Prepared for

**Dynegy Midwest Generation, LLC** 

Date

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Project No.

1940106781-008

# 2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LANDFILL
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS
CCR UNIT 801



## 2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT LANDFILL

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Prepared by Jeff R. Kampman
Checked by Lauren D. Cook
Approved by Nicole M. Pagano

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Ramboll

234 W. Florida Street

Fifth Floor

Milwaukee, WI 53204

USA

T 414-837-3607 F 414-837-3608 https://ramboll.com

Jeff R. Kampman Senior Project Scientist

Nicole M. Pagano, PE, PG Senior Project Manager

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#### **ACRONYMS AND ABBREVIATIONS**

40 C.F.R. Title 40 of the Code of Federal Regulations

ASD Alternative Source Demonstration

CCR coal combustion residuals

D13 Quarter 3, 2023 Detection Monitoring sampling event
D13R Quarter 4, 2023 Detection Monitoring sampling event
D14 Quarter 1, 2024 Detection Monitoring sampling event
D15 Quarter 3, 2024 Detection Monitoring sampling event

LF Landfill

GWPS groundwater protection standard

HPP Hennepin Power Plant

NA not applicable

Ramboll Ramboll Americas Engineering Solutions, Inc.

SAP Sampling and Analysis Plan SSI statistically significant increase

TBD to be determined

#### **EXECUTIVE SUMMARY**

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.90(e) for the Landfill (LF) located at the Hennepin Power Plant (HPP) near Hennepin, Illinois.

Groundwater is being monitored at the LF in accordance with the Detection Monitoring Program requirements specified in 40 C.F.R. § 257.94.

The LF monitoring system was modified in 2024 to add monitoring well 48R as a compliance location to replace the damaged well 48. Well 48 was abandoned after installation of the replacement well 48R.

The following Statistically Significant Increases (SSIs) of 40 C.F.R. § 257 Appendix III parameter concentrations greater than background concentrations were reported in 2024:

- Boron at wells 05R, 05DR, 40S, and 48/48R<sup>1</sup>
- pH at wells 05R, 40S, and 48/48R1

Alternative Source Demonstrations (ASDs) were completed for the SSIs listed above and the LF remains in the Detection Monitoring Program.

<sup>&</sup>lt;sup>1</sup> SSIs of boron and pH were detected at well 48 prior to damage and abandonment and were additionally detected at well 48R after replacement.

#### 1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Dynegy Midwest Generation, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the LF located at the HPP near Hennepin, Illinois.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit (Section 2), summarizes key actions completed (Section 3), describes any problems encountered and actions to resolve the problems (Section 4), and projects key activities for the upcoming year (Section 5). At a minimum, the annual report must contain the following information, to the extent available:

- 1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit (**Figure 1**).
- 2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken (**Section 3**, paragraph 1).
- 3. In addition to all the monitoring data obtained under § 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the Detection Monitoring or Assessment Monitoring Programs (Section 3, Table A).
- 4. A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from Detection Monitoring to Assessment Monitoring in addition to identifying the constituent(s) detected at a statistically significant increase relative to background levels) (Section 2).
- 5. Other information required to be included in the annual report as specified in § 257.90 through 257.98.
- 6. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit (see **Executive Summary**). At a minimum, the summary must specify all of the following:
  - i. At the start of the current annual reporting period, whether the CCR unit was operating under the Detection Monitoring Program in § 257.94 or the Assessment Monitoring Program in § 257.95.
  - ii. At the end of the current annual reporting period, whether the CCR unit was operating under the Detection Monitoring Program in § 257.94 or the Assessment Monitoring Program in § 257.95.
  - iii. If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III of § 257 pursuant to § 257.94(e):
    - A. Identify those constituents listed in Appendix III of § 257 and the names of the monitoring wells associated with such an increase.

- B. Provide the date when the Assessment Monitoring Program was initiated for the CCR unit.
- iv. If it was determined that there was a statistically significant level above the groundwater protection standard [GWPS] for one or more constituents listed in Appendix IV of § 257 pursuant to § 257.95(g) include all of the following:
  - A. Identify those constituents listed in Appendix IV of § 257 and the names of the monitoring wells associated with such an increase.
  - B. Provide the date when the assessment of corrective measures was initiated for the CCR unit.
  - C. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.
  - D. Provide the date when the assessment of corrective measures was completed for the CCR unit.
- v. Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection.
- vi. Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

This report provides the required information for the LF for calendar year 2024.

## 2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

No changes have occurred to the monitoring program status in calendar year 2024 and the LF remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

#### 3. KEY ACTIONS COMPLETED IN 2024

A summary of the samples collected from background and compliance monitoring wells in 2024 under the Detection Monitoring Program is included in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. A groundwater monitoring plan (GMP) was developed for the LF in 2023 (Ramboll, 2023a). Compliance monitoring well 48 was previously damaged in November 2023, and was not sampled during the Quarter 1, 2024 Detection Monitoring sampling event (D14). This well was replaced in March 2024 with montoring well 48R and was successfully sampled during the Quarter 3, 2024 Detection Monitoring event (D15). After installation of new compliance well 48R, the damaged well 48 was abandonded and decomissioned from the LF monitoring network.

One groundwater sample was collected from each background and compliance well during each monitoring event<sup>2</sup>. All samples were collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (SAP) (Ramboll, 2023b).

Potentiometric surfaces for both monitoring events are included in **Figures 2 and 3**. All available monitoring data and analytical results obtained under 40 C.F.R. § 257.90 through 257.98 are presented in **Tables 1 and 2**. All associated laboratory reports and field data sheets are included in **Appendix A**.

Analytical data were evaluated in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022a), the Multi-Site Quality Assurance Project Plan (Ramboll, 2022b), and the Multi-Site Data Management Plan (Ramboll, 2022c) to determine any SSIs of Appendix III parameters greater than background values. SSIs are summarized in **Table A** and highlighted in **Table 2**. Statistical background values are provided in **Table 3**. A flow chart showing the statistical methodology for determination of background values is included as **Appendix B**. Additional information to support background statistics is provided in **Appendix C**.

Potential alternative sources were evaluated as outlined in the 40 C.F.R. § 257.94(e)(2). ASDs were completed in 2024 for the SSIs summarized in **Table A**. The dates the ASDs were completed are also provided in **Table A**. The ASDs were certified by a qualified professional engineer and are included in **Appendix C** The LF remains in the Detection Monitoring Program.

<sup>&</sup>lt;sup>2</sup> Compliance monitoring well 48 was not sampled during the January 2024 sampling event due to damage to the well. The well was replaced in March 2024 with compliance monitoring well 48R and was sampled during the July 2024 sampling event.

**Table A. 2024 Detection Monitoring Program Summary** 

Event ID	Sampling Dates 1, 2, 3	Analytical Data Receipt Date	SSI(s) Determination Date	SSI(s)	ASD Completion Date
D13 <sup>4</sup>	August 23 - 28, 2023	November 16, 2023	February 14, 2024 <sup>5</sup>	Boron at wells 05DR, 05R, 40S, and 48; pH at wells 05R, 40S, and 48	May 14, 2024
D13R	November 16 – 20, 2023	December 27, 2023	NA	NA	NA
D14	January 24 – 26, 2024	February 21, 2024	May 21, 2024	Boron at wells 05DR, 05R, 40S; pH at wells 05R and 40S	August 19, 2024
D15	July 15 – August 6, 2024	August 26, 2024	November 24, 2024	Boron at wells 05DR, 05R, 40S, and 48R; pH at wells 05R, 40S, and 48R	TBD

#### Notes:

ASD: Alternative Source Demonstration

NA: not applicable

 ${\sf SSI:} \ {\sf statistically} \ {\sf significant} \ {\sf increase}$ 

TBD: to be determined in 2025

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<sup>&</sup>lt;sup>1</sup> All samples were analyzed for Appendix III parameters listed in 40 C.F.R. § 257.94(e).

<sup>&</sup>lt;sup>2</sup>The following background wells were sampled for each event: 07, 08, 08D, 16, and 17.

<sup>&</sup>lt;sup>3</sup> The following compliance wells were sampled in D13: 05DR, 05R, 40S, and 48. The following compliance wells were sampled in D14: 05DR, 05R, and 40S. Well 48 was not sampled due to damage, which was replaced by well 48R in March 2024. The following compliance wells were sampled in D15: 05DR, 05R, 40S, and 48R.

<sup>&</sup>lt;sup>4</sup> Laboratory reports and associated analytical data tables were included in the 2023 Annual Groundwater Monitoring and Corrective Action Report.

<sup>&</sup>lt;sup>5</sup> Statistical determinations were completed in 2024. Analytical data from 2023 sampling events used in statistical determinations are included in the 2024 Annual Groundwater Monitoring and Corrective Action Report for completeness.

## 4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

As discussed in **Section 3**, compliance monitoring well 48 was damaged by a lawn mower in November of 2023. A detailed inspection concluded that it was no longer capable of being sampled. This well was replaced in March 2024 with new compliance montoring well 48R. After installation of new compliance well 48R, the damaged well 48 was abandonded and decomissioned from the LF monitoring network.

No additional problems were encountered with the groundwater monitoring program during 2024. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

#### 5. KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continuation of the Detection Monitoring Program with semiannual sampling scheduled for the first and third quarters of 2025.
- Complete evaluation of analytical data from the compliance wells using background data to determine whether an SSI of Appendix III parameters detected at concentrations greater than background concentrations has occurred.
- If an SSI is identified, potential alternative sources (*i.e.*, a source other than the CCR unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated.
  - If an alternative source is identified to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI determination and included in the 2025 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternative source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 C.F.R. §§ 257.94 through 257.98 as may apply in 2025 (e.g., assessment monitoring) will be met, including associated recordkeeping/notifications required by 40 C.F.R. §§ 257.105 through 257.108.

#### 6. REFERENCES

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

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

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

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

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. 40 C.F.R. § 257 Groundwater Monitoring Plan, Landfill, Hennepin Power Plant, Hennepin, Illinois. October 10, 2023.

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

GROUNDWATER ELEVATION DATA
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)  447.37		
05R	Compliance	UA	01/22/2024	41.06			
05R	Compliance	UA	04/15/2024	38.57	449.86		
05R	Compliance	UA	07/15/2024	41.27	447.16		
05R	Compliance	UA	10/07/2024	42.22	446.51		
05DR	Compliance	UA	01/22/2024	41.26	447.11		
05DR	Compliance	UA	04/15/2024	38.55	449.82		
05DR	Compliance	UA	07/15/2024	41.23	447.14		
05DR	Compliance	UA	10/07/2024	42.27	446.42		
07	Background	UA	01/22/2024	68.78	449.49		
07	Background	UA	02/15/2024	66.77	451.49		
07	Background	UA	03/15/2024	67.77	450.49		
07	Background	UA	04/15/2024	66.81	451.46		
07	Background	UA	05/15/2024	66.14	452.13		
07	Background	UA	06/15/2024	67.10	451.17		
07	Background	UA	07/15/2024	67.77	450.50		
07	Background	UA	08/07/2024	68.21	450.58		
07	Background	UA	09/07/2024	69.01	449.78		
07	Background	UA	10/07/2024	69.10	449.69		
07	Background	UA	11/19/2024	68.80	449.99		
07	Background	UA	12/19/2024	69.40	449.39		
08	Background	UA	01/22/2024	53.82	447.36		
08	Background	UA	02/15/2024	51.67	449.50		
08	Background	UA	03/15/2024	53.02	448.15		
08	Background	UA	04/15/2024	51.12	450.06		
08	Background	UA	05/15/2024	51.22	449.96		
08	Background	UA	06/15/2024	52.53	448.65		
08	Background	UA	07/15/2024	53.25	447.93		
08	Background	UA	08/07/2024	53.82	447.68		
08	Background	UA	09/07/2024	54.63	446.87		
08	Background	UA	10/07/2024	54.71	446.80		
08	Background	UA	11/19/2024	54.17	447.33		
08	Background	UA	12/19/2024	55.11	446.40		
08D	Background	UA	01/22/2024	54.20	447.21		
08D	Background	UA	02/15/2024	D	M <sup>7</sup>		
08D	Background	UA	03/15/2024	53.63	447.77		
08D	Background	UA	04/15/2024	51.58	449.83		
08D	Background	UA	05/15/2024	51.90	449.51		
08D	Background	UA	06/15/2024	53.25	448.16		
08D	Background	UA	07/15/2024	54.24	447.17		
08D	Background	UA	08/07/2024	54.63	447.13		
08D	Background	UA	09/07/2024	55.40	446.36		
08D	Background	UA	10/07/2024	55.12	446.65		
08D	Background	UA	11/19/2024	54.92	446.84		
08D	Background	UA	12/19/2024	55.61	446.16		
16	Background	UA	01/22/2024	54.38	447.13		
16	Background	UA	02/15/2024	52.54	448.96		



#### **GROUNDWATER ELEVATION DATA**

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT

LANDFILL

HENNEPIN, IL

Well ID	Monitored Well Type Unit Date			Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)		
16	Background	UA	03/15/2024	53.75	447.75		
16	Background	UA	04/15/2024	51.76	449.75		
16	Background	UA	05/15/2024	52.01	449.50		
16	Background	UA	06/15/2024	53.35	448.16		
16	Background	UA	07/15/2024	54.42	447.09		
16	Background	UA	08/07/2024	54.83	447.12		
16	Background	UA	09/07/2024	55.59	446.35		
16	Background	UA	10/07/2024	55.28	446.67		
16	Background	UA	11/19/2024	55.12	446.82		
16	Background	UA	12/19/2024	55.79	446.16		
17	Background	UA	01/22/2024	58.98	448.32		
17	Background	UA	02/15/2024	57.03	450.26		
17	Background	UA	03/15/2024	57.33	449.96		
17	Background	UA	04/15/2024	55.09	452.21		
17	Background	UA	05/15/2024	54.75	452.55		
17	Background	UA	06/15/2024	54.69	452.61		
17	Background	UA	07/15/2024	56.61	450.69		
17	Background	UA	08/07/2024	56.26	451.56		
17	Background	UA	10/07/2024	56.83	451.00		
17	Background	UA	12/19/2024	60.07	447.76		
40S	Compliance	UA	01/22/2024	40.49	447.18		
40S	Compliance	UA	04/15/2024	37.86	449.81		
40S	Compliance	UA	07/15/2024	40.55	447.12		
40S	Compliance	UA	10/07/2024	41.43	446.61		
48	Compliance	UA	01/22/2024	39.57	447.89		
48R	Compliance	UA	04/15/2024	38.13 N			
48R	Compliance	UA	07/15/2024	40.80 NA			
48R	Compliance	UA	10/07/2024	41.72	446.62		

#### Notes:

BMP = below measuring point

Depth to Groundwater/Groundwater Elevation Code (if applicable):

 $\mathsf{DM^1} = \mathsf{Depth}$  to water was not measured.

 $DM^2$  = Depth to water was not measured because water was above or below the staff gage markings.

 $\mathsf{D}\mathsf{M}^3=\mathsf{Depth}$  to water was not measured because the location was inaccessible.

 $DM^4$  = Depth to water was not measured because water level was below the top of the pump.

DM5 = Depth to water was not measured because water level was above the top of casing (artesian well).

DM6 = Depth to water was not measured because of damage to the well.

 $\mathsf{D}\mathsf{M}^7=\mathsf{Depth}$  to water was not measured due to required pressure transducer maintenance.

 $\mathsf{DM^8} = \mathsf{Lab}$  provided groundwater elevation data and not depth to water.

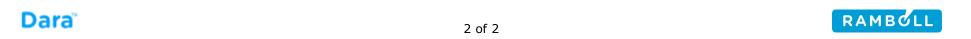
 ${\sf NA} = {\sf not} \ {\sf available/not} \ {\sf applicable}$ 

NAVD88 = North American Vertical Datum of 1988

Monitored Unit Abbreviations:

UA = uppermost aquifer

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#### TABLE 2 **ANALYTICAL RESULTS - APPENDIX III PARAMETERS**

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

HENNEPIN POWER PLANT

LANDFILL

HENNEPIN, IL Comparison Well ID HSU **Well Type Event ID Parameter** Unit Result **SSI Type Date** Value Background 07 UA Background 08/24/2023 D13 Boron, total mg/L 0.0670 07 D14 UA Background 01/26/2024 Boron, total mg/L 0.120 Background 07/15/2024 0.0930 J 07 UA D15 Boron, total mg/L 07 UΑ Background | 08/24/2023 D13 Calcium, total mg/L 94.0 ------D14 07 UA Background 01/26/2024 Calcium, total mg/L 120 07 UA Background 07/15/2024 D15 Calcium, total 170 mg/L 07 UΑ Background 08/24/2023 D13 Chloride, total mg/L 51.0 ------07 UA Background 01/26/2024 D14 Chloride, total mg/L 56.0 07 UA Background 07/15/2024 D15 170 Chloride, total mg/L 07 UΑ Background | 08/24/2023 D13 Fluoride, total mg/L 0.24 J ------07 UA Background 11/20/2023 D13R Fluoride, total 0.120 mg/L 07 UA Background 01/26/2024 D14 Fluoride, total mg/L 0.120 D15 07 UA Background 07/15/2024 0.120 Fluoride, total mg/L --07 UA Background 08/24/2023 D13 pH (field) SU 6.9 07 UA Background 01/26/2024 D14 pH (field) SU 7.0 Background 07/15/2024 D15 pH (field) SU 07 UA 6.7 --07 UA Background 08/24/2023 D13 Sulfate, total mg/L 67.0 07 UA Background 01/26/2024 D14 Sulfate, total mg/L 59.0 D15 Sulfate, total UΑ 07/15/2024 07 Background mg/L 63.0 ------D13 Total Dissolved Solids 07 UΑ Background 08/24/2023 mg/L 640 ------07 UA Background 01/26/2024 D14 Total Dissolved Solids mg/L 650 mg/L 07 UA Background 07/15/2024 D15 Total Dissolved Solids 1,100 08 UΑ Background 08/24/2023 D13 Boron, total mg/L 0.0700 80 UΑ Background 01/26/2024 D14 Boron, total 0.150 -----mg/L 08 UA 07/16/2024 D15 0.0990 J+ Background Boron, total mg/L 08 UΑ Background 08/24/2023 D13 Calcium, total mg/L 160 ----80 UA Background 01/26/2024 D14 Calcium, total 200 -----mg/L 80 UA Background 07/16/2024 D15 Calcium, total mg/L 180 08 UA Background 08/24/2023 D13 Chloride, total mg/L 240 01/26/2024 80 UΑ Background D14 Chloride, total 250 -----mg/L 07/16/2024 80 UA Background D15 Chloride, total mg/L 150 80 UA Background 08/24/2023 D13 mg/L 0.19 J Fluoride, total 80 UA Background | 11/17/2023 D13R Fluoride, total 0.089 J mg/L 80 UA Background 01/26/2024 D14 Fluoride, total mg/L 0.083 J 80 UA Background 07/16/2024 D15 Fluoride, total mg/L 0.110 08/24/2023 80 UA Background D13 pH (field) SU 6.7 ------80 UA 01/26/2024 D14 pH (field) SU 6.8 Background Background 07/16/2024 D15 SU 80 UA pH (field) 6.7 Background 08/24/2023 D13 80 UA Sulfate, total mg/L 100 UA Background 01/26/2024 D14 Sulfate, total 120 80 mg/L mg/L 80 UA Background 07/16/2024 D15 Sulfate, total 110 Total Dissolved Solids 80 UΑ Background 08/24/2023 D13 mg/L 1,100 ------01/26/2024 80 UA D14 Total Dissolved Solids 1,200 Background mg/L



80

08D

08D

UA

UA

UA

Background

Background

Background

07/16/2024

08/24/2023

01/25/2024

D15

D13

D14



870

0.0510

0.120

mg/L

mg/L

mg/L

Total Dissolved Solids

Boron, total

Boron, total

ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENDEIN POWER PLANT

LANDFILL

HENNEPIN, IL

HENNEPIN,							_	Comparison		
Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Value	Background	SSI Type
08D	UA	Background	07/16/2024	D15	Boron, total	mg/L	0.100 J+			
08D	UA	Background	08/24/2023	D13	Calcium, total	mg/L	200			
08D	UA	Background	01/25/2024	D14	Calcium, total	mg/L	220			
08D	UA	Background	07/16/2024	D15	Calcium, total	mg/L	190			
08D	UA	Background	08/24/2023	D13	Chloride, total	mg/L	310			
08D	UA	Background	01/25/2024	D14	Chloride, total	mg/L	330			
08D	UA	Background	07/16/2024	D15	Chloride, total	mg/L	300			
08D	UA	Background	08/24/2023	D13	Fluoride, total	mg/L	0.19 U			
08D	UA	Background	11/17/2023	D13R	Fluoride, total	mg/L	0.097 J			
08D	UA	Background	01/25/2024	D14	Fluoride, total	mg/L	0.09 J			
08D	UA	Background	07/16/2024	D15	Fluoride, total	mg/L	0.110			
08D	UA	Background	08/24/2023	D13	pH (field)	SU	6.6			
08D	UA	Background	01/25/2024	D14	pH (field)	SU	6.7			
08D	UA	Background	07/16/2024	D15	pH (field)	SU	6.7			
08D	UA	Background	08/24/2023	D13	Sulfate, total	mg/L	170			
08D	UA	Background	01/25/2024	D14	Sulfate, total	mg/L	170			
08D	UA	Background	07/16/2024	D15	Sulfate, total	mg/L	170			
08D	UA	Background	08/24/2023	D13	Total Dissolved Solids	mg/L	1,400			
08D	UA	Background	01/25/2024	D14	Total Dissolved Solids	mg/L	1,500			
08D	UA	Background	07/16/2024	D15	Total Dissolved Solids	mg/L	1,300			
16	UA	Background	08/28/2023	D13	Boron, total	mg/L	0.110			
16	UA	Background	01/24/2024	D14	Boron, total	mg/L	0.240			
16	UA	Background	07/16/2024	D15	Boron, total	mg/L	0.180 J+			
16	UA	Background	08/28/2023	D13	Calcium, total	mg/L	73.0			
16	UA	Background	01/24/2024	D14	Calcium, total	mg/L	81.0			
16	UA	Background	07/16/2024	D15	Calcium, total	mg/L	73.0			
16	UA	Background	08/28/2023	D13	Chloride, total	mg/L	81.0			
16	UA	Background	01/24/2024	D14	Chloride, total	mg/L	89.0			
16	UA	Background	07/16/2024	D15	Chloride, total	mg/L	70.0			
16	UA	Background	08/28/2023	D13	Fluoride, total	mg/L	0.31 J			
16	UA	Background	11/17/2023	D13R	Fluoride, total	mg/L	0.220			
16	UA	Background	01/24/2024	D14	Fluoride, total	mg/L	0.230			
16	UA	Background	07/16/2024	D15	Fluoride, total	mg/L	0.270			
16	UA	Background	08/28/2023	D13	pH (field)	SU	7.2			
16	UA	Background	01/24/2024	D14	pH (field)	SU	7.3			
16	UA	Background	07/16/2024	D15	pH (field)	SU	7.3			
16	UA	Background	08/28/2023	D13	Sulfate, total	mg/L	56.0			
16	UA	Background	01/24/2024	D14	Sulfate, total	mg/L	76.0			
16	UA	Background	07/16/2024	D15	Sulfate, total	mg/L	59.0			
16	UA	Background	08/28/2023	D13	Total Dissolved Solids	mg/L	450			
16	UA	Background	01/24/2024	D14	Total Dissolved Solids	mg/L	500			
16	UA	Background	07/16/2024	D15	Total Dissolved Solids	mg/L	450			
17	UA	Background	08/28/2023	D13	Boron, total	mg/L	0.0760			
17	UA	Background	01/24/2024	D14	Boron, total	mg/L	0.140			
17	UA	Background	08/06/2024	D15	Boron, total	mg/L	0.110 J+			
17	UA	Background	08/28/2023	D13	Calcium, total	mg/L	58.0			



ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENDEIN POWER PLANT

LANDFILL HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
17	UA	Background	01/24/2024	D14	Calcium, total	mg/L	120			
17	UA	Background	08/06/2024	D15	Calcium, total	mg/L	65.0			
17	UA	Background	08/28/2023	D13	Chloride, total	mg/L	80.0			
17	UA	Background	01/24/2024	D14	Chloride, total	mg/L	93.0			
17	UA	Background	08/06/2024	D15	Chloride, total	mg/L	68.0			
17	UA	Background	08/28/2023	D13	Fluoride, total	mg/L	0.36 J			
17	UA	Background	11/17/2023	D13R	Fluoride, total	mg/L	0.210			
17	UA	Background	01/24/2024	D14	Fluoride, total	mg/L	0.150			
17	UA	Background	08/06/2024	D15	Fluoride, total	mg/L	0.270			
17	UA	Background	08/28/2023	D13	pH (field)	SU	7.3		-	
17	UA	Background	01/24/2024	D14	pH (field)	SU	7.0			
17	UA	Background	08/06/2024	D15	pH (field)	SU	7.2			
17	UA	Background	08/28/2023	D13	Sulfate, total	mg/L	58.0			
17	UA	Background	01/24/2024	D14	Sulfate, total	mg/L	65.0			
17	UA	Background	08/06/2024	D15	Sulfate, total	mg/L	55.0			
17	UA	Background	08/28/2023	D13	Total Dissolved Solids	mg/L	420			
17	UA	Background	01/24/2024	D14	Total Dissolved Solids	mg/L	670			
17	UA	Background	08/06/2024	D15	Total Dissolved Solids	mg/L	400			
05R	UA	Compliance	08/23/2023	D13	Boron, total	mg/L	0.510	0.510	0.172	Reported
05R	UA	Compliance	01/25/2024	D14	Boron, total	mg/L	0.930	0.930	0.172	Reported
05R	UA	Compliance	07/16/2024	D15	Boron, total	mg/L	0.650	0.650	0.172	Reported
05R	UA	Compliance	08/23/2023	D13	Calcium, total	mg/L	77.0	77.0	232	No Exceedance
05R	UA	Compliance	01/25/2024	D14	Calcium, total	mg/L	84.0	84.0	232	No Exceedance
05R	UA	Compliance	07/16/2024	D15	Calcium, total	mg/L	84.0	84.0	232	No Exceedance
05R	UA	Compliance	08/23/2023	D13	Chloride, total	mg/L	82.0	82.0	297	No Exceedance
05R	UA	Compliance	01/25/2024	D14	Chloride, total	mg/L	81.0	81.0	297	No Exceedance
05R	UA	Compliance	07/16/2024	D15	Chloride, total	mg/L	81.0	81.0	297	No Exceedance
05R	UA	Compliance	08/23/2023	D13	Fluoride, total	mg/L	0.21 J	0.5	0.320	Exceedance Not Confirmed
05R	UA	Compliance	11/16/2023	D13R	Fluoride, total	mg/L	0.130	0.130	0.320	No Exceedance
05R	UA	Compliance	01/25/2024	D14	Fluoride, total	mg/L	0.130	0.130	0.320	No Exceedance
05R	UA	Compliance	07/16/2024	D15	Fluoride, total	mg/L	0.140	0.140	0.320	No Exceedance
05R	UA	Compliance	08/23/2023	D13	pH (field)	SU	7.6	7.6	6.3/7.5	Reported
05R	UA	Compliance	01/25/2024	D14	pH (field)	SU	7.7	7.7	6.3/7.5	Reported
05R	UA	Compliance	07/16/2024	D15	pH (field)	SU	7.6	7.6	6.3/7.5	Reported
05R	UA	Compliance	08/23/2023	D13	Sulfate, total	mg/L	73.0	73.0	199	No Exceedance
05R	UA	Compliance	01/25/2024	D14	Sulfate, total	mg/L	80.0	80.0	199	No Exceedance
05R	UA	Compliance	07/16/2024	D15	Sulfate, total	mg/L	73.0	73.0	199	No Exceedance
05R	UA	Compliance	08/23/2023	D13	Total Dissolved Solids	mg/L	530	530	1,410	No Exceedance
05R	UA	Compliance	01/25/2024	D14	Total Dissolved Solids	mg/L	580	580	1,410	No Exceedance
05R	UA	Compliance	07/16/2024	D15	Total Dissolved Solids	mg/L	500	500	1,410	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	Boron, total	mg/L	0.680	0.680	0.172	Reported
05DR	UA	Compliance	01/25/2024	D14	Boron, total	mg/L	0.890	0.890	0.172	Reported
05DR	UA	Compliance	07/16/2024	D15	Boron, total	mg/L	0.780	0.780	0.172	Reported
05DR	UA	Compliance	08/23/2023	D13	Calcium, total	mg/L	73.0	73.0	232	No Exceedance
05DR	UA	Compliance	01/25/2024	D14	Calcium, total	mg/L	83.0	83.0	232	No Exceedance





ANALYTICAL RESULTS - APPENDIX III PARAMETERS

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT

LANDFILL

HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
05DR	UA	Compliance	07/16/2024		Calcium, total	mg/L	83.0	83.0	232	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	Chloride, total	mg/L	76.0	76.0	297	No Exceedance
05DR	UA	Compliance	01/25/2024	D14	Chloride, total	mg/L	80.0	80.0	297	No Exceedance
05DR	UA	Compliance	07/16/2024	D15	Chloride, total	mg/L	77.0	77.0	297	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	Fluoride, total	mg/L	0.24 J	0.5	0.320	Exceedance Not Confirmed
05DR	UA	Compliance	11/16/2023	D13R	Fluoride, total	mg/L	0.150	0.150	0.320	No Exceedance
05DR	UA	Compliance	01/25/2024	D14	Fluoride, total	mg/L	0.140	0.140	0.320	No Exceedance
05DR	UA	Compliance	07/16/2024	D15	Fluoride, total	mg/L	0.160	0.160	0.320	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	pH (field)	SU	7.4	7.4	6.3/7.5	No Exceedance
05DR	UA	Compliance	01/25/2024	D14	pH (field)	SU	7.5	7.5	6.3/7.5	No Exceedance
05DR	UA	Compliance	07/16/2024	D15	pH (field)	SU	7.4	7.4	6.3/7.5	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	Sulfate, total	mg/L	75.0	75.0	199	No Exceedance
05DR	UA	Compliance	01/25/2024	D14	Sulfate, total	mg/L	100	100	199	No Exceedance
05DR	UA	Compliance	07/16/2024	D15	Sulfate, total	mg/L	130	130	199	No Exceedance
05DR	UA	Compliance	08/23/2023	D13	Total Dissolved Solids	mg/L	490	490	1,410	No Exceedance
05DR 05DR	UA	•	01/25/2024		Total Dissolved Solids	_	590	590	1,410	No Exceedance
	UA	Compliance		D14 D15	Total Dissolved Solids  Total Dissolved Solids	mg/L	560		,	
05DR		Compliance	07/16/2024			mg/L		560	1,410	No Exceedance
40S	UA	Compliance	08/23/2023		Boron, total	mg/L	1.30	1.30	0.172	Reported
40S	UA	Compliance	01/25/2024		Boron, total	mg/L	1.20	1.20	0.172	Reported
40S	UA	Compliance	07/16/2024		Boron, total	mg/L	2.30	2.30	0.172	Reported
40S	UA	Compliance	08/23/2023	D13	Calcium, total	mg/L	58.0	58.0	232	No Exceedance
40S	UA	Compliance	01/25/2024	D14	Calcium, total	mg/L	66.0	66.0	232	No Exceedance
40S	UA	Compliance	07/16/2024	D15	Calcium, total	mg/L	71.0	71.0	232	No Exceedance
40S	UA	Compliance	08/23/2023	D13	Chloride, total	mg/L	73.0	73.0	297	No Exceedance
40S	UA	Compliance	01/25/2024	D14	Chloride, total	mg/L	83.0	83.0	297	No Exceedance
40S	UA	Compliance	07/16/2024	D15	Chloride, total	mg/L	74.0	74.0	297	No Exceedance
40S	UA	Compliance	08/23/2023	D13	Fluoride, total	mg/L	0.24 J	0.5	0.320	Exceedance Not Confirmed
40S	UA	Compliance	11/16/2023	D13R	Fluoride, total	mg/L	0.170	0.170	0.320	No Exceedance
40S	UA	Compliance	01/25/2024	D14	Fluoride, total	mg/L	0.160	0.160	0.320	No Exceedance
40S	UA	Compliance	07/16/2024	D15	Fluoride, total	mg/L	0.180	0.180	0.320	No Exceedance
40S	UA	Compliance	08/23/2023	D13	pH (field)	SU	7.9	7.9	6.3/7.5	Reported
40S	UA	Compliance	01/25/2024	D14	pH (field)	SU	7.9	7.9	6.3/7.5	Reported
40S	UA	Compliance	07/16/2024	D15	pH (field)	SU	7.8	7.8	6.3/7.5	Reported
40S	UA	Compliance	08/23/2023	D13	Sulfate, total	mg/L	92.0	92.0	199	No Exceedance
40S	UA	Compliance	01/25/2024	D14	Sulfate, total	mg/L	110	110	199	No Exceedance
40S	UA	Compliance	07/16/2024	D15	Sulfate, total	mg/L	120	120	199	No Exceedance
40S	UA	Compliance	08/23/2023	D13	Total Dissolved Solids	mg/L	480	480	1,410	No Exceedance
40S	UA	Compliance	01/25/2024	D14	Total Dissolved Solids	mg/L	490	490	1,410	No Exceedance
40S	UA	Compliance	07/16/2024	D15	Total Dissolved Solids	mg/L	550	550	1,410	No Exceedance
48	UA	Compliance	08/23/2023	D13	Boron, total	mg/L	1.40	1.40	0.172	Reported
48	UA	Compliance		D14	Boron, total	mg/L	NS <sup>5</sup>		0.172	
48	UA	Compliance	08/23/2023	D13	Calcium, total	mg/L	64.0	64.0	232	No Exceedance
48	UA	Compliance		D14	Calcium, total	mg/L	NS <sup>5</sup>		232	
48	UA	Compliance	08/23/2023	D13	Chloride, total	mg/L	74.0	74.0	297	No Exceedance
48	UA	Compliance		D14	Chloride, total	mg/L	NS <sup>5</sup>		297	
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#### **ANALYTICAL RESULTS - APPENDIX III PARAMETERS**

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT

LANDFILL

HENNEPIN, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
48	UA	Compliance	08/23/2023	D13	Fluoride, total	mg/L	0.19 J	0.5	0.320	No Exceedance
48	UA	Compliance		D14	Fluoride, total	mg/L	NS <sup>5</sup>		0.320	
48	UA	Compliance	08/23/2023	D13	pH (field)	SU	7.6	7.6	6.3/7.5	Reported
48	UA	Compliance		D14	pH (field)	SU	NS⁵	1	6.3/7.5	
48	UA	Compliance	08/23/2023	D13	Sulfate, total	mg/L	100	100	199	No Exceedance
48	UA	Compliance		D14	Sulfate, total	mg/L	NS⁵	1	199	
48	UA	Compliance	08/23/2023	D13	Total Dissolved Solids	mg/L	490	490	1,410	No Exceedance
48	UA	Compliance		D14	Total Dissolved Solids	mg/L	NS⁵	1	1,410	
48R	UA	Compliance	07/18/2024	D15	Boron, total	mg/L	2.20	2.20	0.172	Reported
48R	UA	Compliance	07/18/2024	D15	Calcium, total	mg/L	83.0	83.0	232	No Exceedance
48R	UA	Compliance	07/18/2024	D15	Chloride, total	mg/L	75.0	75.0	297	No Exceedance
48R	UA	Compliance	07/18/2024	D15	Fluoride, total	mg/L	0.200	0.200	0.320	No Exceedance
48R	UA	Compliance	07/18/2024	D15	pH (field)	SU	7.7	7.7	6.3/7.5	Reported
48R	UA	Compliance	07/18/2024	D15	Sulfate, total	mg/L	130	130	199	No Exceedance
48R	UA	Compliance	07/18/2024	D15	Total Dissolved Solids	mg/L	540	540	1,410	No Exceedance

#### **Notes:**

-- = not applicable

Comparison Value is different from the Result when the Result is below the Reporting Limit (RL). The Result will not be used in statistical calculations due to the inherent uncertainty in results that are below the RL. Half of the RL will be substituted for these data. See the Multi-Site Statistical Analysis Plan (Ramboll, 2022a) for more information.

Event IDs:

D13 = Quarter 3, 2023 Detection Monitoring sampling event

D13R = Quarter 4, 2023 Detection Monitoring resampling event

D14 = Quarter 1, 2024 Detection Monitoring sampling event

D15 = Quarter 3, 2024 Detection Monitoring sampling event

HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

ID = identification

mg/L = milligrams per liter Result Code (if applicable):

 $NR^1$  = Parameter not analyzed.

 $NS^1$  = Well has been, or will be, abandoned; therefore, a sample was not collected.

NS<sup>2</sup> = Well either needs or was undergoing maintenance; therefore, a sample was not collected.

NS<sup>3</sup> = The location was not accessible; therefore, a sample was not collected.

 $NS^4$  = The location could not be found; therefore, a sample was not collected.

 $NS^5$  = The location was damaged; therefore, a sample was not collected.

 $NS^6$  = Sampling pump could not yield a sample.

 $NS^7$  = Well was either dry or purged dry and did not recover sufficiently to yield adequate volume for a sample.

 $NS^8 = A$  sample was not collected.

PM¹ = Parameter not analyzed as the well purged dry during sample collection and did not sufficiently recover to yield adequate sample volume for analysis.

Result qualifiers as defined in the United States Environmental Protection Agency's National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA 542-R-20-006. November 2020.:

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate. Statistically Significant Increase (SSI) Type:

No Exceedance: No exceedance of the background.

Exceedance Not Confirmed: An exceedance was determined in the parent event, a resample was collected, and the resample did not confirm the exceedance; or an exceedance was not determined in the parent event but a subsequent sample collected exhibited a concentration higher than background.

Reported: An exceedance in the parent event was observed and reported.

SU = Standard Units

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STATISTICAL BACKGROUND VALUES
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT

LANDFILL

HENNEPIN, IL

Parameter	Date Range	Sample Count	Percent Non- Detects	Statistical Calculation	Statistical Background Value (LPL/UPL)
Boron (mg/L)	02/24/2021 - 09/14/2022	55	0	Parametric UPL (log- transformed)	0.172
Calcium (mg/L)	02/24/2021 - 09/14/2022	55	0	Non-Parametric UPL	232
Chloride (mg/L)	02/24/2021 - 09/14/2022	55	0	Non-Parametric UPL	297
Fluoride (mg/L)	02/24/2021 - 09/14/2022	55	5	Non-Parametric UPL	0.320
pH (field) (SU)	02/24/2021 - 09/14/2022	55	0	Parametric LPL/UPL	6.3/7.5
Sulfate (mg/L)	02/24/2021 - 09/14/2022	55	0	Non-Parametric UPL	199
Total Dissolved Solids (mg/L)	02/24/2021 - 09/14/2022	52	0	Non-Parametric UPL	1,410

## Notes:

LPL = lower prediction limit (applicable for pH only) mg/L = milligrams per liter

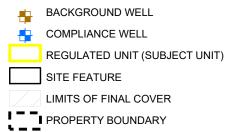
SU = standard units UPL = upper prediction limit

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#### **FIGURES**



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## MONITORING WELL LOCATION MAP

#### 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 1

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.





COMPLIANCE MONITORING WELL BACKGROUND MONITORING WELL MONITORING WELL PORE WATER WELL STAFF GAGE, CCR UNIT GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88) --- INFERRED GROUNDWATER ELEVATION CONTOUR → GROUNDWATER FLOW DIRECTION REGULATED UNIT (SUBJECT UNIT) SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

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

0 175 350

#### POTENTIOMETRIC SURFACE MAP **JANUARY 22-23, 2024**

#### **2024 ANNUAL GROUNDWATER MONITORING** AND CORRECTIVE ACTION REPORT

LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

PORE WATER WELL

STAFF GAGE, CCR UNIT

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION
CONTOUR

GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### **NOTES**

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

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#### POTENTIOMETRIC SURFACE MAP JULY 15, 2024

## 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LANDFILL HENNEPIN POWER PLANT

HENNEPIN, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



#### **APPENDICES**

## APPENDIX A LABORATORY REPORTS AND FIELD DATA SHEETS

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## **ANALYTICAL REPORT**

#### PREPARED FOR

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

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## **JOB DESCRIPTION**

HEN-23Q4 HEN\_257\_801

#### **JOB NUMBER**

500-242591-13

Eurofins Chicago 2417 Bond Street University Park IL 60484



### ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT. LANDFILL

### **Eurofins Chicago**

HEN-257-801

#### **Job Notes**

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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

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APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN PLANNIE LEANSON LEANSO

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

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#### APPENDIX A. ANICASE NATIVE ONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

John 102500 242591-13 SDG: HEN\_257\_801

Project/Site: HEN-23Q4 Job ID: 500-242591-13

Client: Vistra Energy Corp

**Laboratory: Eurofins Chicago** 

**Narrative** 

Job Narrative 500-242591-13

#### 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 1.8° C, 2.3° C, 2.4° C, 3.0° C, 3.2° C, 4.2° C, 4.4° C, 4.6° C, 4.6° C, 4.9° C, 4.9° C, 5.0° C, 5.0° C, 5.6° C and 5.7° C.

#### **Receipt Exceptions**

Per client email HEN\_257\_801 was added to these samples. HEN\_05!R (500-242591-18), HEN\_05&DR (500-242591-19) and HEN\_40#S (500-242591-21)

#### **General Chemistry**

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

3

SDG: HEN\_257\_801

Client Sample ID: HEN_05!R						Lab Sa	mp	ole ID: 500-	242591-18
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.13		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_05&D	R					Lab Sa	mp	ole ID: 500-	242591-19
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.15		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_40#S						Lab Sa	mp	ole ID: 500-	242591-21
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.17		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_08&D						Lab Sample ID: 500-242591-26			
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.097		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_08						Lab Sa	mp	ole ID: 500-	242591-27
Analyte		Qualifier	RL	MDL				Method	Prep Type
Fluoride	0.089	J	0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Client Sample ID: HEN_08_FD	)					Lab Sa	mp	ole ID: 500-	242591-28
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.087	J	0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_17						Lab Sa	mp	ole ID: 500-	242591-30
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.21		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_16						Lab Sa	mp	ole ID: 500-	242591-31
Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.22		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA
Client Sample ID: HEN_07						Lab Sa	mp	ole ID: 500-	242591-38
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.12		0.10	0.056	mg/L	1	_	SM 4500 F C	Total/NA

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

## AFFERDIA A. AMELINO CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 102500 242591-13

SDG: HEN\_257\_801

Method **Method Description** Protocol Laboratory SM 4500 F C Fluoride  $\overline{\mathsf{SM}}$ **EET CHI** 

#### **Protocol References:**

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

SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

## APPENDIX A. ASTAM FRO SOUTHFRAM ITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOHEN 250 242591-13 SDG: HEN\_257\_801

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-242591-18	HEN_05!R	Water	11/16/23 13:49	11/17/23 11:27
500-242591-19	HEN_05&DR	Water	11/16/23 13:46	11/17/23 11:27
500-242591-21	HEN_40#S	Water	11/16/23 15:19	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
500-242591-30	HEN_17	Water	11/17/23 14:17	11/17/23 18:00
500-242591-31	HEN_16	Water	11/17/23 14:29	11/17/23 18:00
500-242591-38	HEN 07	Water	11/20/23 13:12	11/21/23 08:06

## APPENDIX A. CHEMIL SAMPLE RESULTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOHN 2508 242591-13

SDG: HEN\_257\_801

Client Sample ID: HEN\_05!R

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

Lab Sample ID: 500-242591-18 Date Collected: 11/16/23 13:49 **Matrix: Water** 

Date Received: 11/17/23 11:27

General Chemistry								
Analyte	Result Qua	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.13	0.10	0.056	mg/L			12/01/23 15:32	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_05&DR Lab Sample ID: 500-242591-19

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

Date Collected: 11/16/23 13:46 **Matrix: Water** Date Received: 11/17/23 11:27

General Chemistry					_	_		
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.15	0.10	0.056	mg/L			12/01/23 15:37	1

# CHENTLES AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 10250 90242591-13

SDG: HEN\_257\_801

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

Client Sample ID: HEN\_40#S

Lab Sample ID: 500-242591-21

**Matrix: Water** 

Date Collected: 11/16/23 15:19 Date Received: 11/17/23 11:27

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.17		0.10	0.056	mg/L			12/01/23 15:58	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_08&D Lab Sample ID: 500-242591-26

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

Date Collected: 11/17/23 12:31 **Matrix: Water** 

Date Received: 11/17/23 18:00

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.097	J	0.10	0.056	mg/L			12/01/23 16:22	1

#### APPENDIX A. CITEMAL SAMPLE RESULTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

0.056 mg/L

JOHEN 25080242591-13 SDG: HEN\_257\_801

12/01/23 16:27

Client Sample ID: HEN\_08 Lab Sample ID: 500-242591-27

Client: Vistra Energy Corp

Project/Site: HEN-23Q4

Fluoride (SM 4500 F C)

