	17.09	7.81	1,276.4	0.17	0.66	54.4	CLEAR
↓	15:16		40.47	0.02	17.08	7.81	1,276.1	0.14	0.48	53.0	CLEAR
SAMPLE	15:19	2.2gal	40.47	0.02	17.07	7.81	1,276.6	0.12	0.27	51.8	↓
					11-16-23						

FLOW RATE = 400mL/min

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Field Personnel: KLJ
Start Date: 11-17-23 Time: 08:25
Finish Date: 11-17-23 Time:

WELL INFORMATION

Well ID: 47
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	55.52	08:27	55.53	09:33
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

	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
	initial	~~08:43~~		55.53	0.01	17.42	6.92	1,037.1	2.04	0.23	230.8	CLEAR
	purge	08:47		55.53	0.01	17.67	6.92	1,032.6	1.77	0.30	228.5	CLEAR
	↓	08:50		55.53	0.01	17.80	6.96	1,035.2	1.74	0.27	224.2	CLEAR
		08:53		55.53	0.01	17.79	6.98	1,031.5	1.69	—	221.3	CLEAR
*	↓	09:20		55.53	0.01	17.95	7.05	1,046.1	1.69	0.00	193.9	CLEAR
	↓	09:23		55.53	0.01	17.96	7.07	1,085.4	1.616	0.00	192.6	CLEAR
	↓	09:27		55.53	0.01	17.85	7.07	1,044.0	1.59	0.00	191.9	CLEAR
	↓	09:30		55.53	0.01	17.89	7.07	1044.4	1.57	0.00	190.7	CLEAR

* TUBING AIR LEAK? BUBBLES IN LINE
EUROFINS PICKUP CAME EARLY (08:55) HAD TO STOP TEST TO DROP SAMPLES

FLOW RATE ~ 350mL/MIN

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN P.P. Client: VISTRA
Project Number: Task #: Start Date: ~~11-16-23~~ 11-17-23 Time: 09:25
Field Personnel: KT Finish Date: 11-17-23 Time: 09:57

WELL INFORMATION

Well ID: 47
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
SAMPLE ~~PURGE~~	09:33	4gal	55.53	0.01	17.87	7.07	1043.6	1.56	0.00	189.7	CLEAR

11-17-23

NOTES (continued)

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

2 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Project Number:
Field Personnel: KLT
Task #:
Client: VISTRA
Start Date: 11-17-23 Time: 11:21
Finish Date: 11-17-23 Time: 11:58 13:53

WELL INFORMATION

Well ID: 08
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	53.85	12:11	53.88	12:29
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	12:17		53.89	0.04	13.80	6.88	2,039.5	2.58	0.24	168.2	CLEAR
purge	12:20		53.88	0.03	13.75	6.88	2,068.8	1.30	0.38	168.7	↓
↓	12:23		53.88	0.03	13.70	6.89	2,135.7	1.02	0.09	168.5	↓
↓	12:26		53.87	0.02	13.70	6.89	2,130.7	1.58	0.06	168.6	↓
↓	12:29		53.88	0.03	13.63	6.89	2,132.0	1.36	0.03	168.7	↓
SAMPLE	12:32		53.88	0.03							
					11-17-23						

DUP03

~300 ML/MIN

CALLED EUROFINS - AMMONIA BOTTLE MISSING FROM DUP KIT. CAN PULL FROM PHENOLS BOTTLE - FOLLOWUP WAS JUST A DIFFERENT STYLE BOTTLE

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN P.P. Client: VISTRA
Project Number: Task #: Start Date: 11-17-23 Time: 13:55
Field Personnel: KLT Finish Date: 11-17-23 Time:

WELL INFORMATION

Well ID: 16
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	54.42	14:05	54.49	14:29
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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
initial	14:11		54.45	0.03	17.31	7.32	911.80	7.73	0.51	146.0	MILKY
purge	14:14		54.48	0.06	15.78	7.34	913.76	6.56	0.18	148.6	CLEAR
↓	14:17		54.49	0.07	15.57	7.33	915.96	6.16	0.29	149.7	↓
↓	14:20		54.49	0.07	15.50	7.34	916.04	6.05	0.26	150.0	↓
↓	14:23		54.48	0.06	15.27	7.34	915.63	6.01	0.19	150.6	↓
↓	14:26		54.49	0.07	15.33	7.34	915.63	5.98	0.09	150.8	↓
SAMPLE	14:29		54.49	0.07	15.24	7.34	915.25	5.98	0.14	151.1	↓
					11-17-23						

FLOW RATE=

1 OF 1

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Start Date: 11-20-23 Time: 0828
Field Personnel: KLT
Finish Date: 11-20-23 Time: 0935

WELL INFORMATION

Well ID: 416
Casing ID: Inches
Screen Interval:
Borehole Diameter: Inches
Filter Pack Interval:

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	51.58	0831	51.58	0913
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #:
Water Quality Probe Type and Serial #

WATER QUALITY INDICATOR PARAMETERS

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	
initial	0843		51.58	0.00								FORGOT TO START
purge	0846		51.58	0.00	17.56	7.04	952.47	3.67	0.64	246.1	CLEAR	
↓	0849		51.58	0.00	17.62	7.08	587.69	3.21	0.19	242.5	↓	
	0852		51.58	0.00	17.62	7.15	545.35	3.12	1.09	237.3		
	0855		51.58	0.00	17.94	7.19	413.39	3.08	1.07	233.5		
	0858		51.58	0.00	18.03	7.22	441.05	3.03	0.53	230.4		
	0901		51.58	0.00	18.05	7.23	435.64	3.01	0.50	228.1		
↓	0904		51.58	0.00	18.30	7.23	450.28	2.99	0.54	227.0	↓	

FLOW ~ 375 mL/MIN

1 OF 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HEN POWER PLANT
Client:
Project Number:
Task #:
Field Personnel: KLT
Start Date: 11-20-23 Time: 0828
Finish Date: 11-20-23 Time: 0935

WELL INFORMATION

Well ID: 4Q
Casing ID: inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☒ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PURGE	0907		51.58	0.00	18.08	7.25	433.23	2.98	0.00	224.7	CLEAR
↓	0910		51.58	0.00	18.14	7.26	440.23	2.96	0.12	222.7	
SAMPLE	0913	~3.5	51.58	0.00	18.16	7.27	442.66	2.95	0.24	221.0	↓

11-20-23

NOTES (continued)

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

20F2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number: _____ Task #: _____
Start Date: 11-20-23 Time: 09:39
Field Personnel: KLT
Finish Date: 11-20-23 Time: 10:41

WELL INFORMATION

Well ID: 52
Casing ID: _____ Inches
Screen Interval: _____
Borehole Diameter: _____ Inches
Filter Pack Interval: _____

EVENT TYPE

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

PURGE INFORMATION

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

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Time (24-Hour)	Depth FT BTOC	Time (24-Hour)
LNAPL				
Groundwater	53.93	09:42	54.01	10:18
DNAPL				
Casing Base				