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

**General Chemistry** Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac

0.10

0.089 J

SDG: HEN\_257\_801

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

Client Sample ID: HEN\_08\_FD

Date Collected: 11/17/23 12:37

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

Date Received: 11/17/23 18:00

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.087	J	0.10	0.056	mg/L			12/06/23 16:34	1

SDG: HEN\_257\_801

Project/Site: HEN-23Q4 Client Sample ID: HEN\_17

Client: Vistra Energy Corp

Lab Sample ID: 500-242591-30

Date Collected: 11/17/23 14:17 **Matrix: Water** 

Date Received: 11/17/23 18:00

General Chemistry								
Analyte	Result Qualific	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.21	0.10	0.056	mg/L			12/01/23 18:13	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_16 Lab Sample ID: 500-242591-31

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

Date Collected: 11/17/23 14:29

**Matrix: Water** Date Received: 11/17/23 18:00

General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Fluoride (SM 4500 F C)	0.22		0.10	0.056	mg/L			12/01/23 17:12	1	

SDG: HEN\_257\_801

Client Sample ID: HEN\_07 Lab Sample ID: 500-242591-38

Date Collected: 11/20/23 13:12 **Matrix: Water** 

Date Received: 11/21/23 08:06

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

General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C)	0.12	0.10	0.056	mg/L			12/01/23 17:42	1

#### APPENDIX A. DETINITIONS POTOS S'ATYORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

Client: Vistra Energy Corp Jahel 1025/080242591-13 SDG: HEN\_257\_801

#### **Qualifiers**

#### **General Chemistry**

Project/Site: HEN-23Q4

Qualifier **Qualifier Description** 

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.
n	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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

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

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) **RER** 

Reporting Limit or Requested Limit (Radiochemistry) RL

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

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

Too Numerous To Count **TNTC** 

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

#### **General Chemistry**

#### **Analysis Batch: 744922**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-18	HEN_05!R	Total/NA	Water	SM 4500 F C	
500-242591-19	HEN_05&DR	Total/NA	Water	SM 4500 F C	
500-242591-21	HEN_40#S	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	
500-242591-30	HEN_17	Total/NA	Water	SM 4500 F C	
500-242591-31	HEN_16	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	

#### **Analysis Batch: 745605**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-242591-28	HEN_08_FD	Total/NA	Water	SM 4500 F C	
MB 500-745605/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-745605/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Joh⊨ND2570@242591-13 SDG: HEN\_257\_801

**Prep Type: Total/NA** 

Prep Type: Total/NA

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-744922/31

**Matrix: Water** 

**Analysis Batch: 744922** 

Client: Vistra Energy Corp

Project/Site: HEN-23Q4

MB MB

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

Lab Sample ID: MB 500-744922/59

**Matrix: Water** 

**Analysis Batch: 744922** 

MB MB

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

Lab Sample ID: LCS 500-744922/32

**Matrix: Water** 

**Analysis Batch: 744922** 

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

Lab Sample ID: LCS 500-744922/60

**Matrix: Water** 

**Analysis Batch: 744922** 

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

Lab Sample ID: MB 500-745605/3

**Matrix: Water** 

**Analysis Batch: 745605** 

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

Lab Sample ID: LCS 500-745605/4

**Matrix: Water** 

**Analysis Batch: 745605** 

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

Client Sample ID: Method Blank

10

#### APPENDIX A. ANNUAL GROWN ATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

John 102500 242591-13

SDG: HEN\_257\_801

Client Sample ID: HEN 05!R

Date Collected: 11/16/23 13:49 Date Received: 11/17/23 11:27

Client: Vistra Energy Corp

Project/Site: HEN-23Q4

Lab Sample ID: 500-242591-18

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 4500 F C	_	1	744922	SO	EET CHI	12/01/23 15:32

Client Sample ID: HEN 05&DR

Date Collected: 11/16/23 13:46 Date Received: 11/17/23 11:27

Lab Sample ID: 500-242591-19 **Matrix: Water** 

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

Total/NA Analysis SM 4500 F C 744922 SO EET CHI 12/01/23 15:37

Client Sample ID: HEN\_40#S Lab Sample ID: 500-242591-21 Date Collected: 11/16/23 15:19 **Matrix: Water** 

Date Received: 11/17/23 11:27

Batch Batch Dilution Batch Prepared Method **Number Analyst** or Analyzed **Prep Type Factor** Type Run Lab 12/01/23 15:58 SM 4500 F C 744922 SO EET CHI Total/NA Analysis

Client Sample ID: HEN 08&D Lab Sample ID: 500-242591-26 **Matrix: Water** 

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

Batch Batch Dilution Batch Prepared **Prep Type** Method Run Factor **Number Analyst** or Analyzed Type Lab Total/NA Analysis SM 4500 F C 744922 SO EET CHI 12/01/23 16:22

Client Sample ID: HEN 08 Lab Sample ID: 500-242591-27

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

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

12/01/23 16:27 744922 SO Total/NA Analysis SM 4500 F C **EET CHI** Client Sample ID: HEN 08 FD Lab Sample ID: 500-242591-28

Date Collected: 11/17/23 12:37

Date Received: 11/17/23 18:00

Batch Dilution Batch Batch Prepared **Prep Type** Type Method Run **Factor Number Analyst** or Analyzed Lab 745605 EET CHI 12/06/23 16:34 Total/NA Analysis SM 4500 F C SO

Lab Sample ID: 500-242591-30 Client Sample ID: HEN 17

Date Collected: 11/17/23 14:17 Date Received: 11/17/23 18:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 18:13

**Matrix: Water** 

**Matrix: Water** 

**Matrix: Water** 

#### APPENDIX A. ANNUAL SPENNONTER MONITORING AND CORRECTIVE ACTION REPORT

HENNEPIN POWER PLANT, LANDFILL

JOHEN 25080242591-13 SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Client: Vistra Energy Corp

Project/Site: HEN-23Q4

Date Collected: 11/17/23 14:29 Date Received: 11/17/23 18:00

Lab Sample ID: 500-242591-31

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 4500 F C		1	744922	SO	EET CHI	12/01/23 17:12

Client Sample ID: HEN\_07 Lab Sample ID: 500-242591-38

Date Collected: 11/20/23 13:12 **Matrix: Water** 

Date Received: 11/21/23 08:06

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 4500 F C			744922 SO	EET CHI	12/01/23 17:42

**Laboratory References:** 

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

APPENDIX A.

Accreditation/Certification Summan Corrective Action Report
HENNEPIN POWER PLANT, LANDFILL
John 102500242591-13
SDG: HEN\_257\_801 Client: Vistra Energy Corp Project/Site: HEN-23Q4

#### **Laboratory: Eurofins Chicago**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Illinois	NFI AP	II 00035	04-29-24

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately Section A Section B Section C Required Client Information: Required Project Information Invoice Information Company Attention Vistra Corp Report To Brian Voelker Jason Stuckey Address 133 S 4th, Suite 206 Copy To: Jason Stuckey Company Name Vistra Corp REGULATORY AGENCY Springfield, IL 62701 Address see Section A **NPDES GROUND WATER** DRINKING WATER Email To: Purchase Order No. Quote Brian, Voelker@VistraCorp.com UST RCRA OTHER Reference: Phone (217) 753-8911 Project Name roject PAGANO Site Location 23Q4 GW SAMPLING **NIKKI** Manager IL Project Number 50022357 Requested Due Date/TAT 10 day STATE Requested Analysis Filtered (Y/N) Valid Matrix Codes **→**N× Section D C=COMP) (see valid codes to left) Required Client Information COLLECTED Preservatives MATRIX CODE DRINKING WATER DW WASTE WATER ww (G=GRAB Residual Chlorine (Y/N) PRODUCT SOIL/SOLID IEN\_845\_802-805 OIL WIPE Analysis Test # OF CONTAINERS SAMPLE ID RAD AIR OTHER HEN\_257\_803 803 IEN\_845\_804 HEN\_257\_804 801 MATRIX CODE (A-Z, 0-9 / ) IEN\_WPCP 1EN\_000\_E IEN\_WPCP SAMPLE TYPE Sample IDs MUST BE UNIQUE 1EN\_000\_F HEN 845 HEN\_811\_ IEN\_257\_ DATE Project No./ Lab I.D. TIME 33 HEN\_05!R Х Х SHORT HOLDS-NO2 11-16-23 13:49 2 3 5 7 8 10 11 12 13 14 15 16 < ADDITIONAL COMMENTS **RELINQUISHED BY / AFFILIATION** DATE **ACCEPTED BY / AFFILIATION** SAMPLE CONDITIONS HEN-23Q4 Rev 0 DAN SAMPLER NAME AND SIGNATURE Custody Sealed Cooler (Y/N) Received on Ice (Y/N) Samples Intact (Y/N) .⊑ PRINT Name of SAMPLER TREVOR DEMPSEY Euro fins Courier **DATE Signed** SIGNATURE of SAMPLER. Dempsey (MM/DD/YY).

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DW-24259 / Page 1 of 1

Section A Section B Required Project Information: Required Client Information: Invoice Information Report To. Brian Voelker Attention Vistra Corp Jason Stuckey Address 133 S 4th, Suite 206 Copy To: Jason Stuckey Vistra Corp REGULATORY AGENCY Springfield, IL 62701 Address see Section A **NPDES GROUND WATER** DRINKING WATER Brian, Voelker@VistraCorp.com Email To: urchase Order No. Quote UST **RCRA** OTHER Reference 2304 GIN SAMPLING PAGANO Phone (217) 753-8911 NIKK Site Location IL Project Number 50022357 Requested Due Date/TAT 10 day STATE Requested Analysis Filtered (Y/N) Section D Valid Matrix Codes N≀X codes to left) C=COMP) Required Client Information COLLECTED Preservatives WATER WT (G=GRAB valid Residual Chlorine (Y/N) PRODUCT P SL OL WP AR OT TS SOIL/SOLID OIL WIPE # OF CONTAINERS SAMPLE ID Analysis Test. 803 802 IEN\_845\_803 86 HEN\_811\_801 MATRIX CODE (A-Z, 0-9 / ) OTHER SAMPLE TYPE Щ HEN\_WPCP HEN\_WPCP Sample IDs MUST BE UNIQUE HEN\_845\_ IEN\_257\_ 845 HEN 000 EN 257 TEM EN Project No./ Lab I.D. DATE 8 HEN\_40#S 11-16 23 Х SHORT HOLD-NO2 2 3 4 6 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 SAMPLER NAME AND SIGNATURE Custody Sealed Cooler (Y/N) Samples ntact (Y/N) Received or Ice (Y/N) Temp in PRINT Name of SAMPLER. THEESFELD SIGNATURE of SAMPLER (MM/DD/YY):

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Section C Section A Section B Required Project Information Required Client Information: Invoice Information Attention. Report To: Brian Voelker Jason Stuckey Vistra Corp Address Company Name Vistra Corp 133 S 4th, Suite 206 Jason Stuckey **REGULATORY AGENCY** Address see Section A Springfield, IL 62701 **NPDES GROUND WATER** DRINKING WATER Email To: Purchase Order No. Brian.Voelker@VistraCorp.com UST **RCRA** OTHER Project NKK PAGANO Project Name 23 Q4 GW SAMPLING Phone: (217) 753-8911 Site Location IL Project Number 50022357 STATE 10 day Requested Due Date/TAT Requested Analysis Filtered (Y/N) N N Section D Valid Matrix Codes C=COMP) (see valid codes to left) COLLECTED Preservatives Required Client Information MATRIX CODE nW WASTE WATER ww (G=GRAB Residual Chlorine (Y/N) SL OL WP AR SOIL/SOLID HEN 845 802-805 EN\_WPCP\_West OIL Analysis Test # OF CONTAINERS RAD SAMPLE ID WIPE 803 804 804 801 IEN\_845\_803 HEN\_257\_801 MATRIX CODE (A-Z, 0-9 / -) O. HEN WPCP SAMPLE TYPE Sample IDs MUST BE UNIQUE TISSUE IEN\_811\_ IEN\_845\_ HEN\_000\_ HEN\_257\_ 8 IEN\_257\_ EN 257 Ξ, Project No./ Lab I.D. DATE TIME HEN 08 11-14-23 12 32 Х Х Х Х Х Х Х Х Х SHORT HOLDS -NO2 がなど 24 12:31 HEN\_08\_FD Х Х Х Х Х Х Х Х Х SHORT HOLDS -NO3 2 TRIPBLANK UZ BTEX 3 5 6 7 9 10 11 12 13 14 15 16 RELINQUISHED BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS ADDITIONAL COMMENTS 1800 HEN-23Q4 Rev 0 11-13-2 1800 RAMBOL SAMPLER NAME AND SIGNATURE Custody Sealed Cooler (Y/N) Samples Intact (Y/N) Received or Ice (Y/N) Temp in ° PRINT Name of SAMPLER. かせらららし DATE Signed 11-17-23 SIGNATURE of SAMPLER (MM/DD/YY):

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#### **CHAIN-OF-CUSTODY / Analytical Request Document**

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Section A Required Client Information:		Section B Required Pr	oject Info	rmation:					ction	C nformati	on														Pa	age.	1	of	1
Company <sup>.</sup> Vistra Corp		Report To:	Brian Vo	oelker				Att	ention	J	ason	Stuck	ЭУ																•
Address 133 S 4th, Suite	206	Copy To-	Jason S	tuckey				Co	mpan	/ Name	Vis	tra Co	огр										REC	GULA	TORY	Y AG	ENCY	***************************************	
Springfield, IL 62	701							Ad	dress	s	ee Se	ction	A							NPDE	s	GR	OUNI	D WA	ΓER		DRINKI	NG WATER	₹
Email To. <u>Brian.Voelker@</u>	/istraCorp.com	Purchase Or						Qui	erence										1	UST		RC	RA			ОТ	THER		
Phone (217) 753-8911 F	ax:	Project Nam	e 2'	3 Q4 6	5W).	SAMP	LIN	Pro	ject nager	2	ikk	1 1	2AC	'nΑ	N		***************************************			Site I	.ocatio	on						A	
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	-					SIGNATURE	of SAMPL	ER C	PÝ	12	<u>L</u>	el	<u></u>			(MM/	DD/YY	<u>/)·</u>	11.	-20	-2	<u>.3</u>			Ţ	<u> </u>	Re 5	0 8	ν <u>ξ</u>

#### **Login Sample Receipt Checklist**

HEN-257-801

Client: Vistra Energy Corp

Job Number: 500-242591-13

SDG Number: HEN\_257\_801

Login Number: 242591 List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

Creator. Scott, Sherri L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	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	

**Eurofins Chicago** 

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## ANALYTICAL REPORT

#### PREPARED FOR

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

Generated 02/21/24 15:02:43

### **JOB DESCRIPTION**

HEN-24Q1 HEN\_257\_801

#### **JOB NUMBER**

500-245277-14

Eurofins Chicago 2417 Bond Street University Park IL 60484



#### ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

#### **Eurofins Chicago**

HEN-257-801

#### **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 02/21/24 15:02:43

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

APPENDIX A. ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN PLONOGERIC BILDANOTO, LIANGOOD L245277-14 H\$10162:51741801\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q1

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Client: Vistra Energy Corp

Project: HEN-24Q1

Job ID: 500-245277-14 Eurofins Chicago

Job Narrative 500-245277-14

#### Receipt

The samples were received on 01/24/24 12:20. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 12 coolers at receipt time were 2.1° C, 2.3° C, 2.6° C, 2.7° C, 3.2° C, 3.3° C, 3.9° C, 4.1° C, 4.4° C, 4.4° C, 5.1° C and 5.2° C.

#### Metals

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

#### **General Chemistry**

Method 300.0: The method blank for analytical batch 500-752307 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

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Jahen 250 0 245277-14 SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Client: Vistra Energy Corp Project/Site: HEN-24Q1

#### Lab Sample ID: 500-245277-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.24		0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	81		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	28	В	0.20	0.049	mg/L	1		6020B	Total
,,					· · · · · . · · · · · · · ·				Recoverable
Potassium	4.6		0.50	0.11	mg/L	1		6020B	Total
C - di	04	Б	0.00	0.077	/1	4		COOOD	Recoverable
Sodium	61	В	0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	89	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	76		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	500		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.23		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.33				ft	1		Field Sampling	Total/NA
Field pH	7.31				SU	1		Field Sampling	Total/NA
Field Temperature	16.0				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-4.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.48				mg/L	1		Field Sampling	Total/NA
Specific Conductance	814				umhos/cm	1		Field Sampling	Total/NA
Turbidity	3.64				NTU	1		Field Sampling	Total/NA

#### Client Sample ID: HEN\_16\_FD

#### Lab Sample ID: 500-245277-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.21		0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	79		0.20	0.044	mg/L	1		6020B	Total
		_							Recoverable
Magnesium	27	В	0.20	0.049	mg/L	1		6020B	Total
Potassium			0.50	0.11				COOOD	Recoverable
Polassium	4.4		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	59	В	0.20	0.077	ma/l	1		6020B	Total
Codium	00	<u> </u>	0.20	0.011	mg/L			0020B	Recoverable
Chloride	89	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	75		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	460		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.23		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.33				ft	1		Field Sampling	Total/NA
Field pH	7.31				SU	1		Field Sampling	Total/NA
Field Temperature	16.0				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-4.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.48				mg/L	1		Field Sampling	Total/NA
Specific Conductance	814				umhos/cm	1		Field Sampling	Total/NA
Turbidity	3.64				NTU	1		Field Sampling	Total/NA

#### Client Sample ID: HEN\_17

#### Lab Sample ID: 500-245277-17

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D Metho	od Prep Type
Boron	0.14	0.050	0.013 mg/L	1 6020B	Total
					Recoverable

This Detection Summary does not include radiochemical test results.

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Lab Sample ID: 500-245277-17

SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q1

#### Client Sample ID: HEN\_17 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	120		0.20	0.044	mg/L	1	_	6020B	Total
									Recoverable
Magnesium	44	В	0.20	0.049	mg/L	1		6020B	Total
									Recoverable
Potassium	4.8		0.50	0.11	mg/L	1		6020B	Total
-									Recoverable
Sodium	61	В	0.20	0.077	mg/L	1		6020B	Total
		_				_			Recoverable
Chloride	93	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	65		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	400		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	670		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)	58.90				ft	1		Field Sampling	Total/NA
Field pH	6.99				SU	1		Field Sampling	Total/NA
Field Temperature	14.1				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	142.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	3.32				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1110				umhos/cm	1		Field Sampling	Total/NA
Turbidity	2.49				NTU	1		Field Sampling	Total/NA

#### Client Sample ID: HEN 05!R

#### Lab Sample ID: 500-245277-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Boron	0.93		0.050	0.013	mg/L	1	6020B	Total
								Recoverable
Calcium	84		0.20	0.044	mg/L	1	6020B	Total
								Recoverable
Magnesium	30		0.20	0.049	mg/L	1	6020B	Total
Potassium			0.50	0.11			60200	Recoverable
Polassium	8.5		0.50	0.11	mg/L	ļ	6020B	Total Recoverable
Sodium	47		0.20	0.077	ma/l	1	6020B	Total
Codium			0.20	0.011	mg/L	•	0020B	Recoverable
Chloride	81		5.0	0.58	mg/L	5	300.0	Total/NA
Sulfate	80		5.0	1.0	mg/L	5	300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	240		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	0.13		0.10	0.056	mg/L	1	SM 4500 F C	Total/NA
Depth to Water (ft from MP)	41.06				ft	1	Field Sampling	Total/NA
Field pH	7.69				SU	1	Field Sampling	Total/NA
Field Temperature	15.2				Degrees C	1	Field Sampling	Total/NA
Oxidation Reduction Potential	98.7				millivolts	1	Field Sampling	Total/NA
Oxygen, Dissolved	0.96				mg/L	1	Field Sampling	Total/NA
Specific Conductance	851				umhos/cm	1	Field Sampling	Total/NA
Turbidity	4.55				NTU	1	Field Sampling	Total/NA

#### Client Sample ID: HEN\_05&DR

#### Lab Sample ID: 500-245277-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.89		0.050	0.013	mg/L	1	_	6020B	Total
Calcium	83		0.20	0.044	mg/L	1		6020B	Recoverable Total Recoverable

This Detection Summary does not include radiochemical test results.

02/21/24

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SDG: HEN\_257\_801

Project/Site: HEN-24Q1 Client Sample ID: HEN\_05&DR (Continued)

Client: Vistra Energy Corp

#### Lab Sample ID: 500-245277-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Magnesium	30		0.20	0.049	mg/L	1	6020B	Total
								Recoverable
Potassium	6.7		0.50	0.11	mg/L	1	6020B	Total
								Recoverable
Sodium	50		0.20	0.077	mg/L	1	6020B	Total
						_		Recoverable
Chloride	80		5.0	0.58	mg/L	5	300.0	Total/NA
Sulfate	100		5.0	1.0	mg/L	5	300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	3.7	mg/L	1	SM 2320B	Total/NA
Total Dissolved Solids	590		10	4.3	mg/L	1	SM 2540C	Total/NA
Fluoride	0.14		0.10	0.056	mg/L	1	SM 4500 F C	Total/NA
Depth to Water (ft from MP)	41.09				ft	1	Field Sampling	Total/NA
Field pH	7.53				SU	1	Field Sampling	Total/NA
Field Temperature	13.2				Degrees C	1	Field Sampling	Total/NA
Oxidation Reduction Potential	55.8				millivolts	1	Field Sampling	Total/NA
Oxygen, Dissolved	1.13				mg/L	1	Field Sampling	Total/NA
Specific Conductance	794				umhos/cm	1	Field Sampling	Total/NA
Turbidity	2.96				NTU	1	Field Sampling	Total/NA

#### Client Sample ID: HEN\_08&D

#### Lab Sample ID: 500-245277-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.12		0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	220		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	59		0.20	0.049	mg/L	1		6020B	Total
,,					<u>.</u>				Recoverable
Potassium	4.3		0.50	0.11	mg/L	1		6020B	Total
O a dissura	400		0.00	0.077	/I	4		COOOD	Recoverable
Sodium	190		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	330		20	2.3	mg/L	20		300.0	Total/NA
Sulfate	170		5.0		mg/L			300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	510		5.0	3.7		1		SM 2320B	Total/NA
Total Dissolved Solids	1500		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.090	J	0.10	0.056		1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.09				ft	1		Field Sampling	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA
Field Temperature	12.5				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	86.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.50				mg/L	1		Field Sampling	Total/NA
Specific Conductance	2389				umhos/cm	1		Field Sampling	Total/NA
Turbidity	4.40				NTU	1		Field Sampling	Total/NA

#### Client Sample ID: HEN\_40#S

#### Lab Sample ID: 500-245277-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.2	В	0.050	0.013	mg/L		_	6020B	Total
									Recoverable
Calcium	66		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	24		0.20	0.049	mg/L	1		6020B	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

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**Eurofins Chicago** 

02/21/24

SDG: HEN\_257\_801

Client Sample ID: HEN\_40#S (Continued)

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	6.1		0.50	0.11	mg/L	1	_	6020B	Total
									Recoverable
Sodium	52		0.20	0.077	mg/L	1		6020B	Total
									Recoverable
Chloride	83		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	200		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	490		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.16		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	40.36				ft	1		Field Sampling	Total/NA
Field pH	7.94				SU	1		Field Sampling	Total/NA
Field Temperature	15.0				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	74.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.09				mg/L	1		Field Sampling	Total/NA
Specific Conductance	784				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.91				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN\_07

Lab Sample ID: 500-245277-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.12	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	120		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	39		0.20	0.049	mg/L	1		6020B	Total
	· · · · · · · · · · · · · · · · · · ·								Recoverable
Potassium	2.7		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	37		0.20	0.077	ma/l	1		6020B	Total
Sodium	31		0.20	0.077	mg/L	ı		00200	Recoverable
Chloride	56		5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	59		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	350		5.0		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	650		10		mg/L	1		SM 2540C	Total/NA
Fluoride	0.12		0.10	0.056		1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	68.7				ft	1		Field Sampling	Total/NA
Field pH	6.97				SU	1		Field Sampling	Total/NA
Field Temperature	10.0				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	143.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.30				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1026				umhos/cm	 1		Field Sampling	Total/NA
Turbidity	5.90				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN\_08

Lab Sample ID: 500-245277-40

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.15	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	200		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	48		0.20	0.049	mg/L	1		6020B	Total
									Recoverable
Potassium	8.2		0.50	0.11	mg/L	1		6020B	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

02/21/24

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**Eurofins Chicago** 

SDG: HEN\_257\_801

Client Sample ID: HEN\_08 (Continued)

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-40

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	130		0.20	0.077	mg/L	1	_	6020B	Total
Chloride	250		5.0	0.58	mg/L	5		300.0	Recoverable Total/NA
Sulfate	120		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	510		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	0.083	J	0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	53.62				ft	1		Field Sampling	Total/NA
Field pH	6.78				SU	1		Field Sampling	Total/NA
Field Temperature	12.3				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	101.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.53				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1839				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.97				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN\_YSG\_ILRIVER

Lab Sample	ID: 500-245277-	· <b>50</b>
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Analyte	Result Qualifier	RL	MDL Unit	Dil Fac [	Method	Prep Type
Depth to Water (ft from MP)	22.07		ft		Field Sampling	Total/NA

## APPENDIX A. AMETHOO SOUTH AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL Jobell 2509 245277-14

SDG: HEN\_257\_801

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI

#### **Protocol References:**

Client: Vistra Energy Corp Project/Site: HEN-24Q1

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

# APPENDIX A. ASTAM FRO SOUTHFRAM ITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOHEN 250 245277-14 SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-245277-15	HEN_16	Water	01/24/24 10:55	01/25/24 11:51
500-245277-16	HEN_16_FD	Water	01/24/24 10:55	01/25/24 11:51
500-245277-17	HEN_17	Water	01/24/24 11:55	01/25/24 11:51
500-245277-28	HEN_05!R	Water	01/25/24 15:50	01/26/24 11:45
500-245277-29	HEN_05&DR	Water	01/25/24 15:50	01/26/24 11:45
500-245277-30	HEN_08&D	Water	01/25/24 13:05	01/26/24 11:45
500-245277-34	HEN_40#S	Water	01/25/24 14:15	01/26/24 11:45
500-245277-39	HEN_07	Water	01/26/24 08:50	01/26/24 11:45
500-245277-40	HEN_08	Water	01/26/24 08:20	01/26/24 11:45
500-245277-50	HEN_YSG_ILRIVER	Water	01/22/24 14:20	01/26/24 11:45

Client: Vistra Energy Corp Project/Site: HEN-24Q1 SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Lab Sample ID: 500-245277-15 Date Collected: 01/24/24 10:55

**Matrix: Water** Date Received: 01/25/24 11:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.24		0.050	0.013	mg/L		01/30/24 09:37	02/06/24 15:38	1
Calcium	81		0.20	0.044	mg/L		01/30/24 09:37	01/31/24 21:07	1
Magnesium	28	В	0.20	0.049	mg/L		01/30/24 09:37	01/31/24 21:07	1
Potassium	4.6		0.50	0.11	mg/L		01/30/24 09:37	01/31/24 21:07	1
Sodium	61	В	0.20	0.077	mg/L		01/30/24 09:37	01/31/24 21:07	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	89	В	5.0	0.58	mg/L			02/01/24 13:37	5
Sulfate (EPA 300.0)	76		5.0	1.0	mg/L			02/01/24 13:37	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	250		5.0	3.7	mg/L			01/26/24 19:55	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			01/26/24 19:55	1
Total Dissolved Solids (SM 2540C)	500		10	4.3	mg/L			01/29/24 02:33	1
Fluoride (SM 4500 F C)	0.23		0.10	0.056	mg/L			02/09/24 11:16	1
Method: EPA Field Sampling - Fi	ield Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.33				ft			01/24/24 10:55	1
Field pH	7.31				SU			01/24/24 10:55	1
Field Temperature	16.0				Degrees C			01/24/24 10:55	1
Oxidation Reduction Potential	-4.2				millivolts			01/24/24 10:55	1
Oxygen, Dissolved	0.48				mg/L			01/24/24 10:55	1
Specific Conductance	814				umhos/cm			01/24/24 10:55	1
Turbidity	3.64				NTU			01/24/24 10:55	1

02/21/24

SDG: HEN\_257\_801

Client Sample ID: HEN\_16\_FD

Date Collected: 01/24/24 10:55 Date Received: 01/25/24 11:51

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-16

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.21		0.050	0.013	mg/L		01/30/24 09:37	02/06/24 15:41	1
Calcium	79		0.20	0.044	mg/L		01/30/24 09:37	01/31/24 21:10	1
Magnesium	27	В	0.20	0.049	mg/L		01/30/24 09:37	01/31/24 21:10	1
Potassium	4.4		0.50	0.11	mg/L		01/30/24 09:37	01/31/24 21:10	1
Sodium	59	В	0.20	0.077	mg/L		01/30/24 09:37	01/31/24 21:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	89	В	5.0	0.58	mg/L			02/01/24 13:52	5
Sulfate (EPA 300.0)	75		5.0	1.0	mg/L			02/01/24 13:52	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	240		5.0	3.7	mg/L			01/26/24 20:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			01/26/24 20:04	1
Total Dissolved Solids (SM 2540C)	460		10	4.3	mg/L			01/29/24 02:36	1
Fluoride (SM 4500 F C)	0.23		0.10	0.056	mg/L			02/09/24 11:20	1
Method: EPA Field Sampling - Fi	ield Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.33				ft			01/24/24 10:55	1
Field pH	7.31				SU			01/24/24 10:55	1
Field Temperature	16.0				Degrees C			01/24/24 10:55	1
Oxidation Reduction Potential	-4.2				millivolts			01/24/24 10:55	1
Oxygen, Dissolved	0.48				mg/L			01/24/24 10:55	1
Specific Conductance	814				umhos/cm			01/24/24 10:55	1
Turbidity	3.64				NTU			01/24/24 10:55	1

# APPENDIX A. CHEMILS AMPLE TRESONTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 2509 245277-14

Client: Vistra Energy Corp

John D25096245277-14

Project/Site: HEN-24Q1

SDG: HEN\_257\_801

Client Sample ID: HEN\_17

Date Collected: 01/24/24 11:55 Date Received: 01/25/24 11:51 Lab Sample ID: 500-245277-17

**Matrix: Water** 

Method: SW846 6020B - Metals	(ICP/MS)	- Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.14		0.050	0.013	mg/L		01/30/24 09:37	02/06/24 15:45	1
Calcium	120		0.20	0.044	mg/L		01/30/24 09:37	01/31/24 21:14	1
Magnesium	44	В	0.20	0.049	mg/L		01/30/24 09:37	01/31/24 21:14	1
Potassium	4.8		0.50	0.11	mg/L		01/30/24 09:37	01/31/24 21:14	1
Sodium	61	В	0.20	0.077	mg/L		01/30/24 09:37	01/31/24 21:14	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	93	В	5.0	0.58	mg/L			02/01/24 14:39	5
Sulfate (EPA 300.0)	65		5.0	1.0	mg/L			02/01/24 14:39	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	400		5.0	3.7	mg/L			01/26/24 20:13	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			01/26/24 20:13	1
Total Dissolved Solids (SM 2540C)	670		10	4.3	mg/L			01/29/24 02:38	1
Fluoride (SM 4500 F C)	0.15		0.10	0.056	mg/L			02/09/24 11:25	1
Method: EPA Field Sampling - F	ield Samı	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	58.90				ft			01/24/24 11:55	1
Field pH	6.99				SU			01/24/24 11:55	1
Field Temperature	14.1				Degrees C			01/24/24 11:55	1
Oxidation Reduction Potential	142.7				millivolts			01/24/24 11:55	1
Oxygen, Dissolved	3.32				mg/L			01/24/24 11:55	1
Specific Conductance	1110				umhos/cm			01/24/24 11:55	1
Turbidity	2.49				NTU			01/24/24 11:55	1

# APPENDIX A. CHENTLES AND THE SOUTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOHN 1250 250 245277-14

Client: Vistra Energy Corp

John Mo 250 6245277-14

Project/Site: HEN-24Q1

SDG: HEN\_257\_801

Client Sample ID: HEN\_05!R
Date Collected: 01/25/24 15:50

580

0.13

Date Received: 01/26/24 11:45

Total Dissolved Solids (SM 2540C)

Fluoride (SM 4500 F C)

Lab Sample ID: 500-245277-28

01/29/24 03:25

02/09/24 12:37

**Matrix: Water** 

Method: SW846 6020B - Metals	,	Qualifier		MDL	l lmi4	_ n	Duamanad	A malumad	Dil Fac
Analyte	Result	Qualifier	RL _	MIDL	Unit	<u>D</u>	Prepared	Analyzed	DII Fac
Boron	0.93		0.050	0.013	mg/L		01/30/24 17:00	02/01/24 16:39	1
Calcium	84		0.20	0.044	mg/L		01/30/24 17:00	02/06/24 17:55	1
Magnesium	30		0.20	0.049	mg/L		01/30/24 17:00	02/01/24 16:39	1
Potassium	8.5		0.50	0.11	mg/L		01/30/24 17:00	02/01/24 16:39	1
Sodium	47		0.20	0.077	mg/L		01/30/24 17:00	02/01/24 16:39	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	81		5.0	0.58	mg/L			01/31/24 21:28	5
Sulfate (EPA 300.0)	80		5.0	1.0	mg/L			01/31/24 21:28	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	240		5.0	3.7	mg/L			02/08/24 11:29	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	41.06			ft			01/25/24 15:50	1
Field pH	7.69			SU			01/25/24 15:50	1
Field Temperature	15.2			Degrees C			01/25/24 15:50	1
Oxidation Reduction Potential	98.7			millivolts			01/25/24 15:50	1
Oxygen, Dissolved	0.96			mg/L			01/25/24 15:50	1
Specific Conductance	851			umhos/cm			01/25/24 15:50	1
Turbidity	4.55			NTU			01/25/24 15:50	1

10

0.10

4.3 mg/L

0.056 mg/L

02/21/24

*A* 

5

7

9

10

12

13

14

15

# CHENTLES AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 10250 96245277-14

Client: Vistra Energy Corp Project/Site: HEN-24Q1 SDG: HEN\_257\_801

Client Sample ID: HEN\_05&DR Lab Sample ID: 500-245277-29 Date Collected: 01/25/24 15:50

**Matrix: Water** 

Date	Received:	01/26/24	11:45

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.89		0.050	0.013	mg/L		01/30/24 17:00	02/01/24 16:43	1
Calcium	83		0.20	0.044	mg/L		01/30/24 17:00	02/06/24 17:58	1
Magnesium	30		0.20	0.049	mg/L		01/30/24 17:00	02/01/24 16:43	1
Potassium	6.7		0.50	0.11	mg/L		01/30/24 17:00	02/01/24 16:43	1
Sodium	50		0.20	0.077	mg/L		01/30/24 17:00	02/01/24 16:43	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	80		5.0	0.58	mg/L			01/31/24 21:43	5
Sulfate (EPA 300.0)	100		5.0	1.0	mg/L			01/31/24 21:43	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	230		5.0	3.7	mg/L			02/08/24 11:38	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			02/08/24 11:38	1
Total Dissolved Solids (SM 2540C)	590		10	4.3	mg/L			01/29/24 03:27	1
Fluoride (SM 4500 F C)	0.14		0.10	0.056	mg/L			02/09/24 12:41	1
_ Method: EPA Field Sampling - F	ield Sam	oling							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	41.09				ft			01/25/24 15:50	1
Field pH	7.53				SU			01/25/24 15:50	1
Field Temperature	13.2				Degrees C			01/25/24 15:50	1
Oxidation Reduction Potential	55.8				millivolts			01/25/24 15:50	1
Oxygen, Dissolved	1.13				mg/L			01/25/24 15:50	1
Specific Conductance	794				umhos/cm			01/25/24 15:50	1
Turbidity	2.96				NTU			01/25/24 15:50	1

# APPENDIX A. CHEMILS AMPLE TRESONTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 2509 245277-14

Client: Vistra Energy Corp Project/Site: HEN-24Q1 SDG: HEN\_257\_801

Client Sample ID: HEN\_08&D Lab Sample ID: 500-245277-30 Date Collected: 01/25/24 13:05

**Matrix: Water** 

Duto	oonootoa.	01/20/27	
<b>Date</b>	Received:	01/26/24	11:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.12		0.050	0.013	mg/L		01/30/24 17:00	02/01/24 16:50	1
Calcium	220		0.20	0.044	mg/L		01/30/24 17:00	02/06/24 18:05	1
Magnesium	59		0.20	0.049	mg/L		01/30/24 17:00	02/01/24 16:50	1
Potassium	4.3		0.50	0.11	mg/L		01/30/24 17:00	02/01/24 16:50	1
Sodium	190		0.20	0.077	mg/L		01/30/24 17:00	02/01/24 16:50	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	330		20	2.3	mg/L			02/06/24 13:50	20
Sulfate (EPA 300.0)	170		5.0	1.0	mg/L			02/03/24 15:07	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	510		5.0	3.7	mg/L			02/08/24 11:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			02/08/24 11:47	1
Total Dissolved Solids (SM 2540C)	1500		10	4.3	mg/L			01/29/24 03:30	1
Fluoride (SM 4500 F C)	0.090	J	0.10	0.056	mg/L			02/09/24 12:46	1
Method: EPA Field Sampling - Fi	eld Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.09				ft			01/25/24 13:05	1
Field pH	6.69				SU			01/25/24 13:05	1
Field Temperature	12.5				Degrees C			01/25/24 13:05	1
Oxidation Reduction Potential	86.7				millivolts			01/25/24 13:05	1
Oxygen, Dissolved	0.50				mg/L			01/25/24 13:05	1
Specific Conductance	2389				umhos/cm			01/25/24 13:05	1
Turbidity	4.40				NTU			01/25/24 13:05	1

# CHENTLES AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 10250 96245277-14

SDG: HEN\_257\_801

Project/Site: HEN-24Q1

Date Received: 01/26/24 11:45

Client: Vistra Energy Corp

Client Sample ID: HEN\_40#S Lab Sample ID: 500-245277-34 Date Collected: 01/25/24 14:15

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.2	В	0.050	0.013	mg/L		01/31/24 08:07	02/06/24 19:07	1
Calcium	66		0.20	0.044	mg/L		01/31/24 08:07	02/06/24 19:07	1
Magnesium	24		0.20	0.049	mg/L		01/31/24 08:07	02/01/24 17:55	1
Potassium	6.1		0.50	0.11	mg/L		01/31/24 08:07	02/01/24 17:55	1
Sodium	52		0.20	0.077	mg/L		01/31/24 08:07	02/06/24 19:07	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			01/31/24 21:59	5
Sulfate (EPA 300.0)	110		5.0	1.0	mg/L			01/31/24 21:59	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	200		5.0	3.7	mg/L			02/08/24 12:15	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			02/08/24 12:15	1
Total Dissolved Solids (SM 2540C)	490		10	4.3	mg/L			01/29/24 03:37	1
Fluoride (SM 4500 F C)	0.16		0.10	0.056	mg/L			02/09/24 13:11	1
Method: EPA Field Sampling - I	Field Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	40.36				ft			01/25/24 14:15	1
Field pH	7.94				SU			01/25/24 14:15	1
Field Temperature	15.0				Degrees C			01/25/24 14:15	1
Oxidation Reduction Potential	74.4				millivolts			01/25/24 14:15	1
Oxygen, Dissolved	0.09				mg/L			01/25/24 14:15	1
Specific Conductance	784				umhos/cm			01/25/24 14:15	1
Turbidity	0.91				NTU			01/25/24 14:15	1

# APPENDIX A. CHENTLESAMPLE RESOLUTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 102508245277-14

Client: Vistra Energy Corp

John March 2509 245277-14

Project/Site: HEN-24Q1

SDG: HEN\_257\_801

Client Sample ID: HEN\_07 Lab Sample ID: 500-245277-39

Matrix: Water

Date Collected: 01/26/24 08:50 Date Received: 01/26/24 11:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.12	B	0.050	0.013	mg/L		01/31/24 08:07	02/06/24 19:21	1
Calcium	120		0.20	0.044	mg/L		01/31/24 08:07	02/06/24 19:21	1
Magnesium	39		0.20	0.049	mg/L		01/31/24 08:07	02/01/24 18:16	1
Potassium	2.7		0.50	0.11	mg/L		01/31/24 08:07	02/01/24 18:16	1
Sodium	37		0.20	0.077	mg/L		01/31/24 08:07	02/06/24 19:21	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	56		5.0	0.58	mg/L			02/03/24 17:24	5
Sulfate (EPA 300.0)	59		5.0	1.0	mg/L			02/03/24 17:24	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	350		5.0	3.7	mg/L			02/08/24 13:07	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			02/08/24 13:07	1
Total Dissolved Solids (SM 2540C)	650		10	4.3	mg/L			01/29/24 03:50	1
Fluoride (SM 4500 F C)	0.12		0.10	0.056	mg/L			02/09/24 13:48	1
Method: EPA Field Sampling - Fi	ield Samı	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	68.7				ft			01/26/24 08:50	1
Field pH	6.97				SU			01/26/24 08:50	1
Field Temperature	10.0				Degrees C			01/26/24 08:50	1
Oxidation Reduction Potential	143.4				millivolts			01/26/24 08:50	1
Oxygen, Dissolved	4.30				mg/L			01/26/24 08:50	1
Specific Conductance	1026				umhos/cm			01/26/24 08:50	1
Turbidity	5.90				NTU			01/26/24 08:50	1

# CHENTLES AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 10250 96245277-14

Client: Vistra Energy Corp Project/Site: HEN-24Q1 SDG: HEN\_257\_801

Client Sample ID: HEN\_08 Lab Sample ID: 500-245277-40 Date Collected: 01/26/24 08:20

Date Received: 01/26/24 11:45

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.15	В	0.050	0.013	mg/L		01/31/24 08:07	02/06/24 19:24	1
Calcium	200		0.20	0.044	mg/L		01/31/24 08:07	02/06/24 19:24	1
Magnesium	48		0.20	0.049	mg/L		01/31/24 08:07	02/01/24 18:20	1
Potassium	8.2		0.50	0.11	mg/L		01/31/24 08:07	02/01/24 18:20	1
Sodium	130		0.20	0.077	mg/L		01/31/24 08:07	02/06/24 19:24	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	250		5.0	0.58	mg/L			02/06/24 16:07	5
Sulfate (EPA 300.0)	120		5.0	1.0	mg/L			02/06/24 16:07	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	510		5.0	3.7	mg/L			02/08/24 13:16	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			02/08/24 13:16	1
Total Dissolved Solids (SM 2540C)	1200		10	4.3	mg/L			01/29/24 03:53	1
Fluoride (SM 4500 F C)	0.083	J	0.10	0.056	mg/L			02/09/24 13:53	1
Method: EPA Field Sampling - Fi	ield Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	53.62				ft			01/26/24 08:20	1
Field pH	6.78				SU			01/26/24 08:20	1
Field Temperature	12.3				Degrees C			01/26/24 08:20	1
Oxidation Reduction Potential	101.3				millivolts			01/26/24 08:20	1
Oxygen, Dissolved	0.53				mg/L			01/26/24 08:20	1
Specific Conductance	1839				umhos/cm			01/26/24 08:20	1
Turbidity	0.97				NTU			01/26/24 08:20	1

# APPENDIX A. CHEMILS AMPLE TRESONTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 2509 245277-14

Client: Vistra Energy Corp Project/Site: HEN-24Q1 SDG: HEN\_257\_801

Client Sample ID: HEN\_YSG\_ILRIVER Lab Sample ID: 500-245277-50

Date Collected: 01/22/24 14:20 **Matrix: Water** Date Received: 01/26/24 11:45

Method: EPA Field Sampling -	Field Sampling						
Analyte	Result Qualif	ifier RL	MDL Ur	nit D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	22.07		ft			01/22/24 14:20	1

# APPENDIX A. Definitions/C168 saryoring and corrective action report Hennepin power Plant, Landfill

Client: Vistra Energy Corp Jahel 1025 1080 245277-14 Project/Site: HEN-24Q1 SDG: HEN\_257\_801

#### Qualifiers

M	<b>P</b> 1	ta	ıs

Quaimer	Qualifier Description							
	_					-		

Compound was found in the blank and sample.

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

#### **General Chemistry**

Qualifier	Qualifier Description
-----------	-----------------------

В 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.