VOLUME CALCULATION AND PRODUCTION INFORMATION

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

Water Level Serial #: _____
Water Quality Probe Type and Serial # _____

WATER QUALITY INDICATOR PARAMETERS

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
initial	09:51		53.97	0.04	17.86	7.09	1,111.9	2.52	21.8	209.5	CLEAR
purge	09:54		54.00	0.07	18.06	7.09	1,117.3	2.20	5.34	208.5	
	09:57		54.00	0.07	18.20	7.07	1,124.7	2.21	4.30	207.7	
	10:00		54.01	0.08	18.38	7.06	1,128.9	2.23	3.27	207.1	
	10:03		54.01	0.08	18.46	7.06	1,130.1	2.25	3.16	205.5	
	10:06		54.01	0.08	18.36	7.07	1,128.8	2.26	2.25	204.2	
	10:09		54.01	0.08	18.50	7.06	1,129.5	2.26	2.01	203.2	
↓	10:12		54.01	0.08	18.39	7.08	1,128.7	2.27	1.58	201.0	↓

FLOW ~ 375 mL/MIN

1 of 2

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: HENNEPIN POWER PLANT
Client: VISTRA
Project Number:
Task #:
Field Personnel: KLT
Start Date: 11-20-23 Time: 09:39
Finish Date: 11-20-23 Time: 10:41

WELL INFORMATION

Well ID: 52
Casing ID: inches

EVENT TYPE

☐ Well Development
☐ Well Volume Approach Sampling
☒ Low-Flow / Low Stress Sampling
☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
PURGE	10:15		54.01	0.08	18.43	7.09	1,129.2	2.28	1.33	199.5	CLEAR
SAMPLE	10:18	~4	54.01	0.08	18.47	7.09	1,129.6	2.30	1.01	198.1	↓

11-20-23

NOTES (continued)

SECONDARY pH @ 10:18 = 7.19

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

2 of 2

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: HEN
Event: HEN-23Q4 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
02	HEN_02	11-13-23	12:11	45.08		KLT
03R	HEN_03R	11-13-23	10:47	35.50		KLT
04R	HEN_04R	11-13-23	11:55	39.54		KLT
05R	HEN_05!R	11-13-23	11:09	41.37		KLT
05DR	HEN_05&DR	11-13-23	11:08	41.44		KLT
06	HEN_06	11-13-23	10:30	22.82		KLT
07	HEN_07	11-13-23	17:00	68.54		KLT
08	HEN_08	11-13-23	07:50	54.02		KLT
08D	HEN_08&D	11-13-23	07:38	54.23		KLT
10	HEN_10	11-13-23	09:35	50.80		KLT
11	HEN_11	11-13-23	09:37	51.00		KLT
12	HEN_12	11-13-23	08:37	52.26		KLT
13	HEN_13	11-13-23	08:40	51.25		KLT
15	HEN_15	11-13-23	08:15	49.67		KLT
16	HEN_16	11-13-23	08:01	54.67		KLT
17	HEN_17	11-13-23	12:05	56.23		KLT
18S	HEN_18#S	11-13-23	10:59	40.85		KLT
18D	HEN_18&D	11-13-23	10:57	40.95		KLT
19S	HEN_19#S	11-13-23	NM	NM	CASING BROKEN	KLT
19D	HEN_19&D	11-13-23	11:33	40.21		KLT

NM

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: HEN
Event: HEN-23Q4 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
21R	HEN_21R	11-13-23	14:25	5.77		KLT
22	HEN_22	11-13-23	13:32	18.43		KLT
22D	HEN_22&D	11-13-23	13:40	22.10		KLT
23	HEN_23	11-13-23	13:55	17.69		KLT
25	HEN_25	11-13-23	15:42	15.84		KLT
26	HEN_26	11-13-23	15:46	15.91		KLT
27	HEN_27	11-13-23	14:56	3.91		KLT
30	HEN_30	11-13-23	14:48	6.44		KLT
31	HEN_31	11-13-23	14:50	7.34		KLT
32	HEN_32	11-13-23	15:10	4.79		KLT
33	HEN_33	11-13-23	15:22	3.58		KLT
34	HEN_34	11-13-23	14:38	8.15		KLT
@14:30 → 35	HEN_35	11-13-23	14:15	8.37		KLT
36	HEN_36	11-13-23	15:56	15.27		KLT
40S	HEN_40#S	11-13-23	11:28	40.61		KLT
45S	HEN_45#S	11-13-23	10:35	21.45		KLT
46	HEN_46	11-13-23	08:35	51.46		KLT
47	HEN_47	11-13-23	09:08	55.72		KLT
48	HEN_48	11-13-23	NM	NM	CASING LIKELY COMPROMISED NEARBY HORNETS	KLT MUD
49	HEN_49	11-13-23	13:47	21.49		KLT
50	HEN_50	11-13-23	13:24	18.24		KLT
51	HEN_51	11-13-23	14:00	18.59		KLT
52	HEN_52	11-13-23	09:12	53.88		KLT
54	HEN_54	11-13-23	08:52	53.31		KLT
55	HEN_55	11-13-23	08:46	51.26		KLT
XPW01	HEN_XPW01_pore	11-13-23	16:36	11.43		KLT
XPW02	HEN_XPW02_pore	11-13-23	16:28	15.61		KLT
XPW03	HEN_XPW03_pore	11-13-23	16:16	7.14		KLT
XSG01	HEN_XSG01	11-13-23	16:18	10.28		KLT
SG02	HEN_YSG_ILRIVER					
53		11-13-23	09:26	55.68	U:10/03/23 JRK	KLT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Voelker
Vistra Energy Corp
133 S 4th, Suite 206
Springfield, Illinois 62701

Generated 01/04/24 14:52:21 Revision 1

JOB DESCRIPTION

HEN-23Q4
HEN_845_802-805_RAD

JOB NUMBER

500-242591-11

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Eurofins Chicago

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Generated
01/04/24 14:52:21
Revision 1

Authorized for release by
Dirk Nelson, Project Management Assistant II
Dirk.Nelson@et.eurofinsus.com
Designee for
Donna Campbell, Manager of Project Management
Donna.Campbell@et.eurofinsus.com
(217)519-2114

Table of Contents

Case Narrative

Client: Vistra Energy Corp
Project: HEN-23Q4

Job ID: 500-242591-11

Job ID: 500-242591-11 — Eurofins Chicago

Job Narrative
500-242591-11

Revision

The report being provided is a revision of the original report sent on 12/27/23. The report (revision 1) is being revised due to: Client revision requests:
Revise the sample times for the following wells:
HEN_18S 11:32

Receipt

The samples were received on 11/15/2023 11:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 15 coolers at receipt time were 1.8º C, 2.3º C, 2.4º C, 3.0º C, 3.2º C, 4.2º C, 4.4º C, 4.6º C, 4.6º C, 4.9º C, 4.9º C, 5.0º C, 5.0º C, 5.6º C and 5.7º C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Sample #14 no sample time listed on COC, logged per container labels. HEN_03R (500-242591-14), HEN_03R_MS (500-242591-14[MS]) and HEN_03R_MSD (500-242591-14[MSD])

RAD

Methods 903.0: Radium-226 batch 637741
The sample duplicate (DUP) precision for Radium-226 was outside the control limits. However the original sample and DUP activity is below the MDC / RL making the measurement of precision less critical. The lab does not believe this discrepancy to have a negative impact on the data being reported. (500-242591-N-16-A DU)

Method PrecSep-21:
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_03R — Lab Sample ID: 500-242591-14

No Detections.