#### **Glossary**

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

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

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

**DER** Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE) LOQ

MCL EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry) MDA Minimum Detectable Concentration (Radiochemistry) MDC

MDL Method Detection Limit MLMinimum 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)

Negative / Absent NEG POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC Quality Control

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

Toxicity Equivalent Factor (Dioxin) **TEF** Toxicity Equivalent Quotient (Dioxin) TFO

**TNTC** Too Numerous To Count

**Metals** 

Prep	Batch:	751964

Client: Vistra Energy Corp Project/Site: HEN-24Q1

<b>Lab Sample ID</b> 500-245277-15	Client Sample ID HEN_16	Prep Type Total Recoverable	Matrix Water	Method 3005A	Prep Batch
500-245277-16	HEN_16_FD	Total Recoverable	Water	3005A	
500-245277-17	HEN_17	Total Recoverable	Water	3005A	
MB 500-751964/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-751964/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

#### Prep Batch: 752046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-28	HEN_05!R	Total Recoverable	Water	3005A	
500-245277-29	HEN_05&DR	Total Recoverable	Water	3005A	
500-245277-30	HEN_08&D	Total Recoverable	Water	3005A	
MB 500-752046/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-752046/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### **Prep Batch: 752130**

Lab Sample ID 500-245277-34	Client Sample ID HEN 40#S	Prep Type  Total Recoverable	Matrix Water	Method 3005A	Prep Batch
500-245277-39	HEN 07	Total Recoverable	Water	3005A	
500-245277-40	HEN_08	Total Recoverable	Water	3005A	
MB 500-752130/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-752130/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

#### **Analysis Batch: 752304**

Lab Sample	ID Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277	15 HEN_16	Total Recoverable	Water	6020B	751964
500-245277-	16 HEN_16_FD	Total Recoverable	Water	6020B	751964
500-245277-	17 HEN_17	Total Recoverable	Water	6020B	751964
MB 500-751	964/1-A Method Blank	Total Recoverable	Water	6020B	751964
LCS 500-75	1964/2-A Lab Control Sample	Total Recoverable	Water	6020B	751964

#### **Analysis Batch: 752468**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-28	HEN_05!R	Total Recoverable	Water	6020B	752046
500-245277-29	HEN_05&DR	Total Recoverable	Water	6020B	752046
500-245277-30	HEN_08&D	Total Recoverable	Water	6020B	752046
500-245277-34	HEN_40#S	Total Recoverable	Water	6020B	752130
500-245277-39	HEN_07	Total Recoverable	Water	6020B	752130
500-245277-40	HEN_08	Total Recoverable	Water	6020B	752130
MB 500-752046/1-A	Method Blank	Total Recoverable	Water	6020B	752046
MB 500-752130/1-A	Method Blank	Total Recoverable	Water	6020B	752130
LCS 500-752046/2-A	Lab Control Sample	Total Recoverable	Water	6020B	752046
LCS 500-752130/2-A	Lab Control Sample	Total Recoverable	Water	6020B	752130

#### **Analysis Batch: 752984**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-15	HEN_16	Total Recoverable	Water	6020B	751964
500-245277-16	HEN_16_FD	Total Recoverable	Water	6020B	751964
500-245277-17	HEN_17	Total Recoverable	Water	6020B	751964
500-245277-28	HEN_05!R	Total Recoverable	Water	6020B	752046
500-245277-29	HEN_05&DR	Total Recoverable	Water	6020B	752046
500-245277-30	HEN_08&D	Total Recoverable	Water	6020B	752046

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02/21/24

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# APPENDIX A. QC ASSOCIATION SUMMARY GAND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL Jobell 2508 245277-14

Client: Vistra Energy Corp Project/Site: HEN-24Q1

SDG: HEN\_257\_801

### **Metals (Continued)**

#### **Analysis Batch: 752984 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-34	HEN_40#S	Total Recoverable	Water	6020B	752130
500-245277-39	HEN_07	Total Recoverable	Water	6020B	752130
500-245277-40	HEN_08	Total Recoverable	Water	6020B	752130
MB 500-751964/1-A	Method Blank	Total Recoverable	Water	6020B	751964
MB 500-752046/1-A	Method Blank	Total Recoverable	Water	6020B	752046
MB 500-752130/1-A	Method Blank	Total Recoverable	Water	6020B	752130
LCS 500-751964/2-A	Lab Control Sample	Total Recoverable	Water	6020B	751964
LCS 500-752046/2-A	Lab Control Sample	Total Recoverable	Water	6020B	752046
LCS 500-752130/2-A	Lab Control Sample	Total Recoverable	Water	6020B	752130

### **General Chemistry**

#### **Analysis Batch: 751719**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-15	HEN_16	Total/NA	Water	SM 2540C	
500-245277-16	HEN_16_FD	Total/NA	Water	SM 2540C	
500-245277-17	HEN_17	Total/NA	Water	SM 2540C	
MB 500-751719/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-751719/2	Lab Control Sample	Total/NA	Water	SM 2540C	

#### **Analysis Batch: 751720**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-28	HEN_05!R	Total/NA	Water	SM 2540C	
500-245277-29	HEN_05&DR	Total/NA	Water	SM 2540C	
500-245277-30	HEN_08&D	Total/NA	Water	SM 2540C	
500-245277-34	HEN_40#S	Total/NA	Water	SM 2540C	
500-245277-39	HEN_07	Total/NA	Water	SM 2540C	
500-245277-40	HEN_08	Total/NA	Water	SM 2540C	
MB 500-751720/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-751720/2	Lab Control Sample	Total/NA	Water	SM 2540C	

#### **Analysis Batch: 751763**

<b>Lab Sample ID</b> 500-245277-15	Client Sample ID HEN_16	Prep Type Total/NA	Matrix Water	Method SM 2320B	Prep Batch
500-245277-16	HEN_16_FD	Total/NA	Water	SM 2320B	
500-245277-17	HEN_17	Total/NA	Water	SM 2320B	
MB 500-751763/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-751763/29	Lab Control Sample	Total/NA	Water	SM 2320B	

#### **Analysis Batch: 752222**

Lab Sample ID 500-245277-28	Client Sample ID HEN_05!R	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
500-245277-29	HEN_05&DR	Total/NA	Water	300.0	
500-245277-34	HEN_40#S	Total/NA	Water	300.0	
MB 500-752222/3	Method Blank	Total/NA	Water	300.0	
LCS 500-752222/4	Lab Control Sample	Total/NA	Water	300.0	

#### **Analysis Batch: 752307**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-15	HEN_16	Total/NA	Water	300.0	
500-245277-16	HEN 16 FD	Total/NA	Water	300.0	

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SDG: HEN\_257\_801

### **General Chemistry (Continued)**

#### **Analysis Batch: 752307 (Continued)**

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	500-245277-17	HEN_17	Total/NA	Water	300.0	
١	MB 500-752307/3	Method Blank	Total/NA	Water	300.0	
	LCS 500-752307/4	Lab Control Sample	Total/NA	Water	300.0	

#### Analysis Batch: 752534

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-30	HEN_08&D	Total/NA	Water	300.0	
500-245277-39	HEN_07	Total/NA	Water	300.0	
MB 500-752534/3	Method Blank	Total/NA	Water	300.0	
LCS 500-752534/4	Lab Control Sample	Total/NA	Water	300.0	

#### **Analysis Batch: 752833**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-30	HEN_08&D	Total/NA	Water	300.0	<del></del>
500-245277-40	HEN_08	Total/NA	Water	300.0	
MB 500-752833/3	Method Blank	Total/NA	Water	300.0	
LCS 500-752833/4	Lab Control Sample	Total/NA	Water	300.0	
500-245277-C-28 MS	500-245277-C-28 MS	Dissolved	Water	300.0	
500-245277-C-28 MSD	500-245277-C-28 MSD	Dissolved	Water	300.0	

#### Analysis Batch: 753401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-28	HEN_05!R	Total/NA	Water	SM 2320B	
500-245277-29	HEN_05&DR	Total/NA	Water	SM 2320B	
500-245277-30	HEN_08&D	Total/NA	Water	SM 2320B	
500-245277-34	HEN_40#S	Total/NA	Water	SM 2320B	
500-245277-39	HEN_07	Total/NA	Water	SM 2320B	
500-245277-40	HEN_08	Total/NA	Water	SM 2320B	
MB 500-753401/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-753401/4	Lab Control Sample	Total/NA	Water	SM 2320B	

#### Analysis Batch: 753484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-15	HEN_16	Total/NA	Water	SM 4500 F C	
500-245277-16	HEN_16_FD	Total/NA	Water	SM 4500 F C	
500-245277-17	HEN_17	Total/NA	Water	SM 4500 F C	
500-245277-28	HEN_05!R	Total/NA	Water	SM 4500 F C	
500-245277-29	HEN_05&DR	Total/NA	Water	SM 4500 F C	
500-245277-30	HEN_08&D	Total/NA	Water	SM 4500 F C	
500-245277-34	HEN_40#S	Total/NA	Water	SM 4500 F C	
500-245277-39	HEN_07	Total/NA	Water	SM 4500 F C	
500-245277-40	HEN_08	Total/NA	Water	SM 4500 F C	
MB 500-753484/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-753484/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-753484/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-753484/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

# APPENDIX A. QC ASSOCIATION SUMMASSIMMATERY OF AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 2509 245277-14

Client: Vistra Energy Corp

Project/Site: HEN-24Q1

SDG: HEN\_250@245277-14

SDG: HEN\_257\_801

## Field Service / Mobile Lab

#### Analysis Batch: 753002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-15	HEN_16	Total/NA	Water	Field Sampling	
500-245277-16	HEN_16_FD	Total/NA	Water	Field Sampling	
500-245277-17	HEN_17	Total/NA	Water	Field Sampling	
500-245277-28	HEN_05!R	Total/NA	Water	Field Sampling	
500-245277-29	HEN_05&DR	Total/NA	Water	Field Sampling	
500-245277-30	HEN_08&D	Total/NA	Water	Field Sampling	
500-245277-34	HEN_40#S	Total/NA	Water	Field Sampling	
500-245277-39	HEN_07	Total/NA	Water	Field Sampling	
500-245277-40	HEN_08	Total/NA	Water	Field Sampling	

#### **Analysis Batch: 753107**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-245277-50	HEN_YSG_ILRIVER	Total/NA	Water	Field Sampling	

3

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14

15

10

John 1025000245277-14

SDG: HEN\_257\_801

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

Lab Sample ID: MB 500-751964/1-A

**Matrix: Water** 

Analysis Batch: 752304

Client: Vistra Energy Corp

Project/Site: HEN-24Q1

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

**Client Sample ID: Method Blank** 

**Prep Type: Total Recoverable** 

**Prep Batch: 751964** 

**Prep Batch: 751964** 

**Prep Batch: 752046** 

**Prep Batch: 752046** 

						Prep Batch:	751964	
ifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	0.20	0.044	mg/L		01/30/24 09:37	01/31/24 20:01	1	

Analyte Result Quali Calcium < 0.20 Magnesium 0.0659 J 0.20 0.049 mg/L 01/30/24 09:37 01/31/24 20:01 0.50 0.11 mg/L 01/30/24 09:37 01/31/24 20:01 Potassium < 0.50 Sodium 0.0938 J 0.20 0.077 mg/L 01/30/24 09:37 01/31/24 20:01

Lab Sample ID: MB 500-751964/1-A

**Matrix: Water** 

**Analysis Batch: 752984** 

MB MB

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.050 Boron <0.050 0.013 mg/L 01/30/24 09:37 02/06/24 14:54

Lab Sample ID: LCS 500-751964/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 752304 **Prep Batch: 751964** 

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit %Rec Limits 10.0 8.00 80 80 - 120 Calcium mg/L Magnesium 10.0 10.5 mg/L 105 80 - 120 Potassium 10.0 10.5 mg/L 105 80 - 120 Sodium 10.0 10.4 mg/L 104 80 - 120

Lab Sample ID: LCS 500-751964/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable** 

**Analysis Batch: 752984** 

LCS LCS %Rec Spike Added Analyte Result Qualifier Limits Unit %Rec Boron 1.00 0.935 93 80 - 120 mg/L

Lab Sample ID: MB 500-752046/1-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total Recoverable** 

**Analysis Batch: 752468** 

	IVIB	MB						
Analyte	Result	Qualifier R	L MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	<0.20	0.2	0.049	mg/L		01/30/24 17:00	02/01/24 15:50	1
Potassium	<0.50	0.5	0.11	mg/L		01/30/24 17:00	02/01/24 15:50	1
Sodium	<0.20	0.2	0.077	ma/L		01/30/24 17:00	02/01/24 15:50	1

Lab Sample ID: MB 500-752046/1-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total Recoverable** 

Analysis Batch: 752984

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050	0.013	mg/L		01/30/24 17:00	02/06/24 17:37	1
Calcium	<0.20		0.20	0.044	mg/L		01/30/24 17:00	02/06/24 17:37	1

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John 1025000245277-14 SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q1

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

Lab Sample ID: LCS 500-752046/2-A

**Matrix: Water** 

**Analysis Batch: 752468** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total Recoverable Prep Batch: 752046** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Magnesium	10.0	9.19		mg/L		92	80 - 120	
Potassium	10.0	9.23		mg/L		92	80 - 120	
Sodium	10.0	9.20		mg/L		92	80 - 120	

Lab Sample ID: LCS 500-752046/2-A

**Matrix: Water** 

Analysis Batch: 752984

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

**Prep Batch: 752046** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 1.00 0.944 Boron mg/L 94 80 - 120 Calcium 10.0 8.60 mg/L 86 80 - 120

Lab Sample ID: MB 500-752130/1-A

**Matrix: Water** 

Analysis Batch: 752468

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

**Prep Batch: 752130** 

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	<0.20		0.20	0.049	mg/L		01/31/24 08:07	02/01/24 17:31	1
Potassium	<0.50		0.50	0.11	mg/L		01/31/24 08:07	02/01/24 17:31	1
Sodium	0.169	J	0.20	0.077	mg/L		01/31/24 08:07	02/01/24 17:31	1

Lab Sample ID: MB 500-752130/1-A

**Matrix: Water** 

Analysis Batch: 752984

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

**Prep Batch: 752130** 

MB MB Result Qualifier RL **MDL** Unit **Analyte** Prepared Analyzed Dil Fac 0.0176 J 0.050 0.013 mg/L 01/31/24 08:07 02/06/24 18:39 Boron Calcium < 0.20 0.20 0.044 mg/L 01/31/24 08:07 02/06/24 18:39

Lab Sample ID: LCS 500-752130/2-A

**Matrix: Water** 

Analysis Batch: 752468

**Client Sample ID: Lab Control Sample Prep Type: Total Recoverable** Prep Batch: 752130

Allalysis Batcii. 132400	Spike	LCS	LCS				%Rec	11. 732 130
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Magnesium	10.0	8.80		mg/L		88	80 - 120	
Potassium	10.0	9.01		mg/L		90	80 - 120	
Sodium	10.0	8.92		mg/L		89	80 - 120	

Lab Sample ID: LCS 500-752130/2-A

**Matrix: Water** Analysis Ratch: 752094 **Client Sample ID: Lab Control Sample Prep Type: Total Recoverable** Pren Batch: 752130

Alialysis balcii. 152304							Prep Dat	CII. 152 130
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	1.00	0.914		mg/L		91	80 - 120	
Calcium	10.0	8.33		mg/L		83	80 - 120	

**Eurofins Chicago** 

John 1025000245277-14 SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-752222/3

**Matrix: Water** 

**Analysis Batch: 752222** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 0.12 mg/L <1.0 1.0 01/31/24 16:55 Sulfate <1.0 1.0 0.21 mg/L 01/31/24 16:55

Lab Sample ID: LCS 500-752222/4 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 752222** 

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		20.0	21.2		mg/L		106	90 - 110	
Sulfate		20.0	21.2		mg/L		106	90 - 110	

Lab Sample ID: MB 500-752307/3 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 752307** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.140	J	1.0	0.12	mg/L			02/01/24 11:00	1
Sulfate	<1.0		1.0	0.21	mg/L			02/01/24 11:00	1

Lab Sample ID: LCS 500-752307/4 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 752307** 

-		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		20.0	21.8		mg/L		109	90 - 110	
Sulfate		20.0	20.9		ma/l		105	90 _ 110	

Lab Sample ID: MB 500-752534/3 Client Sample ID: Method Blank Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 752534

мв мв

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0	1.0	0.12 mg/L			02/03/24 11:20	1
Sulfate	<1.0	1.0	0.21 mg/L			02/03/24 11:20	1

Lab Sample ID: LCS 500-752534/4 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 752534

Alialysis Datell. 102004									
-	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	20.0	20.2		mg/L	_	101	90 - 110	 	
Sulfate	20.0	19.9		mg/L		99	90 - 110		

Lab Sample ID: MB 500-752833/3 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 752833** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0	0.12	mg/L			02/06/24 11:49	1
Sulfate	<10		1.0	0.21	ma/l			02/06/24 11:40	1

**Eurofins Chicago** 

02/21/24

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**Client Sample ID: Lab Control Sample** 

Client Sample ID: 500-245277-C-28 MS

Client Sample ID: 500-245277-C-28 MSD

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

10

John 1025000245277-14 SDG: HEN\_257\_801

**Prep Type: Total/NA** 

**Prep Type: Dissolved** 

**Prep Type: Dissolved** 

**Prep Type: Total/NA** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

Project/Site: HEN-24Q1

Client: Vistra Energy Corp

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 500-752833/4

**Matrix: Water** 

**Analysis Batch: 752833** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	20.0	20.5		mg/L		102	90 - 110	
Sulfate	20.0	20.0		mg/L		100	90 - 110	

Lab Sample ID: 500-245277-C-28 MS

**Matrix: Water** 

**Analysis Batch: 752833** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Sulfate	77		50.0	124		mg/L		95	80 - 120	

Lab Sample ID: 500-245277-C-28 MSD

**Matrix: Water** 

Analysis Batch: 752833

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sulfate	77		50.0	124		mg/L		95	80 - 120	0	20

#### Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-751763/28

**Matrix: Water** 

**Analysis Batch: 751763** 

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			01/26/24 20:23	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			01/26/24 20:23	1

Lab Sample ID: LCS 500-751763/29

**Matrix: Water** 

**Analysis Batch: 751763** 

_		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Alkalinity		100	107		mg/L		107	90 - 110	 

Lab Sample ID: MB 500-753401/3

**Matrix: Water** 

Analysis Batch: 753401

	MB I	MB							
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			02/08/24 10:58	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			02/08/24 10:58	1

Lab Sample ID: LCS 500-753401/4

**Matrix: Water** 

Analysis Batch: 753401								
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Alkalinity	100	107		ma/L		107	90 - 110	

**Eurofins Chicago** 

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Method Blank

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Client: Vistra Energy Corp Project/Site: HEN-24Q1

John 1025000245277-14 SDG: HEN 257 801

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

**Prep Type: Total/NA** 

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

10

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

Lab Sample ID: MB 500-751719/1

**Matrix: Water** 

**Analysis Batch: 751719** 

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 10 01/29/24 01:47 **Total Dissolved Solids** <10 4.3 mg/L

Lab Sample ID: LCS 500-751719/2

**Matrix: Water** 

**Analysis Batch: 751719** 

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

Lab Sample ID: MB 500-751720/1

**Matrix: Water** 

**Analysis Batch: 751720** 

MB MB

Result Qualifier RL **MDL** Unit Analyte D Prepared Analyzed Dil Fac Total Dissolved Solids <del><</del>10 10 4.3 mg/L 01/29/24 02:54

Lab Sample ID: LCS 500-751720/2

**Matrix: Water** 

**Analysis Batch: 751720** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits

Total Dissolved Solids 250 236 mg/L 80 - 120

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-753484/3

**Matrix: Water** 

**Analysis Batch: 753484** 

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Fluoride <0.10 0.10 0.056 mg/L 02/09/24 10:43

Lab Sample ID: MB 500-753484/31

**Matrix: Water** 

Analysis Batch: 753484

MR MR

**MDL** Unit Analyte Result Qualifier RL Prepared Analyzed Dil Fac <0.10 0.10 0.056 mg/L 02/09/24 12:56 Fluoride

Lab Sample ID: LCS 500-753484/32

**Matrix: Water** 

**Analysis Batch: 753484** 

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits Fluoride 10.0 9.90 mg/L 99 90 - 119

**Eurofins Chicago** 

02/21/24

# QCUSAMPIE UNSTORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL John 10250 250 26245277-14

SDG: HEN\_257\_801

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-753484/4 **Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Matrix: Water** 

Analysis Batch: 753484

Client: Vistra Energy Corp Project/Site: HEN-24Q1

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Fluoride	10.0	9.96		mg/L		100	90 - 119

John 102500 245277-14 SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Date Collected: 01/24/24 10:55 Date Received: 01/25/24 11:51

Lab Sample ID: 500-245277-15

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752304	RN	EET CHI	01/31/24 21:07
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 15:38
Total/NA	Analysis	300.0		5	752307	NMB	EET CHI	02/01/24 13:37
Total/NA	Analysis	SM 2320B		1	751763	SO	EET CHI	01/26/24 19:55
Total/NA	Analysis	SM 2540C		1	751719	CLB	EET CHI	01/29/24 02:33
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 11:16
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/24/24 10:55

Client Sample ID: HEN\_16\_FD

Date Collected: 01/24/24 10:55 Date Received: 01/25/24 11:51

Lab Sample ID: 500-245277-16

Lab Sample ID: 500-245277-17

**Matrix: Water** 

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752304	RN	EET CHI	01/31/24 21:10
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 15:41
Total/NA	Analysis	300.0		5	752307	NMB	EET CHI	02/01/24 13:52
Total/NA	Analysis	SM 2320B		1	751763	SO	EET CHI	01/26/24 20:04
Total/NA	Analysis	SM 2540C		1	751719	CLB	EET CHI	01/29/24 02:36
Total/NA	Analysis	SM 4500 F C		1	753484	so	EET CHI	02/09/24 11:20
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/24/24 10:55

Client Sample ID: HEN\_17 Date Collected: 01/24/24 11:55

Date Received: 01/25/24 11:51

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752304	RN	EET CHI	01/31/24 21:14
Total Recoverable	Prep	3005A			751964	BDE	EET CHI	01/30/24 09:37 - 01/30/24 15:37 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 15:45
Total/NA	Analysis	300.0		5	752307	NMB	EET CHI	02/01/24 14:39
Total/NA	Analysis	SM 2320B		1	751763	so	EET CHI	01/26/24 20:13
Total/NA	Analysis	SM 2540C		1	751719	CLB	EET CHI	01/29/24 02:38
Total/NA	Analysis	SM 4500 F C		1	753484	so	EET CHI	02/09/24 11:25
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/24/24 11:55

**Eurofins Chicago** 

John 1025000245277-14 SDG: HEN\_257\_801

Client Sample ID: HEN 05!R

Date Collected: 01/25/24 15:50 Date Received: 01/26/24 11:45

Client: Vistra Energy Corp

Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-28

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			752046	МС	EET CHI	01/30/24 17:00 - 01/30/24 23:00 1
Total Recoverable	Analysis	6020B		1	752468	RN	EET CHI	02/01/24 16:39
Total Recoverable	Prep	3005A			752046	MC	EET CHI	01/30/24 17:00 - 01/30/24 23:00 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 17:55
Total/NA	Analysis	300.0		5	752222	W1T	EET CHI	01/31/24 21:28
Total/NA	Analysis	SM 2320B		1	753401	SO	EET CHI	02/08/24 11:29
Total/NA	Analysis	SM 2540C		1	751720	CLB	EET CHI	01/29/24 03:25
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 12:37
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/25/24 15:50