Client Sample ID: HEN_18#S — Lab Sample ID: 500-242591-15

No Detections.

Client Sample ID: HEN_18&D — Lab Sample ID: 500-242591-16

No Detections.

Client Sample ID: HEN_08&D — Lab Sample ID: 500-242591-26

No Detections.

Client Sample ID: HEN_08 — Lab Sample ID: 500-242591-27

No Detections.

Client Sample ID: HEN_08_FD — Lab Sample ID: 500-242591-28

No Detections.

Client Sample ID: HEN_45#S — Lab Sample ID: 500-242591-32

No Detections.

Client Sample ID: HEN_45#S_FD — Lab Sample ID: 500-242591-33

No Detections.

Client Sample ID: HEN_07 — Lab Sample ID: 500-242591-38

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_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-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-242591-14	HEN_03R	Water	11/16/23 09:25	11/17/23 11:27
500-242591-15	HEN_18#S	Water	11/16/23 11:32	11/17/23 11:27
500-242591-16	HEN_18&D	Water	11/16/23 11:55	11/17/23 11:27
500-242591-26	HEN_08&D	Water	11/17/23 12:31	11/17/23 18:00
500-242591-27	HEN_08	Water	11/17/23 12:32	11/17/23 18:00
500-242591-28	HEN_08_FD	Water	11/17/23 12:37	11/17/23 18:00
500-242591-32	HEN_45#S	Water	11/20/23 09:15	11/21/23 08:06
500-242591-33	HEN_45#S_FD	Water	11/20/23 09:20	11/21/23 08:06
500-242591-38	HEN_07	Water	11/20/23 13:12	11/21/23 08:06

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_03R

Date Collected: 11/16/23 09:25
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-14

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	0.218	U	0.192	0.193	1.00	0.295	pCi/L	11/21/23 10:58	12/21/23 07:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*30 - 110*	*11/21/23 10:58*	*12/21/23 07:21*	*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	0.266	U	0.391	0.391	1.00	0.659	pCi/L	11/21/23 11:02	12/20/23 11:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*30 - 110*	*11/21/23 11:02*	*12/20/23 11:58*	*1*
Y Carrier	*73.6*		*30 - 110*	*11/21/23 11:02*	*12/20/23 11:58*	*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	0.484	U	0.436	0.436	5.00	0.659	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_18#S

Date Collected: 11/16/23 11:32
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-15

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	0.186	U	0.173	0.174	1.00	0.258	pCi/L	11/21/23 11:04	12/20/23 18:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*11/21/23 11:04*	*12/20/23 18:28*	*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	0.270	U	0.344	0.345	1.00	0.572	pCi/L	11/21/23 11:11	12/20/23 11:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*1*
Y Carrier	*75.1*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*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	0.456	U	0.385	0.386	5.00	0.572	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_18&D

Date Collected: 11/16/23 11:55
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-16

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	**0.561**		0.266	0.271	1.00	0.312	pCi/L	11/21/23 11:04	12/20/23 18:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*30 - 110*	*11/21/23 11:04*	*12/20/23 18:42*	*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	0.221	U	0.371	0.371	1.00	0.632	pCi/L	11/21/23 11:11	12/20/23 11:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*1*
Y Carrier	*78.9*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*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	**0.782**		0.457	0.459	5.00	0.632	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_08&D

Date Collected: 11/17/23 12:31
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-26

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	**0.632**		0.261	0.267	1.00	0.279	pCi/L	11/22/23 09:46	12/21/23 19:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*30 - 110*	*11/22/23 09:46*	*12/21/23 19:27*	*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	0.492	U	0.369	0.372	1.00	0.562	pCi/L	11/22/23 09:53	12/21/23 11:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*1*
Y Carrier	*73.3*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*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	**1.12**		0.452	0.458	5.00	0.562	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_08

Date Collected: 11/17/23 12:32
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-27

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	0.373		0.247	0.250	1.00	0.356	pCi/L	11/22/23 09:46	12/21/23 20:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.7*		*30 - 110*	*11/22/23 09:46*	*12/21/23 20:51*	*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	0.654		0.378	0.382	1.00	0.543	pCi/L	11/22/23 09:53	12/21/23 11:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.7*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*1*
Y Carrier	*77.4*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*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		0.452	0.457	5.00	0.543	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_08_FD

Date Collected: 11/17/23 12:37
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-28

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	0.238	U	0.190	0.191	1.00	0.276	pCi/L	11/22/23 09:46	12/21/23 20:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*11/22/23 09:46*	*12/21/23 20:51*	*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	**0.631**		0.415	0.420	1.00	0.621	pCi/L	11/22/23 09:53	12/21/23 11:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*1*
Y Carrier	*75.1*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:58*	*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	**0.869**		0.456	0.461	5.00	0.621	pCi/L		12/22/23 17:50	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_45#S

Date Collected: 11/20/23 09:15
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-32

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	**0.394**		0.242	0.245	1.00	0.322	pCi/L	11/27/23 10:49	12/22/23 14:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*11/27/23 10:49*	*12/22/23 14:27*	*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	0.414	U	0.430	0.432	1.00	0.693	pCi/L	11/27/23 10:59	12/19/23 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:27*	*1*
Y Carrier	*80.7*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:27*	*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	**0.808**		0.493	0.497	5.00	0.693	pCi/L		12/27/23 14:29	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_45#S_FD

Date Collected: 11/20/23 09:20
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-33

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	0.0975	U	0.185	0.185	1.00	0.329	pCi/L	11/27/23 10:49	12/22/23 14:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*11/27/23 10:49*	*12/22/23 14:27*	*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	0.288	U	0.503	0.504	1.00	0.863	pCi/L	11/27/23 10:59	12/19/23 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:27*	*1*
Y Carrier	*74.0*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:27*	*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	0.386	U	0.536	0.537	5.00	0.863	pCi/L		12/27/23 14:29	1

Client Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_07

Date Collected: 11/20/23 13:12
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-38

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	**0.409**		0.222	0.225	1.00	0.292	pCi/L	11/27/23 10:49	12/22/23 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.1*		*30 - 110*	*11/27/23 10:49*	*12/22/23 14:28*	*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	0.568	U	0.431	0.434	1.00	0.667	pCi/L	11/27/23 10:59	12/19/23 16:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.1*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:28*	*1*
Y Carrier	*77.4*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:28*	*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	**0.978**		0.485	0.489	5.00	0.667	pCi/L		12/27/23 14:29	1

Definitions/Glossary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Qualifiers

Rad

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit
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-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Rad

Prep Batch: 637738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	PrecSep-21	
MB 160-637738/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-637738/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	PrecSep-21	
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	PrecSep-21	

Prep Batch: 637740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-14	HEN_03R	Total/NA	Water	PrecSep_0	
MB 160-637740/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-637740/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-242591-14 MS	HEN_03R_MS	Total/NA	Water	PrecSep_0	
500-242591-14 MSD	HEN_03R_MSD	Total/NA	Water	PrecSep_0	

Prep Batch: 637741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total/NA	Water	PrecSep-21	
500-242591-16	HEN_18&D	Total/NA	Water	PrecSep-21	
MB 160-637741/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-637741/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-242591-16 DU	HEN_18&D	Total/NA	Water	PrecSep-21	

Prep Batch: 637742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-15	HEN_18#S	Total/NA	Water	PrecSep_0	
500-242591-16	HEN_18&D	Total/NA	Water	PrecSep_0	
MB 160-637742/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-637742/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-242591-16 DU	HEN_18&D	Total/NA	Water	PrecSep_0	

Prep Batch: 637928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-26	HEN_08&D	Total/NA	Water	PrecSep-21	
500-242591-27	HEN_08	Total/NA	Water	PrecSep-21	
500-242591-28	HEN_08_FD	Total/NA	Water	PrecSep-21	
MB 160-637928/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 637931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-26	HEN_08&D	Total/NA	Water	PrecSep_0	
500-242591-27	HEN_08	Total/NA	Water	PrecSep_0	
500-242591-28	HEN_08_FD	Total/NA	Water	PrecSep_0	
MB 160-637931/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-637931/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 638356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total/NA	Water	PrecSep-21	
500-242591-33	HEN_45#S_FD	Total/NA	Water	PrecSep-21	
500-242591-38	HEN_07	Total/NA	Water	PrecSep-21	
MB 160-638356/1-A	Method Blank	Total/NA	Water	PrecSep-21	

QC Association Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Rad (Continued)

Prep Batch: 638356 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-638356/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 638358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-32	HEN_45#S	Total/NA	Water	PrecSep_0	
500-242591-33	HEN_45#S_FD	Total/NA	Water	PrecSep_0	
500-242591-38	HEN_07	Total/NA	Water	PrecSep_0	
MB 160-638358/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-638358/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-637738/1-A
Matrix: Water
Analysis Batch: 641668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637738

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1201	U	0.199	0.199	1.00	0.345	pCi/L	11/21/23 10:58	12/20/23 20:54	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*30 - 110*	*11/21/23 10:58*	*12/20/23 20:54*	*1*

Lab Sample ID: LCS 160-637738/2-A
Matrix: Water
Analysis Batch: 641668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637738

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.821		1.27	1.00	0.309	pCi/L	87	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.0*		*30 - 110*

Lab Sample ID: 500-242591-14 MS
Matrix: Water
Analysis Batch: 641812

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA
Prep Batch: 637738

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.218	U	11.4	9.948		1.21	1.00	0.269	pCi/L	85	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*99.7*		*30 - 110*

Lab Sample ID: 500-242591-14 MSD
Matrix: Water
Analysis Batch: 641812

Client Sample ID: HEN_03R_MSD
Prep Type: Total/NA
Prep Batch: 637738

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	0.218	U	11.4	9.116		1.13	1.00	0.249	pCi/L	78	60 - 140	0.36	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*100*		*30 - 110*

Lab Sample ID: MB 160-637741/1-A
Matrix: Water
Analysis Batch: 641474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637741

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06042	U	0.132	0.132	1.00	0.244	pCi/L	11/21/23 11:04	12/20/23 18:28	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-637741/1-A
Matrix: Water
Analysis Batch: 641474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637741

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		30 - 110	11/21/23 11:04	12/20/23 18:28	1

Lab Sample ID: LCS 160-637741/2-A
Matrix: Water
Analysis Batch: 641474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637741

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.379		1.23	1.00	0.319	pCi/L	83	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.9		30 - 110

Lab Sample ID: 500-242591-16 DU
Matrix: Water
Analysis Batch: 641668

Client Sample ID: HEN_18&D
Prep Type: Total/NA
Prep Batch: 637741

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.561			0.05877	U F	0.174	1.00	0.323	pCi/L			1.13	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	101		30 - 110

Lab Sample ID: MB 160-637928/1-A
Matrix: Water
Analysis Batch: 641696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637928

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03703	U	0.146	0.146	1.00	0.283	pCi/L	11/22/23 09:46	12/21/23 19:21	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		30 - 110	11/22/23 09:46	12/21/23 19:21	1

Lab Sample ID: MB 160-638356/1-A
Matrix: Water
Analysis Batch: 641880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638356

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06469	U	0.132	0.133	1.00	0.237	pCi/L	11/27/23 10:49	12/22/23 14:25	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		30 - 110	11/27/23 10:49	12/22/23 14:25	1

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-638356/2-A
Matrix: Water
Analysis Batch: 641880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638356

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	13.65		1.56	1.00	0.278	pCi/L	120	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.4*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-637740/1-A
Matrix: Water
Analysis Batch: 641668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637740

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2300	U	0.324	0.325	1.00	0.545	pCi/L	11/21/23 11:02	12/20/23 12:05	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*30 - 110*	*11/21/23 11:02*	*12/20/23 12:05*	*1*
Y Carrier	*78.5*		*30 - 110*	*11/21/23 11:02*	*12/20/23 12:05*	*1*

Lab Sample ID: LCS 160-637740/2-A
Matrix: Water
Analysis Batch: 641668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637740

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.63	8.121		1.18	1.00	0.529	pCi/L	106	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.0*		*30 - 110*
Y Carrier	*80.4*		*30 - 110*

Lab Sample ID: 500-242591-14 MS
Matrix: Water
Analysis Batch: 641474

Client Sample ID: HEN_03R_MS
Prep Type: Total/NA
Prep Batch: 637740

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.266	U	7.68	6.125		1.00	1.00	0.542	pCi/L	76	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*99.7*		*30 - 110*
Y Carrier	*75.5*		*30 - 110*

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 500-242591-14 MSD — **Client Sample ID: HEN_03R_MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 641474 — **Prep Batch: 637740**

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	0.266	U	7.66	8.439		1.29	1.00	0.613	pCi/L	107	60 - 140	1.01	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*100*		*30 - 110*
Y Carrier	*81.5*		*30 - 110*

Lab Sample ID: MB 160-637742/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 641669 — **Prep Batch: 637742**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.04353	U	0.204	0.204	1.00	0.409	pCi/L	11/21/23 11:11	12/20/23 11:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*1*
Y Carrier	*84.1*		*30 - 110*	*11/21/23 11:11*	*12/20/23 11:35*	*1*