Client Sample ID: HEN\_05&DR

Date Collected: 01/25/24 15:50 Date Received: 01/26/24 11:45

Lab Sample ID: 500-245277-29

Lab Sample ID: 500-245277-30

**Matrix: Water** 

**Matrix: Water** 

Batch Batch Dilution Batch **Prepared** Method or Analyzed **Prep Type** Type Run **Factor Number Analyst** Lab 01/30/24 17:00 - 01/30/24 23:00 1 Total Recoverable Prep 3005A 752046 MC EET CHI Total Recoverable Analysis 6020B 752468 RN **EET CHI** 02/01/24 16:43 1 Total Recoverable Prep 3005A 752046 MC EET CHI 01/30/24 17:00 - 01/30/24 23:00 1 Total Recoverable 6020B 752984 RN **EET CHI** 02/06/24 17:58 Analysis 1 Total/NA Analysis 300.0 5 752222 W1T **EET CHI** 01/31/24 21:43 Total/NA Analysis SM 2320B 1 753401 SO **EET CHI** 02/08/24 11:38 Total/NA Analysis SM 2540C 1 751720 CLB **EET CHI** 01/29/24 03:27 Total/NA **EET CHI** Analysis SM 4500 F C 1 753484 SO 02/09/24 12:41 Total/NA Analysis 753002 DN EET CHI 01/25/24 15:50 Field Sampling 1

Client Sample ID: HEN 08&D Date Collected: 01/25/24 13:05

Date Received: 01/26/24 11:45

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			752046	MC	EET CHI	01/30/24 17:00 - 01/30/24 23:00 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	752468	RN	EET CHI	02/01/24 16:50
Total Recoverable	Prep	3005A			752046	MC	EET CHI	01/30/24 17:00 - 01/30/24 23:00 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 18:05
Total/NA	Analysis	300.0		5	752534	W1T	EET CHI	02/03/24 15:07
Total/NA	Analysis	300.0		20	752833	W1T	EET CHI	02/06/24 13:50
Total/NA	Analysis	SM 2320B		1	753401	so	EET CHI	02/08/24 11:47
Total/NA	Analysis	SM 2540C		1	751720	CLB	EET CHI	01/29/24 03:30
Total/NA	Analysis	SM 4500 F C		1	753484	so	EET CHI	02/09/24 12:46
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/25/24 13:05

**Eurofins Chicago** 

John 102500 245277-14 SDG: HEN\_257\_801

Client Sample ID: HEN\_40#S

Date Collected: 01/25/24 14:15 Date Received: 01/26/24 11:45

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-34

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752468	RN	EET CHI	02/01/24 17:55
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 19:07
Total/NA	Analysis	300.0		5	752222	W1T	EET CHI	01/31/24 21:59
Total/NA	Analysis	SM 2320B		1	753401	SO	EET CHI	02/08/24 12:15
Total/NA	Analysis	SM 2540C		1	751720	CLB	EET CHI	01/29/24 03:37
Total/NA	Analysis	SM 4500 F C		1	753484	SO	EET CHI	02/09/24 13:11
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/25/24 14:15

Client Sample ID: HEN\_07 Lab Sample ID: 500-245277-39

Date Collected: 01/26/24 08:50 **Matrix: Water** 

Date Received: 01/26/24 11:45

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752468	RN	EET CHI	02/01/24 18:16
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 19:21
Total/NA	Analysis	300.0		5	752534	W1T	EET CHI	02/03/24 17:24
Total/NA	Analysis	SM 2320B		1	753401	so	EET CHI	02/08/24 13:07
Total/NA	Analysis	SM 2540C		1	751720	CLB	EET CHI	01/29/24 03:50
Total/NA	Analysis	SM 4500 F C		1	753484	so	EET CHI	02/09/24 13:48
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/26/24 08:50

Client Sample ID: HEN\_08 Lab Sample ID: 500-245277-40 Date Collected: 01/26/24 08:20 **Matrix: Water** 

Date Received: 01/26/24 11:45

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752468	RN	EET CHI	02/01/24 18:20
Total Recoverable	Prep	3005A			752130	BDE	EET CHI	01/31/24 08:07 - 01/31/24 14:07 1
Total Recoverable	Analysis	6020B		1	752984	RN	EET CHI	02/06/24 19:24
Total/NA	Analysis	300.0		5	752833	W1T	EET CHI	02/06/24 16:07
Total/NA	Analysis	SM 2320B		1	753401	so	EET CHI	02/08/24 13:16
Total/NA	Analysis	SM 2540C		1	751720	CLB	EET CHI	01/29/24 03:53
Total/NA	Analysis	SM 4500 F C		1	753484	so	EET CHI	02/09/24 13:53
Total/NA	Analysis	Field Sampling		1	753002	DN	EET CHI	01/26/24 08:20

## APPENDIX A. ANNUAL SPORTED MONITORING AND CORRECTIVE ACTION REPORT

HENNEPIN POWER PLANT, LANDFILL
JOHEN 25080245277-14

SDG: HEN\_257\_801

Client Sample ID: HEN\_YSG\_ILRIVER

Date Collected: 01/22/24 14:20 Date Received: 01/26/24 11:45

Client: Vistra Energy Corp Project/Site: HEN-24Q1

Lab Sample ID: 500-245277-50

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Field Sampling		1	753107	DN	EET CHI	01/22/24 14:20

<sup>&</sup>lt;sup>1</sup> 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

APPENDIX A.

Accreditation/Certification Summap Corrective Action Report
HENNEPIN POWER PLANT, LANDFILL
John D2509:245277-14
SDG: HEN\_257\_801 Client: Vistra Energy Corp Project/Site: HEN-24Q1

### **Laboratory: Eurofins Chicago**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

uthority	Prog	ram	Identification Number	Expiration Date
nois	NELA	\P	IL00035	04-29-24
The following analytes for which the agency Analysis Method Field Sampling	s are included in this rep does not offer certificatio	•	not certified by the governing authori	ty. This list may include analytes
Analysis Method	Prep Method	Matrix	Analyte	
Field Sampling		Water	Depth to Water (ft from M	P)
Field Sampling		Water	Field pH	
Field Sampling		Water	Field Temperature	
Field Sampling		Water	Oxidation Reduction Pote	ntial
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 C	°CO3

# CHAIN-OF-CUSTODY / Analytical Request Document

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Section C

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CHAIN-OF-CUSTODY / Analytical Request Document

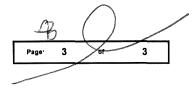
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Page 38 of 84 02/21/24

HENNEPIN POWER PL Section B Section C Section A 2 HEN-257-801 Page: Required Client Information: Required Project Information: Invoice Information Company Vistra Corp-Hennepin Report To: Brian Voelker Attention: Dave McCoy Address. 13498 E 800th St Copy To: Jason Stuckey Jason Stuckey@vistracorp.com Company Name. A3 Environmental REGULATORY AGENCY Sam Davies samantha davies@vistracorp.com Hennepin, IL 61327 Address. 3030 Warrenville Rd , Suite 418 NPDES **GROUND WATER** DRINKING WATER Email To: Purchase Order No. Warrenville, IL 60532 Brian.Voelker@VistraCorp.com UST **RCRA** OTHER (217) 753-8911 Project Name: Project Manager Site Location IL Project Number: 50022619 Profile #: Requested Due Date/TAT 10 day STATE Requested Analysis Filtered (Y/N) Section D Valid Matrix Codes valid codes to left) COLLECTED Preservatives Required Client Information CODE DRINKING WATER WATER WASTE WATER Residual Chlorine (Y/N) SOIL/SOLID OIL WIPE AIR OTHER TISSUE HEN-WPCP-WEST # OF CONTAINERS SAMPLE ID HEN\_000\_RAD MATRIX CODE **IEN-257-802** IEN-257-803 1EN-257-804 1EN-845-802 IEN-845-803 HEN-845-804 (A-Z, 0-9/) 4EN-257-801 EN-811-801 IEN-WPCP Sample IDs MUST BE UNIQUE 000 ĘN, TEM Project No./ Lab I D 1/23/24 150) Х Х Х Н HEN-22&D Х Х Х Х Н HEN-23 х HEN-25 DTW-ONLY HEN-26 DTW ONLY 1045 Х Х Х Х Н HEN-27 X HEN-30 DTW ONLY Х DTWONLY HEN-31 HEN-32 0030 Х Х Х Х Н HEN-33 DTW-ONLY 1/23/24 1150 Х Х Х HEN-34 Н WT B 1/23/24 1340 Х Х Х DUPE х Н HEN-35 DTW ONLY HEN-36 Ε SHORT HOLDS - NO2 HEN-40#S HEN-45#S Х Х В SHORT HOLDS - NO2 Х Х Х G HEN-46 X G HEN-47 ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION DATE ACCEPTED BY / AFFILIATION DATE SAMPLE CONDITIONS HEN-24Q1 Rev 2 0700 SAMPLER NAME AND SIGNATURE Received on Ice (Y/N) Samples Intact (Y/N) Temp in ° PRINT Name of SAMPLER. Beckert DATE Signed SIGNATURE of SAMPLER. 1/23/24 (MM/DD/YY)

#### CHAIN-OF-CUSTODY / Analytical Request Document

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Required Client Information: Required Project Information:

Section B

Section A

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02/21/24

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Company Report To: Brian Voelker Attention: HEN-257-801 Vistra Energy Corp-Hennepin Dave McCoy Address. Copy To: Jason Stuckey Jason Stuckey@vistracorp.com 13498 E 800th St Company Name A3 Environmental REGULATORY AGENCY Sam Davies samantha davies@vistracorp com Hennepin, IL 61327 Address. 3030 Warrenville Rd , Suite 418 **NPDES GROUND WATER** DRINKING WATER Email To: Brian.Voelker@VistraCorp.com Purchase Order No. Warrenville, IL 60532 UST RCRA OTHER Project Name: hone: (217) 753-8911 Prolect Site Location Manager IL Project Number 50022619 rofile #: Requested Due Date/TAT 10 day STATE Requested Analysis Filtered (Y/N) Section D Valid Matrix Codes codes to left) C=COMP) COLLECTED Preservatives Required Client Information MATRIX CODE WASTE WATER PRODUCT SOIL/SOLID Residual Chlorine (Y/N) (see valid HEN-WPCP-WEST OIL WIPE AIR OTHER # OF CONTAINERS Analysis Test SAMPLE ID RAD. IEN-WPCP-E/ MATRIX CODE (A-Z, 0-9 / ) Sample IDs MUST BE UNIQUE 1EN-257-802 EN-845-802 EN-845-803 1EN-845-804 HEN-257-803 1EN-257-804 HEN-811-801 TISSUE SAMPLE TYPE 1EN\_000\_I 8 HEN-257-TEM Ä, Project No./ Lab I D DATE HEN-48 423/24 PRO 1010 423/24 HEN-49 Х Х Х Н 1/23/24 1110 8V 7 Х Х Х Н HEN-50 HEN-51 Х Х Х Х Н HEN-52 Х G Х G HEN-54 HEN-55 X Х DTW ONLY HEN-XPW01-pore Х Х Х G Х Х х G HEN-XPW02-pore HEN-XPW03-pore X Х Х G HEN-XSG01 DTW ONLY X Х Х С HEN-FB Х Х SHORT HOLDS - NO2 ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION DATE TIME AGCEPTED BY / AFFILIATION DATE SAMPLE CONDITIONS HEN-24Q1 Rev 2 24/24 07 X 1005 SAMPLER NAME AND SIGNATURE Temp in °C Received on Ice (Y/N) Samples Intact (Y/N) Custody saled Cool (Y/N) PRINT Name of SAMPLER. Brl DATE Signed SIGNATURE of SAMPLERS (MM/DD/YY)

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APPENDIX A.

ANNUAL GROUNDWATER MONITORING AND GORRECTIVE ACTION REPORT
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ANNUAL GROUNDWATER MONITORING AND GORRECTIVE ACTION REPORT
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ANNUAL GROUNDWATER MONITORING AND GORRECTIVE ACTION REPORT
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Section C Section A Section B 2 HEN-257-801 3 Required Client Information: Required Project Information Invoice Information Allention Vistra Corp-Hennepin Report To. Brian Voelker Dave McCoy Company Address 13498 E 800th St Copy To. Jason Stuckey Jason Stuckey@vistracorp.com Company Name A3 Environmental **REGULATORY AGENCY** Sam Davies samantha davies@vistracorp com Address 3030 Warrenville Rd , Suite 418 Hennepin, IL 61327 **NPDES** DRINKING WATER **GROUND WATER** mail To Purchase Order No Warrenville, IL 60532 OTHER Brian Voetker@VistraCorp.com UST RCRA Project Name Project Phone (217) 753-8911 Site Location Manager IL Profile #: Project Number 50022619 STATE Requested Due Date/TAT 10 day Requested Analysis Filtered (Y/N) Valld Matrix Codes codes to left) Section D C=COMP) COLLECTED Preservatives MATRIX CODE Required Client Information DRINKING WATER WASTE WATER PRODUCT SOL/SOLID (G=GRAB OIL WIPE AIR OTHER IEN-WPCP-EAST ees) # OF CONTAINERS RAD AD SAMPLE ID CODE 804 HEN-257-801 HEN-257-803 JEN-811-801 IEN-845-803 (A-Z, 0-9 / ) SAMPLE TYPE Sample IDs MUST BE UNIQUE 8 HEN-257-HEN-257-JEN 000 MATRIX ĒN ITEM Project No./ Lab I.D. DATE TIME HEN-22&D 0835 1/24/24 Х Х Х Х Н HEN-23 DTW ONLY HEN-25 J DTW ONLY HEN-26 J Х Х Н **HEN-27** Х J DTW ONLY HEN-30 Х J DTW ONLY **HEN-31** Х Х Х Н HEN-32 Х HEN-33 J DTW ONLY Н Х Х HEN-34 Х Х Н HEN-35 Х Х HEN-36 DTW ONLY Ē SHORT HOLDS - NO2 HEN-40#S HEN-45#S XB **SHORT HOLDS - NO2** 13/0 Х G HEN-46 Х 10 Х Х x l G **HEN-47** ADDITIONAL COMMENTS **ACCEPTED BY / AFFILIATION** DATE TIME SAMPLE CONDITIONS **RELINQUISHED BY / AFFILIATION** DATE TIME HEN-24Q1 Rev 2 1/25/24 1/25/25 0840 0200 stychowie Hemanoh 1/25/24 SAMPLER NAME AND SIGNATURE Samples Intact (Y/N) eceived or Ice (Y/N) Custody alled Coo (Y/N) Temp in PRINT Name of SAMPLER DATE Signed SIGNATURE of SAMPLER (MM/DD/YY)

CHAIN-OF-CUSTODY / Analytical Request Document

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Section 8

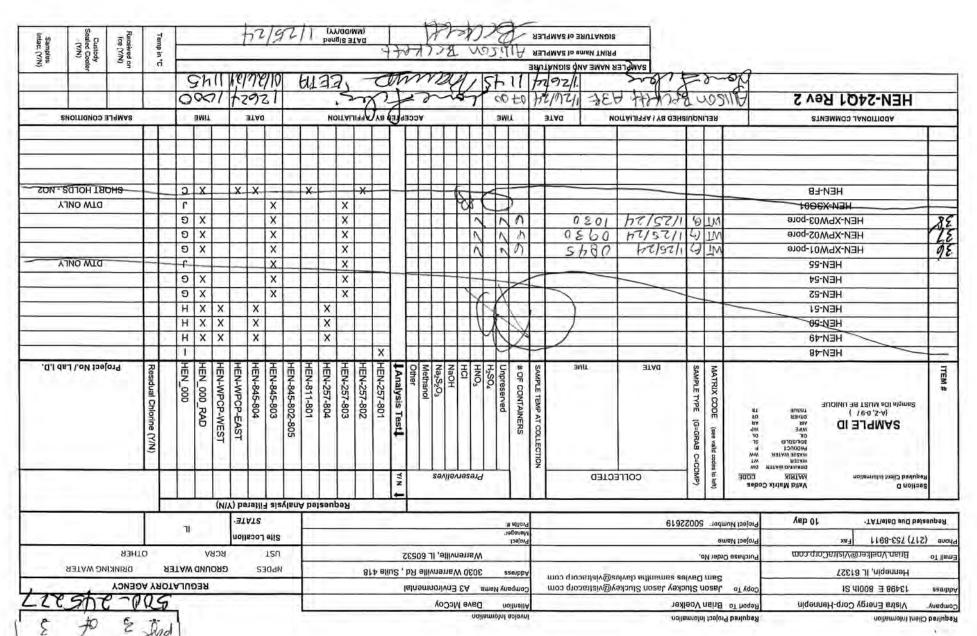
Section C The Chain-of-Custody is a LEGAL DOCUMENT All relevant fletds must be completed accurately

### CHAIN-OF-CUSTODY / Analytical Request Document

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APPENDIX A.

HEN-257-801

HENNEPIN POWER PLANT, LANDFILL

ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

### The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately CHAIN-OF-CUSTODY / Analytical Request Document

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Project No./ Lab J.D.	Residual Chlorine (Y/N)	HEN_000	HEN 000 RAD	HEN-WPCP-EAST	HEN-845-804	HEN-845-803	HEN-845-802-805	HEN-811-801	HEN-257-804	HEN-257-803	HEN-257-802	HEN-257-801	LAnalysis Test	Other	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	NaOH	HQI G	H <sub>2</sub> SO <sub>4</sub>	Unpreserved	# OC CONTAINEDS	SAMPLE TEMP AT COLLECTION	ЭМП	∃TAŒ	SAMPLE TYPE (G=GR	MATRIX CODE (see	ю ям 10 21	ас ЗЧМ РАЗНТО ЗUSSIT		/MPLE ID (A-2, 0-9/ ) Ds must be uniq		ITEM#
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ЯЗНТС			ARC		.,	TSU		-		-	_				1:			_	120(	224	-			-	0	Project Nam		_		-637 (715)	) euc
DRINKING WATER		TAW 0				ABDE2		-		_	_	_			기 'el				_	+				(	oM 1eb	Purchase Or	000	aCorp.	Voelker@Vlstra	Grilan	oT lis
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CHAIN-OF-CUSTODY / Analytical Request Document

## **Login Sample Receipt Checklist**

HEN-257-801

Client: Vistra Energy Corp

Job Number: 500-245277-14

SDG Number: HEN\_257\_801

Login Number: 245277 List Source: Eurofins Chicago

List Number: 1

Creator: Scott. Sherri L

Creator: Scott, Sherri L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1,3.2,2.3,3.9,5.2,5.1,4.4,4.1,3.3,2.6,2.7,4.4
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Stress Sampling Stress Sampling Oxygen 10% 1.72 5 1.72 0 1.74 0 1	MATER SAMPLING  DJECT INFORMATION  ##0  Time:  525  IDICATOR PARAMETERS (conf (°C) 7.11  O 7.11  O 7.11  D 7.11  D 7.11  D 7.11	PROJECT INFORMATION  Vistra  24  Time:   1525    24 24 24  Time:   1525    24 24 24  Time:   1525    24 24 24    24 24 24    34 24 24    100					(Specify):Low Flow		ORP Visual (mv) Clarity	+10	. 85.1	95.3		97.4	4.7			ABBREVIATIONS	ORP - Oxidation-Reduction Pdemail SEC - Specific Electrical Conductance SU - Standard Units	
Time:   52   SEC or     Time:   53   SEC or     Time:   54   SEC or     Time	MATER SAMPLING  DJECT INFORMATION  ##0  Time:  525  IDICATOR PARAMETERS (conf (°C) 7.11  O 7.11  O 7.11  D 7.11  D 7.11  D 7.11	PROJECT INFORMATION  Vistra  24  Time:   1525    24 24 24  Time:   1525    24 24 24  Time:   1525    24 24 24    24 24 24    34 24 24    100	IRM			1	Low Stress Sampling Other		Dissolved Turbidity Oxygen (NTU)	-	74.	80	10.69 1. ava 12	٥	74			ABBRE	Cond - Actual Conductvrty FT BTOC - Feet Below Top of Casing na -	
OR PARAMETER (\$U)  7.50  7.11  7.11  7.11  7.11	AND GROUNDWATER SAMF PROJECT INFORMATION  Time: 17  ampling  Temp (°C) 7.50  11.0 7.11  11.0 7.11  11.0 7.11  11.0 7.11  11.0 7.11  11.1 7.1 7.11  11.1 7.	Comment and Groundwater Same   PROJECT INFORMATION   Vistra   PROJECT INFORMATION   PR	LING FIELD FO		ļ	- 1	Low-Flow / I	(S (continued)	SEC or Cond.	3%	850	809	793	164	790					() (
	AND GROUN PROJECT Time: // +/-0   1   0   1   1   0   1   1   1   0   1   1	Vistra  Vistra  Vistra  Vistra  Vistra  Drawdown  (Feet)  Drawdown  (Feet)  11.0  11.0  11.0  11.0  11.0  11.0  11.0  11.0	DWATER SAME	INFORMATION				OR PARAMETER	Hd (ns)	+.1	5.50	ルナ	7.11	11.6	<del>ار</del> =					
Sontti	WELL DEVE Client: Stan Date: 1/2 H Finish Date: 1/2 H Well Dev Well Dev Well Volu Well Well Well Well Well Well Well We				4500-400				Volume Removed (gallons)	0					91				6	
Sontti	WELL DEVE  Client:  Client:  Client:  Finish Date: 1/2.14  Well Devy Well Volume  (Gallons)  Volume  Volume  Removed (Gallons)  Volume	Volume Removed (Gallons)		Ummania	udauua	WELL INFORMATION	:N-62	Serial #: /*/	Time (military)	1445	<u> </u>	1452	t541	1502	120+				70,000	
Task #: 2024.0654   Start Date: 1/2.4/    ABA.F.   Finish Date: 1/2.4/    ABORMATION   Well Develor     Volume   Removed   (Feet)     (Gallons)   444.85     44.85	WELL Task # 2024, 0054 Start Date:  RMATION  Volume Removed (registers)  Out 9 44.8  44.8  44.8  C.B. 44.8	Hennepin Task #: 2024, 2054  rel: AB/LE  WELL INFORMATION  Serial #: N/4  Serial #: N/4  Time Removed  (military)  (4445  1452  1452  1453  1502  1504  1006  1006		Cito	Project Number		Well ID: HEN-62	ransducer	Sampling Stage	pyo	S PSYCK	10	15	R	25				U	/