Lab Sample ID: LCS 160-637742/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 641669 — **Prep Batch: 637742**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.63	7.098		1.03	1.00	0.467	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.9*		*30 - 110*
Y Carrier	*81.1*		*30 - 110*

Lab Sample ID: 500-242591-16 DU — **Client Sample ID: HEN_18&D**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 641669 — **Prep Batch: 637742**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.221	U		0.4420	U	0.307	1.00	0.449	pCi/L			0.33	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*101*		*30 - 110*
Y Carrier	*77.0*		*30 - 110*

QC Sample Results

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-637931/1-A
Matrix: Water
Analysis Batch: 641696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637931

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5670		0.346	0.350	1.00	0.505	pCi/L	11/22/23 09:53	12/21/23 11:55	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:55*	*1*
Y Carrier	*80.7*		*30 - 110*	*11/22/23 09:53*	*12/21/23 11:55*	*1*

Lab Sample ID: LCS 160-637931/2-A
Matrix: Water
Analysis Batch: 641696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637931

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.63	9.224		1.26	1.00	0.484	pCi/L	121	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.2*		*30 - 110*
Y Carrier	*80.0*		*30 - 110*

Lab Sample ID: MB 160-638358/1-A
Matrix: Water
Analysis Batch: 641298

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638358

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4002	U	0.311	0.314	1.00	0.480	pCi/L	11/27/23 10:59	12/19/23 16:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:26*	*1*
Y Carrier	*85.6*		*30 - 110*	*11/27/23 10:59*	*12/19/23 16:26*	*1*

Lab Sample ID: LCS 160-638358/2-A
Matrix: Water
Analysis Batch: 641298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638358

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.63	8.197		1.16	1.00	0.478	pCi/L	107	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.4*		*30 - 110*
Y Carrier	*83.4*		*30 - 110*

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_03R
Date Collected: 11/16/23 09:25
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637738	KAC	EET SL	11/21/23 10:58
Total/NA	Analysis	903.0		1	641812	FLC	EET SL	12/21/23 07:21
Total/NA	Prep	PrecSep_0			637740	KAC	EET SL	11/21/23 11:02
Total/NA	Analysis	904.0		1	641672	FLC	EET SL	12/20/23 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Client Sample ID: HEN_18#S
Date Collected: 11/16/23 11:32
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637741	KAC	EET SL	11/21/23 11:04
Total/NA	Analysis	903.0		1	641474	FLC	EET SL	12/20/23 18:28
Total/NA	Prep	PrecSep_0			637742	KAC	EET SL	11/21/23 11:11
Total/NA	Analysis	904.0		1	641669	FLC	EET SL	12/20/23 11:35
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Client Sample ID: HEN_18&D
Date Collected: 11/16/23 11:55
Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637741	KAC	EET SL	11/21/23 11:04
Total/NA	Analysis	903.0		1	641668	FLC	EET SL	12/20/23 18:42
Total/NA	Prep	PrecSep_0			637742	KAC	EET SL	11/21/23 11:11
Total/NA	Analysis	904.0		1	641669	FLC	EET SL	12/20/23 11:35
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Client Sample ID: HEN_08&D
Date Collected: 11/17/23 12:31
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637928	KAC	EET SL	11/22/23 09:46
Total/NA	Analysis	903.0		1	641812	FLC	EET SL	12/21/23 19:27
Total/NA	Prep	PrecSep_0			637931	KAC	EET SL	11/22/23 09:53
Total/NA	Analysis	904.0		1	641696	FLC	EET SL	12/21/23 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_08
Date Collected: 11/17/23 12:32
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637928	KAC	EET SL	11/22/23 09:46
Total/NA	Analysis	903.0		1	641812	FLC	EET SL	12/21/23 20:51
Total/NA	Prep	PrecSep_0			637931	KAC	EET SL	11/22/23 09:53
Total/NA	Analysis	904.0		1	641696	FLC	EET SL	12/21/23 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Client Sample ID: HEN_08_FD
Date Collected: 11/17/23 12:37
Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-28
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			637928	KAC	EET SL	11/22/23 09:46
Total/NA	Analysis	903.0		1	641696	FLC	EET SL	12/21/23 20:51
Total/NA	Prep	PrecSep_0			637931	KAC	EET SL	11/22/23 09:53
Total/NA	Analysis	904.0		1	641696	FLC	EET SL	12/21/23 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	641923	EMH	EET SL	12/22/23 17:50

Client Sample ID: HEN_45#S
Date Collected: 11/20/23 09:15
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-32
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			638356	KAC	EET SL	11/27/23 10:49
Total/NA	Analysis	903.0		1	641880	SCB	EET SL	12/22/23 14:27
Total/NA	Prep	PrecSep_0			638358	KAC	EET SL	11/27/23 10:59
Total/NA	Analysis	904.0		1	641298	FLC	EET SL	12/19/23 16:27
Total/NA	Analysis	Ra226_Ra228 Pos		1	642175	EMH	EET SL	12/27/23 14:29

Client Sample ID: HEN_45#S_FD
Date Collected: 11/20/23 09:20
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-33
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			638356	KAC	EET SL	11/27/23 10:49
Total/NA	Analysis	903.0		1	641880	SCB	EET SL	12/22/23 14:27
Total/NA	Prep	PrecSep_0			638358	KAC	EET SL	11/27/23 10:59
Total/NA	Analysis	904.0		1	641298	FLC	EET SL	12/19/23 16:27
Total/NA	Analysis	Ra226_Ra228 Pos		1	642175	EMH	EET SL	12/27/23 14:29

Lab Chronicle

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Client Sample ID: HEN_07

Date Collected: 11/20/23 13:12
Date Received: 11/21/23 08:06

Lab Sample ID: 500-242591-38

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			638356	KAC	EET SL	11/27/23 10:49
Total/NA	Analysis	903.0		1	641880	SCB	EET SL	12/22/23 14:28
Total/NA	Prep	PrecSep_0			638358	KAC	EET SL	11/27/23 10:59
Total/NA	Analysis	904.0		1	641298	FLC	EET SL	12/19/23 16:28
Total/NA	Analysis	Ra226_Ra228 Pos		1	642175	EMH	EET SL	12/27/23 14:29

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-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_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	11-30-24

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
903.0	PrecSep-21	Water	Radium-226
904.0	PrecSep_0	Water	Radium-228
Ra226_Ra228 Pos		Water	Radium 226 and 228

COC 15 ~~HEN~~ 012

500-242591 COC

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591

Page 1 of 1

Section A Required Client Information.

Company	Vistra Corp
Address	133 S 4th, Suite 206
	Springfield, IL 62701
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	23Q4 GW SAMPLING
Project Number	50022357

Section C Invoice Information.

Attention	Jason Stuckey
Company Name	Vistra Corp
Address	see Section A
Quote Reference	
Project Manager	NIKKI PAGANO
Profile #.	

REGULATORY AGENCY

NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER

Site Location STATE: IL

Section D Required Client Information

Valid Matrix Codes

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	HEN_257_802 (Y)	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805 (Y)	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD (Y)	HEN_WPCP_East (Y)	HEN_WPCP_West			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_03R	W	G	11-16-23			14	5	1	4	3	1					X				X			X	X	X					SHORT HOLDS-NO2
2	HEN_03R MS/MSD	W	G	11-16-23			28	10	2	8	6	2					X				X			X	X	X					SHORT HOLDS-NO2
3																															TD ~~BTEX~~ BTEX in cooler w/ 18 D
4																															
5				TJD 11-17-23																											
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

14 / 1

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	[signature] CAMBELL	11-17-23	0900	N. J. Ellis	11/17/23	0900	
	N. J. Ellis	11/17/23	1127	stephanie Hernandez EETA	11/17/23	1127	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: KRISTEN THEESFELD

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11-16-23

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

EUROFINS COURIER PICKUP

Temp: 1.9+1.8, 5.8+5.6, 4.8+4.6 QC TJD

HEN-013

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591

Page 1 of 1

Section A Required Client Information.

Company:	Vistra Corp
Address	133 S 4th, Suite 206
	Springfield, IL 62701
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	23Q4 GW SAMPLING
Project Number:	50022357

Section C Invoice Information:

Attention.	Jason Stuckey
Company Name	Vistra Corp
Address	see Section A
Quote Reference:	
Project Manager:	NIKKI PAGANO
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_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	Residual Chlorine (Y/N)	Project No./ Lab I.D.
15 1	HEN_18#S	W	G	11-16-23	11:55		14	5	1	4	3	1					X				X			X	X	X			SHORT HOLDS-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-23Q4 Rev 0	RAMBILL	11.17.23	0900		11/17/23	0900	
		11/17/23	1127	Stephenie Hernandez EOH	11/17/23	1127	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: TREVOR DEMPSEY

SIGNATURE of SAMPLER: Trevor Dempsey

DATE Signed (MM/DD/YY): 11-16-23

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

EUROFINS COURIER PICKUP

QC: KLT

CHAIN-OF-CUSTODY / Analytical Request Document

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

500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name:	Vistra Corp
	Springfield, IL 62701			Address:	see Section A
Email To	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone	(217) 753-8911 Fax:	Project Name	23Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	2285	Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Requested Analysis Filtered (Y/N): SELECT KJ 11-16-23

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl 11-16-23	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West			Residual Chlorine (Y/N)	Project No./ Lab I.D.
16 1	HEN_18&D	W	G	11-16-23	11:55		14	5	1	4	3	1				X					X			X	X	X				SHORT HOLDS-NO2
17 2	TRIP BLANK01	W	G	11-16-23	—		2				2																				BTEX
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-23Q4 Rev 0	RAMBOLL	11-17-23	0900		11/17/23	0900	
		11/17/23	1127	Stephanie Hennessey EEA	11/17/23	1127	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: KRISTEN THEESFELD

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11-16-23

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

EUROFINS 11-16-23

COURIER PICKUP

QC TJD

500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone	(217) 753-8911 Fax:	Project Name	[illegible]	Project Manager	[illegible]
Requested Due Date/TAT:	10 day	Project Number	50022357	Profile #:	

REGULATORY AGENCY: NPDES | GROUND WATER | DRINKING WATER | UST | RCRA | OTHER

Site Location STATE: IL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_C	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_08&D			11/7/[illegible]	~~[illegible]~~ 1231		[illegible]	[illegible]	3	[illegible]	3						X	X		X	X	X		X	X	X		X		SHORT HOLDS -NO2
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														

Valid Matrix Codes: 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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	[signature] RAMBOLL	11-17-23	1800	[signature]	11/17/23	1800	

SAMPLER NAME AND SAMPLER SIGNATURE
PRINT Name of SAMPLER: [illegible]
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/17/[illegible]

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

• [illegible]
• BTEX in cooler w/ 08

QC KLT

01/04/24 (Rev. 1)

HEN-08-27
500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone:	(217) 753-8911 Fax:	Project Name	23Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	50022357	Profile #:	

REGULATORY AGENCY		
NPDES	**GROUND WATER**	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE	IL	

Section D Required Client Information

Valid Matrix Codes

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

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

Requested Analysis Filtered (Y/N)

	ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_C	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801		Residual Chlorine (Y/N)	Project No./ Lab I.D.
27	1	HEN_08	W	G	11-17-23	12:32		13	5	3	4		1					X	X		X	X	X		X	X	X		X			SHORT HOLDS -NO2
28	2	HEN_08_FD	W	G	11-17-23	12:37		13	5	3	4		1					X	X		X	X	X		X	X	X		X			SHORT HOLDS -NO3
29	3	TRIP BLANK 02	W	G	11-17-23	—																										BTEX
	4																															
	5																															
	6																															
	7																															
	8																															
	9																															
	10																															
	11																															
	12																															
	13																															
	14																															
	15																															
	16																															

KB 11-17-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	[signature] RAMBOLL	11-17-23	1800	[signature]	11/17/23	1800	

SAMPLER NAME AND SAMPLE SIGNATURE			
PRINT Name of SAMPLER:	KRISTEN THEESFELD		
SIGNATURE of SAMPLER	[signature]	DATE Signed (MM/DD/YY):	11-17-23

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

DROP OFF AT LAB

QC: TJD

01/04/24 (Rev. 1)

HEN 027
500-242591

500-242591 COC

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone	(217) 753-8911 Fax:	Project Name:	23 Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	50022357	Profile #:	

REGULATORY AGENCY		
NPDES	GROUND WATER	DRINKING WATER
UST	RCRA	OTHER
Site Location STATE:	IL	

Section D Required Client Information

Valid Matrix Codes

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_45#S	W	G	11-20-23	09:15		14	5	1	4	3	1					X				X			X	X	X					SHORT HOLD-NO2
2	HEN_45#S_FD	W	G	11-20-23	09:20		14	5	1	4	3	1					X				X			X	X	X					
3	TRIPBLANK03	W	G	11-20-23	—		2				2																				BTEX
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
16																															

32 33 34

11-20-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	RAMBOLL	11-21-23	0800		11/21/23	0806	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Trevor Dempsey

SIGNATURE of SAMPLER: Trevor Dempsey

DATE Signed (MM/DD/YY):

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

DROP @ LAB

25→23, 5.1→4.9, 5.2→5.0 QC: TJD

HEN_CCR1

500-242591

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	133 S 4th, Suite 206	Copy To:	Jason Stuckey	Company Name:	Vistra Corp
	Springfield, IL 62701			Address	see Section A
Email To.	Brian.Voelker@VistraCorp.com	Purchase Order No.		Quote Reference:	
Phone	(217) 753-8911 Fax:	Project Name	23 Q4 GW SAMPLING	Project Manager:	NIKKI PAGANO
Requested Due Date/TAT:	10 day	Project Number:	50022357	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