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Polici Number 224, Cocy   Table   Time   1   2   2	Page   Name   Color   Page   Name   Page   Name   Page   Name   Page   Name   Page   Name   Page   Name	Project Number 2014	Time: //2/24 //2/2/24 hent Aptroach Sampling TER QUALITY INDICAT  TERQUALITY INDICAT  (Feet) 3% // C. C.	Time: (22.5	1				
WELL INFORMATION   Well Development   Long-Daw   Long	Well information   Well inform	WELL INFORMATION         WELL INFORMATION         Well Dev           It ansigned Stage         Time (gallons)         Volume (Feet)         Well Volume (Feet)         Well Volume (Feet)         Well Volume (Feet)         Well Dev           Stage         It I I I I I I I I I I I I I I I I I I	hent Approach Sampling FER QUALITY INDICAT  Drawdown (Feet) (Feet) 3%						
Note   D.   He by - 0   A   Note   Depth to Volume Approach Sampling   Time   Note   Depth to Volume	The continued   The continue	Sampling   Time   Nolume   Depth to Water   Sampling   Time   Sampling   Time   Sampling   Time   Sampling   Time   Stage	rent Approach Sampling  FER QUALITY INDICAT  Drawdown (Feet) (*C)    1		-	/PF			
Sampling   Time   Wolume   Depth to Water   Disabled   Condition	Singling   Time	Stage Time Nolume Depth to Water (Feet)  Stage   1 2.0	Drawdown Temp. ("C) ("C) 3%	- COLLECTION OF THE PARTY OF TH	Low-Flow / Lo	ow Stress Samp	oling Other (Spe	cify):Low Flow	1
Sangling   Time   Notice   Depth to Water   Drawdown   Temp.   PH   SEC or Dissolved   Turnord   ORP	Surger Time Retirence Depth to Water Dissolven Temp. PH SECT Obesieved Turbidity Opp PM Section Opp PM PM Section Opp PM PM Section Opp PM PM Section Opp PM PM Section Opp PM PM Section Opp PM PM PM Section Opp PM PM PM Section Opp PM PM PM PM PM PM PM PM PM PM PM PM PM	Sampling Time Stage (miliary) (gallons) (gallo		OK PAKAMETEKS (C	ontinued)				
Puge 1120 35.85 15.0 7.34 978 1.56 1672 64.7 1.35 1.35 5.8.5 11.35 35.85 14.7 7.34 876 1.60 67.75 64.7 1.35 11.35 35.89 1.44 7.33 876 1.41 7.34 8.70 1.54 6.6.8 11.35 1.35 5.8.9 1.45 7.33 876 1.41 7.34 8.70 1.54 6.6.0 1.45 7.35 8.8 7.1 1.35 1.38 8.8 7.1 1.25 1.24 1.45 7.35 1.39 8.70 1.39 1.30 49.7 1.25 1.26 1.49 47.3 1.30 8.70 1.29 1.24 49.7 1.20 1.25 8.70 1.29 1.24 49.7 1.20 1.25 8.7	Page 1126 35.85 15.0 7.34 278 156 1672 66.07 11.35 11.35 35.85 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.	Purge 11.20 11.30 11.30 11.30 11.40 11.40 11.40 11.50	3%	H <b>d</b>	SEC or Cond.	Dissolved Oxygen	Turbidity (NTU)	ORP (mV)	Visual
1, 20   1, 20   35, 85   14, 7   7, 34   876   1, 60   67, 70   64, 77   1, 35   35, 85   14, 7   7, 34   876   1, 60   67, 70   64, 77   1, 35   35, 87   1, 40   67, 70   64, 77   1, 35   35, 87   1, 40   67, 70   64, 77   1, 35   35, 87   1, 40   67, 70   64, 77   1, 35   1, 34   56, 60   67, 70	Fige 1120 35.85 15.0 7.34 876 1.60 60.8 60.8 1.35 68.8 1.35 68.8 1.35 64.7 7.33 876 1.60 60.70 60.7 1.35 876 1.44 7.33 876 1.47 7.33 876 1.47 55.8 1.45 1.45 60.0 1.44 7.33 876 1.47 55.8 1.45 60.0	11.20 11.30 11.30 11.30 11.40 11.40 11.50 11.50 11.50 12.15 12.15 12.15 12.15 12.15	15.0	+.1	3%	10%	10%	+10	11/11
1130 1130 25,86 1144 1133 276 1145 25,86 1144 1133 276 1140 25,87 1140 25,89 1140 25,89 1140 25,89 1150 1150 1150 1150 1150 1150 1150 115	1130 35.85 114.7 1130 35.85 114.7 1131 35.87 114.7 1132 36.89 114.7 1133 37.7 1134 37.85 114.7 115.0 1	11.30 11.30 11.30 11.40 11.40 11.50 12.00			800	-	11714	0 1	100
1130 1136 1135 1135 1135 1135 1140 135.84 1140 1333 1370 1371 1371 1373 1470 1373 1470 1373 1470 1373 1470 1374 1374 1374 1374 1374 1374 1374 1374	1136 1136 1136 1136 135.84 1144 133 136.80 1144 133 137 138 1200 136.80 137 138 1200 136.80 137 138 1200 136.80 137 138 1200 137 138 138 138 138 138 138 138 138 138 138	1136 1145 1145 1156 1206 1206 1216 1215 1215 1215	( <del>1</del>	7.34	400	77	15 75		
1135 1145 35.89 1140 35.89 1140 35.89 1140 35.89 1140 35.89 1150 1150 1150 1150 1150 1151 1151 115	1136 1136 1136 15.84 1140 1140 1150 1140 1150 1150 1150 115	1135 1140 1140 1150 1200 1200 1215 1210 1215 56aL	1-1-1-	7.33	918	-	21.53	× %	_
1145. 35.89 146 7:33 877 1.39 16.80 1150. 25.89 15.1 7.32 8.72 1.34 1150. 35.90 15.0 7.32 8.77 1.39 13.49 1200 35.90 15.0 7.31 8.77 1.29 17.40 1200 35.90 15.0 7.31 8.77 1.29 11.98 1200 35.90 15.0 7.31 8.77 1.20 10.04 1200 35.90 15.0 7.31 8.77 1.28 8.97 1215 56aL 35.9 15.0 7.31 8.77 1.28 8.97 1215 56aL 35.9 15.0 7.31 8.77 1.28 8.97 1215 56aL 35.9 15.0 7.31 8.77 1.28 8.97 1215 56aL 35.9 15.0 7.31 8.77 1.28 8.97 1215 56aL 35.9 15.0 7.31 8.77 1.28 8.99  Tived OUT at 1 146. SAMPLE at 1215	1145 1145 1145 1145 1146 1133 1147 1131 1146 1132 1146 1131 1147 1131 1146 1146 1131 1147 1131 1146 1146 1146 1146 1147 1131 1146 1146 1146 1146 1146 1146 1146	1140 1140 1150 1200 1200 1215 56aL	14.4	7 33	200	14.1	73.47	750	
1150 1150 1200	1150 1150 1150 1150 1150 1150 1150 1150	1150 1200 1200 1215 1215 56aL	041	7.33	817	1.39	16.90	<0.0	
1150 1155 1260 1260 1260 1260 1260 1260 1260 1260	1150 1150 1150 1150 1150 1250 1350 150 1732 1877 1732 1877 1732 1877 1732 1877 1732 1877 1732 1877 1733 1338 1338 1358 150 1731 1877 1731 1732 1732 1738 1738 1738 1738 1738 1738 1738 1738	1150 1200 1205 1205 1215 56aL	14.7	- 4	876	1.35	03.81	14.7	
1200 7.32 8.17 1.33 1.338 1.338 1.23	1200 1200 35.90 15.0 7.31 877 1.20 11.98 35.90 15.0 7.31 877 1.21 10.04 35.91 1205 35.90 15.0 7.31 877 1.21 10.04 35.91 1215 SGAL 35.91 15.0 7.31 877 1.21 10.04 35.91 1215 SGAL 35.91 1200 7.31 877 1.23 8.97 1.24 8.97 1.25 8.97 1.24 8.97 1.25 8.97 1.24 8.97 1.25 8.97 1.25 8.97 1.26 11.98  NOTES (continued) 1.21 1.21 1.21 1.22 1.22 1.20 1.31 8.77 1.23 8.97 1.24 8.99 1.20 1.20 1.21 1.22 1.23 1.23 1.23 1.23 1.24 8.97 1.24 8.99 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.26 1.90 1.27 1.28 1.90 1.28 1.90 1.20 1.20 1.20 1.20 1.20 1.20 1.20 1.2	1200 1200 1215 1215 56aL	1.5.1		811	1.29	12.46	1.47	
1200 7.31 877 1.26 (1.98 1205 35.90 15.0 7.31 877 1.27 10.04 1215 5696 35.9 15.0 7.31 877 1.28 8.97 1215 5696 35.9 15.0 7.31 877 1.28 8.97  NOTES (continued)  Timed out at 1215  Dipe Struptle at 1225	1200 1205 35.90 15.0 7.31 877 1.28 11.98 12.0 7.31 877 1.28 8.97 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.004 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 35.9 10.04 36.9	1200 1215 1215 1215 56aL	15.0	•		1.33	236	0.54	
1205   1505   15.0   7.31   877   1.27   10.64   35.9   15.0   7.31   8.77   1.28   8.97   1.28   8.97   1.28   8.98   8.97   1.28   8.98	1215 56al 359, 150 7.31 877 1.27 10.04 1215 56al 359, 150 7.31 877 1.28 8.97  Timed out at 1 11 5 Ample at 1215  Dupe Spriple at 1225  Sport 1-25  Dupe Spriple at 1225  Sport 1-25  Dupe Spriple at 1225  ABBRET  Freesow Pumpara altighter  Sport 1-25  Dupe Spriple at 1225  ABBRET	1705 1215 1215 SGaL	15.0	7,31	511	1.26	11.98	47.3	
1215 5GAL 35.9 15.0 7.31 877 1.28 8.97  NOTES (continued)  Timed out at 11215  Dipe Structure at 1225	Timed out at 1 1st. Sample at 1215  Dupe Striple at 1225  Sport 128  Sport 12	1215 SGaL	15.0	16,1		1.27	10.04	46.6	
Timed out at 1115 SAMPLE 24 1225	Timed out at 1 146. Sample at 1215  Timed out at 1146. Sample at 1215  Dipe Spriple at 1225  ABBRE  ABBRE  ABBRE  AAA + FRom Pumpara 1415/46/  SBOTT 1-25  AAA + FRom Pumpara 1415/46/  Pressorie Toget Water To Pump.	1215 5696	15.0	7.31	617	, 2 <i>y</i>	65.8	410.5	7
OUT at 1 1st. SAWPLE at 1215  Dupe Structure at 1225  The Structure at 1225	145. SAWPLE CLT 1215  De Struplle CLT 1215  HAd to Ron Pumpata Higher  PARET PORTE Higher  PARET PORTE Higher  PARET PORTE TO SET DOTE TO PUMP.	NOTES (continu	150	7.31	517	1.28	8.38	9197	7
out at 1 1st. Sample at 1215  Dipe Struple at 1225	126. Sample at 1215  Deposite Sample at 1225  HAd to Ron Pumpara Higher  Pressure To Get Water To Pomps		(pe				ABBREVIA	ATIONS	
Dope Struple	rie Sample a parles	out at 1 Hr. SAmple				Cond - Actual Conducts FT BTOC - Feet Below 7	rity Of Carsong na - Co	P - Condation-Reduction Potential SE Inductance SU - Standard Units	C - Specific Electrica
	rtles	Dupe Struple	1225						

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Stage							PROJECT	PROJECT INFORMATION					
Floriet Number:   Task # 2.014; 0.054   San Due:   12.5124	Site	Hennepin			Client:	Vietra							
Find Personne	Project N	lumber:	Task #: 2	1024.00	_		me: 1430						
Well Drawlor   Well Development   Not Developm	Field Per		AB/LF			- 1	177						
Volume   Volume Aproach Sampling   Low-Flow   Low Stress Sampling Other (specify) Low Flow   Volume Approach Sampling   Low-Flow   Low Stress Sampling Other (specify) Low Flow   Volume   Volume Approach Sampling   Low Stress	WELL INFO	DRMATION						$I^{-}$	YPE				
Sampling   Time   Canal   Ca	Well ID: Transduc	HEN-DS!	20		Well Devek	opment e Approach San	прііпд		Low-Flow / L	ow Stress San	npling Other (Sp	ecity):Low Flow	
Sampling   Time   Semonth   Wolume   Circuity   Circu					1 1	ATER QUAL	ITY INDICAT	OR PARAMETERS (C	ontinued)				
puvy = 1440 0 (1760   174, 0   1.74	Sampl Stage	<u>p</u>		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
151   410   14.9   14.9   14.0   16.8   40.08   16.0		-	- 4	0	14	9	3%	+.1	3%	10%	10%	+10	CLEON
1510	_	+		-	41.06		9-71	2.70	852	0.88	40.48	8 471	4
1516   16   16   17   16   17   16   17   16   18   18   18   18   18   18   18		101		ę	704		14.7	04.4	158	1.08	39.70	121.0	×
1521		181	9	6	1 .		14.9	7	1881	0.85	25.99	114.4	3
1526 41.06 15.0 7.69 852 1.13 12.91 1530 41.00 15.1 7.09 854 1.03 12.91 1541 3.5 41.00 15.2 7.09 857 10.2 8.54 1550 41.00 15.2 7.09 857 10.2 8.54 1550 41.00 15.2 7.09 857 10.2 8.54 1550 41.00 15.2 7.09 857 10.2 8.54 1600 41.00 15.2 7.09 857 10.2 8.54 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2 8.57 17.00 15.2 7.09 857 10.2		751	<u>ا</u> ۔	2			14.9	-0	853	0.88	14.91	116.2	3
1531		20	9		4.06		100		862	1.13	12.91	4.401	mvrk
1530		183	_		41.00		- S	7.00	854	1.03	W.80	-	5
54  3.5 41.06		(5.0	20		41.01		1.51		856	0.94	5.21	L.	3
15.2 4.09 851 0.94 4.55  15.2 4.09 851 0.94 4.55  11.06  NOTES (continued)  SOMM PULCH (15.5)		154		3,5	41.00		15.2		887	102	8.54	100.0	5
Sampled & 1550		154	0		41.06		15:5		85)	200	4.55	4.86	
TES (continued)  ABBREV  Cond - Actual Connections  FT 8TOC - Feet Below Top of Casing na -		15.5	Đ		41.00					•			
TES (continued)  Cord - Actual Generation of PI BTOG - Feet Below Top of Carrier na - A BBREN													
TES (continued)  ABBREV  Cond - Actual Conducting at 18100 - Fact Below Top of Caring na-													
* HOOC - Feet Below Top of Chaining ins.					NOTES (contin	(pant					ABBREV	ATIONS	
	C		_							Cond - Actual Concus FT BTOC - Feet Below	10	ORP - Oxidation-Reduction Potential 3 Conductance SU - Standard Units	SEC - Specific Electrical
	7	Jd Wy	r V		(25C)	N	KDION	daler					

Amped air into Yst, bt Still stabilized \* took 38 min to get worker at of wer (WE nigh pressure

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					PROJECT IN	PROJECT INFORMATION					
Site:	Hennepin		Client	Vistra							
Project Numb	Project Number 2024-5054 Task #:	a.	Start Date: 1 - 25. 2		Time: 15/5	,					
Field Personnel:	rel: AB/LF		Finish Date:	1(25)	力						
	WELL INFORMATION	NC					EVENT TYPE	YPE			
Well ID: Hen Transducer Serial #:	Well ID: Hen - assumed . OS MDP. Transducer Serial #:	OS ADR	Well Develo	Well Development Well Volume Approach Sampling	guild		Low-Flow / L	ow Stress San	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	ecify):Low Flow	
			W	ATER QUALI	TY INDICATO	/ATER QUALITY INDICATOR PARAMETERS (continued)	ontinued)				
Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	Hd (ns)	SEC or Cond.	Dissolved Oxygen (ma/L)	Turbidity (NTU)	ORP (mV)	Visual
Pre	\$151		41.09		3%	+.1	3%	10%	10%	+10	May
Pura	1520		41.09		12.7	7,60	285	2.87	40.4	(08.)	-
	1525		41.10		12.9	7.54	<i>76L</i>	1.35	3.45	61.2	_
	15 30		91.10		136	7.53	195	1.23	2.95	800	) <sub>e</sub>
	1535		41.10		136	7.53	796	1.20	260	56.1	-
	1540		41.10		13.4	7.53	196	1.18	7.81	55.7	_
	15 45		41.11		13.2	7.53	795	1.1		56.7	
	1850		41.11		13.5	1.53	466	1.13	35.2	8155	>
			NOTES (contin	nied)					SHOIL AND GOOD	C	
	V	Samo O O O		560				Come - Actual Conductivity FT BTOC - Feet Below Top of Casing na -	- 1	ORP - Ordaton-Reduction Potential SEC - Specific Evetings Conductions SI - Standard Unite	EC - Specific Electrical
H		7		)							

Visual Clarity ORP - Ordaton-Reduction Potential SEQ - Specific Electrical Conductance SU - Standard Units 38.7 エガオ ORP (ye) +10 37.8 111 40.3 39.7 Low-Flow / Low Stress Sampling Other (Specify): Low Flow 41.7 ABBREVIATIONS 1.87 01.0 Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na 6.80 10% 5.45 0 4,30 4.33 4,66 4.40 4.30 Oxygen (mg/L) Dissolved 10% **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 920 1027 1035 1034 1034 1020 6701 SEC or Cond (µs/cm) 5201 501 3% WATER QUALITY INDICATOR PARAMETERS (continued) 6,97 16,97 6.97 9 060 6.9 0,0 6.9 9 PROJECT INFORMATION Hd (ng +:1 و Time: 15 bothles 0280 0,0 0,0 0.0 1.0 0.0 101 0.1 Temp (°C) 5 1.01 3% Well Development
Well Volume Approach Sampling Тіте: 1/20/21 Drawdown (Feet) NOTES (continued) Start Date: 1/2 (0/2) Finish Date: Depth to Water (Feet) 00000 00000 1111 68,7 C837 C837 C837 C837 68,7 080 Client sampled (A) 0850 Task #: 2024-0054 Volume Removed (gallons) 0 Transducer Serial #: 21015139 WELL INFORMATION AB/LF 805 20 800 Well ID: HEN/OF Time (military) Hennepin Project Number. Field Personnel: Sampling Stage DUYAR かで

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124.0054			NOTIVINIO INT. IOSONI.					
124.0054		8						
WELL INFORMATION	-4	Fine: 5745	5 10214	i.				
Well ID: HEN, 08	rinish Date: 170		Time: UO   3	CAST TAND	La			
25 VIV	Well Development Well Volume Approach Sampling	h Sampling		Low-Flow / L	ow Stress Sam	pling Other (s	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	
Hailsaucer Serial #: CLGTO TOO	WATER Q	UALITY INDICA	WATER QUALITY INDICATOR PARAMETERS (continued)	ntinued)				
Time Volume Di (military) (gallons)	Depth to Water (Feet) (Feet)	own Temp.	Hd (ns)	SEC or Cond	Dissolved Oxygen	Turbidity (NTU)	ORP (mV)	Visual
0	53.62	3%	+.1	3%	10%	10%	710	1000
85+0	53.42	12.2	(0.8%)	1852	112	1 20	2 7 7 7 T	1222
		12.3		185.0	0,02	1.32	95.4	5
0800		12.3	8t.v	1881	65.0	1.18	2 26	5
0813		12.3	6th	1844	650	1.10	1,001	s
0 810		12.3	18.7B	1839	0.53	F10.0	161.3	٤
- 6280								
		+						
	NOTES (continued)					ABBRE	ABBREVIATIONS	
					Cord - Actual Conductivity FT BTOC - Feet Below Top of Casing na -	twny 7 Top of Casing na -	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units	C - Specific Electrical
SAMPLY (P) 0850	20							

Find Parameter   Task #7004,0054   Start Date   155/204   Time   125/204   Time   Tim						PROJECT II	PROJECT INFORMATION					
Court   125/24  Time   125/54  Tim	Site:	lennepin		Client:	Vistra							
Continued   Cont	Project Numi		200. HOD	54 Start Date: 1/25/	7.4 Tin	ne:	- 1215					
Mel Information	Field Person			Finish Date:	1/25/12	P.	Time: 1325					
Note   Continued		WELL INFORMATIO	N						rPE			
Continued   Cont	Well ID: H	5N_ 081/D		Well Devek Well Volum	opment le Approach Sarr	guing		Low-Flow / L	ow Stress San	npling Other (S	bedify):Low Flow	
Time   Removed   Depth to Widere   Depth to Wi				V	VATER QUALI	TY INDICATO	OR PARAMETERS (C.	ontinued)				
1225 S4.09 10.8 721 1799 6.32 S.W. 108 1225 1230 1199 0.77 2244 3.98 2.077 1230 1240 1240 1240 1240 1240 1240 1240 124	Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
1230 1230 1230 1230 1240 1230 1240 1240 1240 1240 1240 1240 1240 124	are	1223	0	5469		3%	+.1	3%	10%	10%	+10	5/18/13
1230 1230 1230 1240 1240 1240 1240 1240 1240 1240 124	purae	1225		54.09		70.8	127	1799	9.32	FO'S	104.14	5
1240 1240 1240 1240 1240 1240 1240 1240		1230		0		11.9	6.77	17h77	3.98	467	102.7	5
1240 1240 1240 1240 1240 1240 1240 1240		1235		54.09		12.4	(f.1)	2343	_	5.01	95.0	5
1245 54.09 12.5 6.69 2396 0.72 5.06 1255 54.09 12.4 0.69 2299 0.50 5.23 1255 54.09 12.4 0.09 2399 0.50 4.40 1255 54.09 12.7 0.09 2399 0.50 4.40 1255 54.09 12.7 0.09 2399 0.50 4.40 1255 1255 54.09 12.7 0.09 12589 0.50 4.40 1255 1255 54.09 12.7 0.09 12589 0.50 4.40 1255 1255 54.09 12.5 0.09 12589 0.50 4.40 1255 1255 1259 1259 1259 1259 1259 1259		1240		54.09		12.4	050	2390		81'S	2.16	2
1255 54.09 12.4 0.69 2293 0.54 15.04 12.5 54.09 12.4 0.69 22893 0.54 15.04 12.5 0.69 22893 0.56 14.40 NOTES (continued)    U bottles		1245		54.09		12.5	69.07	2396	_	5.0%	89.4	5
1255 54.09 12.4 0.09 2393 6.54 5.04 1300 2.5 54.09 12.5 0.09 2389 0.50 4.40 NOTES (continued)    U bottles		1250		64.09		12.4	69.0	2396		5.23	87.5	5
1300 2.5 54.09 12.5 4.40 12.5 4.40 12.50 4.40  NOTES (continued)  NOTES (continued)  ABBREV  ABBREV  POUMPER TINYOUGH VST From the order of the continued.		1255		1		12.4	6.00	2393		5.04	8,8	4
NOTES (continued)  **ABREVITY OF BEING FIBIOG-Feet Boow Too Thersport.  **POUMPER TRYGUGH VST From.**		1300	2.5				60.00	1389		4.40	8 Co. 7	
NOTES (continued)  **GOLIFIS BEING FIETO: Feet Boow To of Campan.    DUMPER THYOUGH VST FORM												
NOTES (continued)  **ACM, V IS BEING POUMPER TRYGUGIN VST From Commenced and Commenced												
NOTES (continued)  **SOLITIS BEING    PUMPER TRYGUGN VST From												
bour ris being from the form				NOTES (contin	nued)					ABBREV	IATIONS	
									Core - Actual Cores. FT BTOC - Feet Belon		ORP - Oxdanan-Recuston Penntal S Conductance SU - Standard Units	SEC - Specific Electrical
pumped through yst from	7	sal Hoc			A	diri	s being					
					) (C	anno	ed throu	19h y	IT FR	٤		
								)	2	3		