ITEM #	SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	HEN_257_802	HEN_257_803	HEN_257_804	HEN_811_801	HEN_845_802-805	HEN_845_803	HEN_845_804	HEN_000_B	HEN_000_RAD	HEN_WPCP_East	HEN_WPCP_West	HEN_257_801	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	HEN_07	WG		11-20-23	1312		15	1	4	3	1					X	X			X	X		X	X	X		X		SHORT HOLDS-NO2
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

38

11-20-23

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
HEN-23Q4 Rev 0	RAMBOLL 11-21-23		0806		11/21/23	0906	

DROP@LAB

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	KRISTEN THEESFELD				
SIGNATURE of SAMPLER		DATE Signed (MM/DD/YY):	11-20-23		

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

QC: TJD

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: Campbell, Donna L	Carrier Tracking No(s):	COC No: 500-181630.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Donna.Campbell@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-242591-1
Address: 13715 Rider Trail North,	Due Date Requested: 11/30/2023	Analysis Requested		Preservation Codes:
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-23Q4	Project #: 50022357			
Site:	SSOW#:			

Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

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 AJ	904.0/PrecSep_0 AJ	Ra226_228GFPC_P/ AJ	903.0/PrecSep_21 AQ	904.0/PrecSep_0 AQ	Ra226_228GFPC_P/ AQ	903.0/PrecSep_21 BB	904.0/PrecSep_0 BB	Ra226_228GFPC_P/ BB	Total Number of containers	Special Instructions/Note:
				Preservation Code:													
HEN_03R (500-242591-14)	11/16/23	09:25 Central		Water			X	X	X	X	X	X	X	X	X	2	
HEN_03R_MS (500-242591-14MS)	11/16/23	09:25 Central	MS	Water			X	X	X	X	X	X	X	X	X	2	
HEN_03R_MSD (500-242591-14MSD)	11/16/23	09:25 Central	MSD	Water			X	X	X	X	X	X	X	X	X	2	
HEN_18#S (500-242591-15)	11/16/23	11:55 Central		Water			X	X	X	X	X	X	X	X	X	2	
HEN_18&D (500-242591-16)	11/16/23	11:55 Central		Water			X	X	X	X	X	X	X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

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

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: [signature]	Date/Time: 11/17/23 1520	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: M. Pinotte	Date/Time: NOV 20 2023 0920	Company
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: Campbell, Donna L	Carrier Tracking No(s):	COC No: 500-181722.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Donna.Campbell@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-242591-16
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/30/2023			
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-23Q4	Project #: 50022357			
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 AL	904.0/PrecSep_0 AL	Ra226_228GFPC_P/ AL	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_54 (500-242591-22)	11/17/23	09:02 Central		Water			X	X	X	2	
HEN_47 (500-242591-23)	11/17/23	09:33 Central		Water			X	X	X	2	
HEN_12 (500-242591-24)	11/17/23	10:14 Central		Water			X	X	X	2	
HEN_13 (500-242591-25)	11/17/23	10:21 Central		Water			X	X	X	2	
HEN_08&D (500-242591-26)	11/17/23	12:31 Central		Water			X	X	X	2	
HEN_08 (500-242591-27)	11/17/23	12:32 Central		Water			X	X	X	2	
HEN_08_FD (500-242591-28)	11/17/23	12:37 Central		Water			X	X	X	2	
HEN_17 (500-242591-30)	11/17/23	14:17 Central		Water			X	X	X	2	
HEN_16 (500-242591-31)	11/17/23	14:29 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: FED EX			
Relinquished by: Stephanie Hemmerley	Date/Time: 11/20/23 1300	Company: EEIA	Received by: M. Pinette	Date/Time: NOV 21 2023 0845	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
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: Campbell, Donna L	Carrier Tracking No(s):	COC No: 500-181843.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Donna.Campbell@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-242591-2
Address: 13715 Rider Trail North,	Due Date Requested: 12/18/2023			
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-23Q4	Project #: 50022357			
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 BB	904.0/PrecSep_0 BB	Ra226_228GFPC_P/ BB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HEN_45#S (500-242591-32)	11/20/23	09:15 Central		Water			X	X	X	2	
HEN_45#S_FD (500-242591-33)	11/20/23	09:20 Central		Water			X	X	X	2	
HEN_46 (500-242591-35)	11/20/23	09:13 Central		Water			X	X	X	2	
HEN_52 (500-242591-37)	11/20/23	10:18 Central		Water			X	X	X	2	
HEN_07 (500-242591-38)	11/20/23	13:12 Central		Water			X	X	X	2	
HEN_FB (500-242591-39)	11/20/23	13:20 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	Shari Scott	11/21/23 1510				
2	Relinquished by:	Date/Time:	Company	Received by: M Pinette	Date/Time: NOV 22 2023 0840	Company
3	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:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
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	5.7,4.9,3.2,4.2,3.0,1.8,5.6,4.6,2.4,4.6,4.4,5.0,,2.3 ,4.9,5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/16/23 12:55 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	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
List Number: 3
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/17/23 01:43 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	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
List Number: 5
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/20/23 02:30 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	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
List Number: 7
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/21/23 12:16 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	

Login Sample Receipt Checklist

Client: Vistra Energy Corp

Job Number: 500-242591-11
SDG Number: HEN_845_802-805_RAD

Login Number: 242591
List Number: 9
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/22/23 01:50 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-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_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)
500-242591-14	HEN_03R	94.3
500-242591-14 MS	HEN_03R_MS	99.7
500-242591-14 MSD	HEN_03R_MSD	100
500-242591-15	HEN_18#S	92.8
500-242591-16	HEN_18&D	91.8
500-242591-16 DU	HEN_18&D	101
500-242591-26	HEN_08&D	95.6
500-242591-27	HEN_08	98.7
500-242591-28	HEN_08_FD	93.8
500-242591-32	HEN_45#S	91.0
500-242591-33	HEN_45#S_FD	93.1
500-242591-38	HEN_07	94.1
LCS 160-637738/2-A	Lab Control Sample	92.0
LCS 160-637741/2-A	Lab Control Sample	97.9
LCS 160-638356/2-A	Lab Control Sample	96.4
MB 160-637738/1-A	Method Blank	97.7
MB 160-637741/1-A	Method Blank	98.5
MB 160-637928/1-A	Method Blank	101
MB 160-638356/1-A	Method Blank	102

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
500-242591-14	HEN_03R	94.3	73.6
500-242591-14 MS	HEN_03R_MS	99.7	75.5
500-242591-14 MSD	HEN_03R_MSD	100	81.5
500-242591-15	HEN_18#S	92.8	75.1
500-242591-16	HEN_18&D	91.8	78.9
500-242591-16 DU	HEN_18&D	101	77.0
500-242591-26	HEN_08&D	95.6	73.3
500-242591-27	HEN_08	98.7	77.4
500-242591-28	HEN_08_FD	93.8	75.1
500-242591-32	HEN_45#S	91.0	80.7
500-242591-33	HEN_45#S_FD	93.1	74.0
500-242591-38	HEN_07	94.1	77.4
LCS 160-637740/2-A	Lab Control Sample	92.0	80.4
LCS 160-637742/2-A	Lab Control Sample	97.9	81.1
LCS 160-637931/2-A	Lab Control Sample	98.2	80.0
LCS 160-638358/2-A	Lab Control Sample	96.4	83.4
MB 160-637740/1-A	Method Blank	97.7	78.5
MB 160-637742/1-A	Method Blank	98.5	84.1
MB 160-637931/1-A	Method Blank	101	80.7
MB 160-638358/1-A	Method Blank	102	85.6

Tracer/Carrier Legend

Tracer/Carrier Summary

Client: Vistra Energy Corp
Project/Site: HEN-23Q4

Job ID: 500-242591-11
SDG: HEN_845_802-805_RAD

Ba = Ba Carrier
Y = Y Carrier

ATTACHMENT C
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND
QUARTER 4, 2023

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
03R	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.001
03R	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.001	0.001
03R	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CI around geomean	0.0617	0.212
03R	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.001
03R	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	0.456	0.163
03R	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	92	CI around median	0.001	0.00230
03R	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	76.7	435
03R	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	25	92	CB around T-S line	0.0015	0.00100
03R	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	26	96	CI around median	0.001	0.0380
03R	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	4	CI around median	0.27	0.120
03R	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.0005	0.00150
03R	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CI around mean	0.0238	0.0190
03R	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.0002
03R	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0867	0.00170
03R	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CB around T-S line	7.1/7.2	6.6/7.5
03R	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around median	0.27	1.50
03R	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	27	4	CI around mean	0.00475	0.00140
03R	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	74.3	215
03R	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.001
03R	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CI around mean	510	1,620
18S	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.001
18S	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.001
18S	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CB around linear reg	0.0501	0.212
18S	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.001
18S	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	0.731	0.163
18S	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	77	CB around T-S line	0.0006	0.00230
18S	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	69.6	435

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
18S	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	26	57	CI around median	0.0015	0.00100
18S	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	26	83	CI around median	0.001	0.0380
18S	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	3	CB around T-S line	0.172	0.120
18S	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	100	All ND - Last	0.0005	0.00150
18S	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0362	0.0190
18S	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.0002
18S	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.0876	0.00170
18S	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CI around median	7.3/7.4	6.6/7.5
18S	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around mean	0.328	1.50
18S	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	27	3	CB around T-S line	0.000201	0.00140
18S	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	76.7	215
18S	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.001
18S	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	464	1,620
18D	UA	E003	Antimony, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.003	0.001
18D	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.001
18D	UA	E003	Barium, total	mg/L	12/09/15 - 11/16/23	27	0	CB around T-S line	0.0633	0.212
18D	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.001	0.001
18D	UA	E003	Boron, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	1.23	0.163
18D	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/16/23	26	93	CI around median	0.001	0.00230
18D	UA	E003	Chloride, total	mg/L	12/09/15 - 11/16/23	31	0	CI around mean	76.1	435
18D	UA	E003	Chromium, total	mg/L	12/09/15 - 11/16/23	25	93	CB around T-S line	0.0015	0.00100
18D	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/16/23	27	3	CB around linear reg	0.000178	0.0380
18D	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/16/23	28	3	CI around median	0.15	0.120
18D	UA	E003	Lead, total	mg/L	12/09/15 - 11/16/23	25	97	CI around median	0.001	0.00150
18D	UA	E003	Lithium, total	mg/L	12/09/15 - 11/16/23	30	0	CB around linear reg	0.023	0.0190
18D	UA	E003	Mercury, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.0002	0.0002
18D	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/16/23	30	0	CI around median	0.0315	0.00170

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
18D	UA	E003	pH (field)	SU	12/09/15 - 11/16/23	34	0	CB around T-S line	7.0/7.1	6.6/7.5
18D	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/16/23	25	0	CI around mean	0.529	1.50
18D	UA	E003	Selenium, total	mg/L	12/09/15 - 11/16/23	26	93	CB around T-S line	0.001	0.00140
18D	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/16/23	31	0	CB around linear reg	87.7	215
18D	UA	E003	Thallium, total	mg/L	12/09/15 - 11/16/23	24	100	All ND - Last	0.002	0.001
18D	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/16/23	31	0	CB around T-S line	465	1,620
45S	UA	E003	Antimony, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.003	0.001
45S	UA	E003	Arsenic, total	mg/L	12/09/15 - 11/20/23	25	96	CI around median	0.001	0.001
45S	UA	E003	Barium, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0781	0.212
45S	UA	E003	Beryllium, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.001	0.001
45S	UA	E003	Boron, total	mg/L	12/09/15 - 11/20/23	28	0	CB around linear reg	0.209	0.163
45S	UA	E003	Cadmium, total	mg/L	12/09/15 - 11/20/23	26	46	CB around linear reg	0.000558	0.00230
45S	UA	E003	Chloride, total	mg/L	12/09/15 - 11/20/23	28	0	CB around linear reg	86.7	435
45S	UA	E003	Chromium, total	mg/L	12/09/15 - 11/20/23	26	92	CB around T-S line	0.0015	0.00100
45S	UA	E003	Cobalt, total	mg/L	12/09/15 - 11/20/23	27	15	CI around geomean	0.00137	0.0380
45S	UA	E003	Fluoride, total	mg/L	12/09/15 - 11/20/23	28	4	CB around T-S line	0.248	0.120
45S	UA	E003	Lead, total	mg/L	12/09/15 - 11/20/23	25	84	CI around median	0.001	0.00150
45S	UA	E003	Lithium, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0107	0.0190
45S	UA	E003	Mercury, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.0002	0.0002
45S	UA	E003	Molybdenum, total	mg/L	12/09/15 - 11/20/23	27	0	CB around linear reg	0.0423	0.00170
45S	UA	E003	pH (field)	SU	12/09/15 - 11/20/23	28	0	CI around mean	7.1/7.2	6.6/7.5
45S	UA	E003	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 11/20/23	25	0	CI around geomean	0.518	1.50
45S	UA	E003	Selenium, total	mg/L	12/09/15 - 11/20/23	26	100	All ND - Last	0.0025	0.00140
45S	UA	E003	Sulfate, total	mg/L	12/09/15 - 11/20/23	28	0	CI around median	70	215
45S	UA	E003	Thallium, total	mg/L	12/09/15 - 11/20/23	24	100	All ND - Last	0.002	0.001
45S	UA	E003	Total Dissolved Solids	mg/L	12/09/15 - 11/20/23	28	0	CI around mean	524	1,620

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 4, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
ASH POND NO. 2 AND ASH POND NO. 4
HENNEPIN, IL

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