Sampled @ 1305

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State   Personnel   Personne						PROJECT IN	PROJECT INFORMATION	G FIELD FO	K			
1-05\$/ Teak #: Som Due:	Site:	Hennepin		Client:	Vistra							
Violume	Project Nur.	nber2024-0054 Task #:		124	A ISHIE	O/5/10						
Volume	Field Perso			Finish Date:	1/24	4	Time: 1					
Well Powel Demetric Approach Sampling   Well Volume Approach		WELL INFORMATION	2		,		2004	- 1	I di			
Volume	Well ID:	0		Well Deve	lopment	pailan		Low-Flow / L	ow Stress Sam	pling Other (Sp	ecity):Low Flow	
Time   Notine   Removed   Green   Temp   PH   SEC or Oxygen   Turbidity   ORP	Transducer					n l						
Time   Remove   Condition   Temp   Time   Condition		-	Volume	- 1	WAIEK QUAL	ITY INDICATO	R PARAMETERS (CO	ontinued)				
14   14   14   14   14   14   14   14	Stage		Removed	(Feet)	Drawdown (Feet)		Hd (Dg)	SEC or Cond.	Dissolved Oxygen	Turbidity	ORP	Visual
1515   52,11   14,2   7,17   75,6   10%   +10   10,6   10%   10%   +10   10,6   10%   10	Pro	K810		11 3		700		(hs/cm)	(mg/L)	(NIO)	(VIII)	Clarity
13.6   1.17   13.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.6   179.7   179.6   179.7	5,000	777		10:00		370	17+	3%	10%	10%	+10	Char
So. 71	6	27.5		50.11		- 1	1.17	250	3.52	152	179.6	
So. 71		2000		1000		13.5	7.16	945		55'	176.6	
50,71 141 715 444 397 376 50.71 141 715 944 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.68 3.93 1.59 3.90 3.90 3.90 3.90 3.90 3.90 3.90 3.9		120		50.71		13.8	7.15	345	4,01	. 83	172.7	
50.71 14.1 7.15 944 3.93 1.16 50.71 14.3 7.15 944 3.93 1.68 50.71 14.3 7.15 944 3.93 1.66 50.71 14.3 7.15 944 3.93 1.66 59.71 14.3 7.15 944 3.91 5.90 1.99 1.99 1.99 1.99 1.99 1.99 1.99 1		13.30		12.05		140	7.15	943	50%	33.	172.7	
So.71 14.3 7.16 944 3.93 1.69  So.71 14.3 7.15 944 3.93 1.69  So.71 14.3 7.15 944 3.93 1.69  NOTES (continued)  So.71 14.3 7.15 944 3.93 1.50  ABBRE  So.71 14.3 7.15 944 3.93 1.50  ABBRE		15.25		50,71		1-1-1	7.15	446	3.9.7	720	176.7	
56.71 14.3 7.15 944 3.83 166 56.71 14.3 7.15 944 3.81 59 56.71 14.3 7.15 946 3.81 .56 NOTES (continued)  Sond ABBRE		1		50.71		17:	2,15	348	3.93	169	1762	
Se, 71   45A  14.3 7,15 944 3,89 .59 .98   56.07   45A  14.3 7,15 946 3.31 .56   56.07   45A  14.3 7,15 946 3.31 .56   56.07   45A  14.3 7,15 946 3.31 .56   56.07   5		- 1		50.71		14.3	3,16	344	3.93	100	176,5	
So, 71 45A1 14.3 7,15 945 3,32 ,98 So, 71 45A1 14.3 7,15 946 3,31 ,56  NOTES (continued)  Some Matter 1600		15:30		12.05		143	7,15	446	3,89	65	17/0.9	
NOTES (continued)  NOTES (and 143 7.15 946 3.81 .560  NOTES (continued)  Spin, Ph. at 1600		1555		56.71		14.3	7,15	348	3 37	.98	1179	1
TES (continued)  ABBRE  Cond. *Actual Constitution  FT FITOC. Fiver Bullow Top of Cassing in -		11000		16.05	454	143	7.15	F	3.81	.56	1740	>
TES (continued)  ABBRE\  Cond - Actual Conductivity FT 5100 - free Ballow Top of Casting in a												
TES (continued)  Cond. Actual Constitution  Fig TOC. Fleet Before top of Casting in												
at 1600 the Ballow Top of Casting Its.					(panu				1	ABBREVI.	ATIONS	
at			(						Cond - Actual Conducts FT 9TOC - Faet Below		RP - Oxidation Reduction Potential St anductance SU - Standard Units	C - Specife Electrical
			Spr	0	1600							

Visual Clarity cheon

Dissolved Oxygen (mg/L)

SEC or Cond, (µs/cm)

F (S) +.1 5

Temp.

Drawdown (Feet)

Depth to Water (Feet)

Volume Removed (gallons)

Time (military)

Sampling Stage

Transducer Serial #: 21 165520

Well ID: HEN- 12

WELL INFORMATION AB/LF

3%

51.29

SE'0

1138

51.30

0

130

133

ol/rose

WATER QUALITY INDICATOR PARAMETERS (continued)

Low-Flow / Low Stress Sampling Other (Specify): Law Flow

**EVENT TYPE** 

Time: (2/0

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Time: 1120

Task #: 2024.2054 Start Date: 1/24/24

Project Number: Field Personnel:

1/24/24

Finish Date:

Well Development Well Volume Approach Sampling

+10 ORP (mV)

> 2.03 10%

> > 7.32 80

10%

1.03

296 780

> 3.42 44

たりも

7 S. 4

51.29 51.30

153

1148

N5 75 5 25 W

56.8 53.

> 180 710

52.

Cond - Actual Conductivity ORP - Oxidation-Reduction Potential SEC - Specific Electrical FT BTOC - Feet Below Top of Casing na. Conductance SU - Standard Units **ABBREVIATIONS** Still Stabilized bunged through bioddler, by YOU JOING NOTES (continued) Sampled @ 1155

NITCIC SOFFENIC SOFFENIC

Find Date						PROJECT II	PROJECT INFORMATION					
Finish Date   1/2 4/124   Time   1/2 22   Time   1/2 4/124   Time   1/2 22   Time   1/2 4/124   Time   1/2	Site:	lennepin	College Land	Client	E							
WELL INFORMATION         WELL INFORMATION         EVENT TYPE           Transducer Senial #: 216/55         Well Development         Low-Flow Low Stress Sampling Other (Specify) Low Flow           Sampling         Time         Well Development         Low-Flow Low Stress Sampling Other (Specify) Low Flow           Stage         Fresh         Well Development         Fresh         PMA           Stage         Fresh         Fresh         Fresh         PMA           PLG         12.13         0         S1.20         RP           PLG         12.20         RP         3.4         3.8         4.1           PLG         12.20         RP         2.4         83.9         2.1         4.0           12.20         12.40         2         51.20         RP         2.4         83.8         0.9         0.9         0.9           12.24         2         51.27         RP         RP         RP	Field Person	AB/	500 - b7m	Start Date: 17.2	- 12	12/0 174	Time 1200					
Transclucer Serial # 2   U 55   Well You'ne Approach Sampling   Transclucer Serial # 2   U 55   Well You'ne Approach Sampling   Transclucer Serial # 2   U 55   Well You'ne Approach Sampling   Transclucer Serial # 2   U 55   Well You'ne Approach Sampling   Transclucer Serial # 2   U 55   Well You'ne Approach Sampling   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   Well You'ne Approach   Transclucer Serial # 2   U 55   U 55   Well You'ne Approach   U 55		WELL INFORMATIO	NC				)	EVENT T	YPE			
Sampling   Time   Removed   Depth to Water   Depth to W	Well ID: #	EN-13 Serial # 2161551	S	Well Devek	opment e Approach Sarr	pling		Low-Flow / L	ow Stress Sam	npling Other (Sp	ecify):Low Flow	
Sampling   Time   Noture   Depth to Watter   D				×	ATER QUALI	TY INDICATO	OR PARAMETERS (C	ontinued)				
12.26   51.29   14.1   3%   10%   10%   10%   14.0   12.25   12.20   12.30   13.8   14.4   13.8   2.79   2.79   2.73   2.43   14.4   12.35   12.35   14.2   14.7   18.35   14.4   14.3   17.35   17.3   14.4   14.3   14.4   17.3   17.3   17.3   14.4   14.3   17.	Sampling Stage	Time (military)	Volume Removed (gallons)	(C)	Drawdown (Feet)	Temp (°C)	Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
12.20	pa	1213	0	51.29		3%	+.1	3%	10%	10%	+10	(LE 0/2)
1 \$1.30   13.8   7.41   784   2.78   2.17   2.78   2.17   2.13   2.17   2.13   2.17   2.13   2.17   2.13   2.17   2.13   2.17	pura	1215		57.30			15.t	のせも	5.0V		6	5
1 \$1,30 2 \$1.29 2 \$1.29 14.2 7.47 835 0.99 1.0 2 \$1.29 14.2 7.47 835 0.99 (0.99 14.3 7.47 838 0.99 0.99 14.3 7.47 838 0.99 0.99 14.5 7.47 838 0.99 0.99 14.5 7.47 838 0.99 0.99 14.5 7.47 838 0.99 0.99 14.5 7.47 838 0.99 0.99		1220		5(30		-	7.41	186	2.78	217		4 5
2 51.29 14.2 7.47 834 0.99 3.78 1.0 14.2 7.47 835 0.93 1.0 14.2 7.47 838 0.89 0.99 0.99 0.99 0.99 0.99 0.99 0.9		5221	)	51.30		(4.0	7.45	1809	2.434	\$ 7.58	54.3	4
2 51.29 14.2 7.37 835 0.93 1.0 14.3 3.47 838 0.89 0.99 14.3 5.47 838 0.99 0.99 14.3 5.47 838 0.99 14.4 838 0.99 14.5 5.44 838 0.99 14.5 5.44 838 0.99 14.5 5.44 838 0.99 14.7 ABBREN		1230		51.30		14.2	ナホナ	834	0.00	378	44.9	, i
2 51.29 14-3 3-44 838 0.89 0.99 6.99 0.99 NOTES (continued) ABBEN Cont. Attait Const. Attait Const. Abb. Top of Canity is a Cont. Attait Const. Abb. Top of Canity is a Cont. Attait Const. Abb. Top of Canity is a Cont. Attait Const. Abb. Top of Canity is a Cont. Attait Const. Abb. Top of Canity is a Cont. Attait Const. Abb. Top of Canity is a Cont. Attait Cont. Abb. Top of Canity is a Cont. Attait Cont. Abb. Top of Canity is a Cont. Attait Cont. Abb. Top of Canity is a Cont. Attait Cont. Attai		1235		51.29		14.2	7.77	835	0.93	0.1	41.1	4
NOTES (continued)  ABBREV  FI BTOC - Feet Below Top of Casting ne		1240	2	51.29		14.3	4.47	838	0.89		37.2	\$
NOTES (continued)  ABBRE  ABBRE  ABBRE  ABBRE  FI BTOC - Feet Below Top of Casing no -												
NOTES (continued)  ABBRE  ABBRE												
NOTES (continued)  ABBREV  FI BTOC - Feet Below Top of Clearing has a												
NOTES (continued)  ABBRE  Cock - Amail Conductivity FT BTOC - Feet Below Top of Casing no.												
NOTES (continued)    ABBRE												
NOTES (continued)  ABBREV  God: - Actual Consectivity FT BTOC - Feet Below Top of Casing no-												
Cord Azua Consustriory FT BTOC Feet Below Top of Casing ne.				NOTES (conti	(panu					ABBREV	IATIONS	
	S	Impled	6	1421					Cood - Actual Conds FT BTOC - Feet Belon		ORP - Dxidation-Reduction Potential & Conductance SU - Standard Units	SEC - Specific Electrical

LITCIC THAT

Superior   Teach # 2024 .0054 start Date   1/24/124   Time # 20455						PROJECT	PROJECT INFORMATION					
Trinc.	Site:	Hermepin		Client:	Vistra							
Finish Date	Project Nur		2024.30	S4 Start Date: 1/24/		NO BOW	55					
Well Development   Well Volume Approach Sampling   Approach Sampling   Notice   Approach   Approac	Field Perso			Finish Date:	1/171/17	+	Time: 1115					
Well Development   Well Volume Approach Sampling Other (Specify)Low Flow   Well Volume   Well Volu		WELL INFORMATIC	NC					EVENT	LYPE			
Water   Depth to Water   Drawdown   Temp   EC or   Dissolved   Cond.	Well ID: 14	*N-16 Serial #: 210155	34	Well Develo Well Volume	pment Paproach San	npling		Low-Flow /	Low Stress Sar	mpling Other (S)	pecify):Low Flow	
Image   Turne   Routine   Descrito Watter   Oravidown   Temp   PH   Const.   Oravidown   Temp   Oravidown   Temp   Const.   Oravidown   Temp   Const.   Oravidown   Temp   Const.   Oravidown   Temp   Const.   Oravidown   Temp				W	ATER QUAL	ITY INDICAT	OR PARAMETERS (	continued)				
1020 0 54.33 3% +1 3% 10% 10% +10 10 10 10 10 10 10 10 10 10 10 10 10 1	Sampling Stage		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
1021    54.34   16.1   7.34   801   6.55   15.84   48.4   18.4   16.2   12.2   7.34   792   4.30   84.45   40.6   16.2   16.3   1.34   16.3   1.34   14.5   16.3   1.4.5   1.4.5	Ore	1020	0			3%	+.1	3%	10%	10%	+10	Checker
12.2	PUTAL			54.34		1 (0. 1	7.34	80)	(3.50	105.84	87	5 5
33 16.1 7.33 811 0.78 105.32 24.2 \\ 34 16.1 7.31 813 0.45 2.30 14.8 \\ 35 10.1 7.31 813 0.45 2.30 14.8 \\ 35 10.1 7.31 812 0.46 3.50 -0.09 \\ 18.3 10.4 -4.2 \\ 18.0 7.31 8.14 0.48 3.64 -4.2 \\ NOTES (continued)  NOTES (continued)  ABBREVATIONS  FIGURE Foot States Tay of Change Res. Condutation St. Schridter Units.	)	1026		54.35		12.2	7.34	28E	4.30	UT 178		×
33 16.1 7.32 813 0.52 2.39 14.8 w 34 16.1 7.31 813 0.52 2.00 4.2 w 35 10.0 7.31 812 0.46 3.50 -0.09 w 36 10.0 7.31 8.14 0.48 3.64 -4.2 w 37 10.0 7.31 8.14 0.48 3.64 -4.2 w 38 10.0 10.0 10.0 w 39 10.0 10.0 w 40 10.0 10.0 w 40 1		1021	1	54.33		16.3	7.33	900	0.78	105.32	24.7	-
34 16.1 7.31 813 0.52 2.107 35 14.1 7.31 812 0.46 3.50 1.34 16.0 7.31 8.14 0.48 3.64  NOTES (continued)  ABBREV  THEORY OF THE CONTINUE OF THE				54.33		161	7.82	813	0,75	2.39	14.8	5
1.34 16.6 7.31 812 0.46 3.50 1.34 16.6 7.31 8.14 0.48 3.194 NOTES (continued)  NOTES (continued)  ABBREV  FI BTOC. Feet Bear Tip of Chang no.		1041		S#.34		1.9/		813	15.0	2.107.	4.2	\$
1.34 16.6 7.31 8.14 0.48 3.64  NOTES (continued)    PUPP   Supplement	1046	1.5	54.33		<u> </u>		2/8	940	3.50	-0.09	3	
NOTES (continued)    Condition		1901						8.4	2	3.44	1 -	7
NOTES (continued)  Gene - Actual Conductively FT BTOC - Feet Benev Tips of Charge na -												
NOTES (continued)  ABBREV  FIFETOC - Feet Believing of Causage as-												
NOTES (continued)  ABBREV  Grea - Artual Conductivity  FT BTOC - Feet Basier Tips of Classing rea-												
NOTES (continued)  ABBREV  Gred - Artial Conductivity  FT BTOC - Feet Below Tip of Caning na-												
DUPE ( FT BTOC - Feet Basier Tips of Classing ma.				NOTES (contin	(pan					ABBREV	MATIONS	
	✓	Moley	9	צכ		C	1001		Gond - Actual Cond FT BTOC - Feet Bein	15	ORP - Oxdaton-Reduction Potential ( Conductance SU - Standard Units	SEC - Specific Electrical
			)			Z	) =					

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Time: 1116	155	Finish Date: (174/24/174 Time: 1111 B  Finish Date: Well Development Well Volume Approach Sampling  WATER QUALITY INDICATOR PAI  (Feet)  (Feet)
T TYPE  To Dissolved Turbidity ORP  To Oxygen (MTU)  To O	1423  T TYPE  Tow / Low Stress Sampling Other  Cor Dissolved Turbidity (mV)  Cor Dissolved Turbi	evelopment olume Approach Sampling IALITY INDICATOR PA down Temp.
Cor   Dissolved   Turbidity   ORP   ONP	Cor   Dissolved   Turbidity   ORP   Cor   Dissolved   Turbidity   ORP   Cor   Oxygen   (NTU)   (MV)   (MV	Sevelopment blume Approach Sampling ALITY INDICATOR PA Covn Temp.
Cor Dissolved Turbidity ORP (mV)  (mg/L)  (mg/L)  (mg/L)  (mg/L)  (mV)	Cor Dissolved Turbidity ORP (mV)  (mg/L)  (mg/L)  (mg/L)  (mg/L)  (mV)	ALITY INDICATOR PA
Temp pH SEC or Dissolved Turbidity (mV)  3% +1.1 3% 10% 10% +10 (mV)  14.0 6.96 1111 2.92 2.47 128.77  14.0 6.96 1111 2.92 2.36 138.2  14.1 6.97 1109 2.97 3.17 133.6  14.1 6.97 1109 2.97 3.17 135.6  14.1 6.97 1109 3.34 2.48 142.8  14.1 6.97 110 3.34 2.48 142.8  14.1 6.97 110 3.34 2.48 142.8  14.1 6.97 110 3.32 2.49 142.8  14.1 6.97 110 3.32 2.49 142.8	Temp   PH   SEC or Dissolved   Turbidity   ORP   (C.)     3%	
+.1 3% 10% 10% +10  6.96 1107 3.09 5.76 127.9  6.96 111 2.92 2.30 179.1  6.97 1109 2.97 3.17 133.2  6.97 1001 3.41 2.77 139.2  6.99 1001 3.41 2.77 139.2  6.99 110 3.38 2.46 141.3  6.99 1110 3.38 2.46 142.8  6.99 1110 3.38 2.46 142.8  6.99 1110 3.39 2.49 142.8	3% +.1 3% 10% 10% +10  14.0 6.96 1107 3.099 5.76 127.99  14.0 6.96 1111 2.92 2.30 179.91  13.9 6.96 1112 2.97 2.30 179.91  13.9 6.97 1109 2.97 3.17 133.2  14.0 6.97 1101 3.41 2.17 135.6  14.0 6.97 1101 3.41 2.17 135.6  14.1 6.97 1101 3.41 2.17 175.7  14.1 6.97 1100 3.34 2.48 142.8  14.1 6.97 110 3.32 2.49 142.8  14.1 6.97 110 3.32 2.49 142.8  50.38 8.4 142.8  14.1 6.97 110 3.32 2.49 142.8	
6.96 1107 3.09 5.76 127.99 6.96 1111 2.92 2.31 128.71 6.96 1112 2.97 2.30 179.1 6.97 1109 2.97 3.17 133.5 6.97 1101 3.41 2.17 139.2 6.97 1101 3.41 2.17 139.2 6.99 1101 3.41 2.17 139.2 6.99 1101 3.38 2.46 141.3 6.99 1110 3.38 2.46 141.3 ABBREVIATIONS FIRTOC: Feet Billow   Top of Charter of the Constitution	14.0 6.96 1114 3.02 2.47 128.7 14.0 6.96 1111 2.92 2.30 128.7 13.9 6.99 1112 2.97 3.17 133.5 14.1 6.99 1001 3.41 2.17 135.6 14.0 6.97 1109 3.41 2.14 141.3 14.1 6.97 1109 3.34 2.48 142.8 14.1 6.97 110 3.32 2.49 142.8 14.1 6.99 1110 3.32 2.49 142.8	3%
6,96 1114 3,02 2,47 6,96 1111 2.92 2,38 6,97 1109 2,97 3,17 6,99 1091 3,41 2,17 6,97 1107 3,41 2,17 6,97 1107 3,41 2,17 6,97 1107 3,41 2,14 6,97 110 3,34 2,48 6,97 110 3,34 2,48	14.0 6.96 1111 2.92 2.47 13.9 6.96 1112 2.92 2,38 14.1 6.97 1109 2.97 3.17 14.0 6.99 1101 3.41 2.17 14.1 6.97 1101 3.41 2.17 14.1 6.97 1101 3.38 2.46 14.1 6.97 1110 3.38 2.48 14.1 6.99 1110 3.38 2.48 14.1 6.99 1110 3.32 2.48 14.1 6.99 1110 3.32 2.48	1403
9 6,96 1111 2.92 2,30 9 6,97 112 2.97 3,17 9 6,99 1091 3,56 7,34 1 6,97 1107 3,41 2,17 5 6,97 1108 3,34 2,48 6,97 1110 3,38 2,46 6,97 1110 3,38 2,48	14.0 6.96 1112 2.92 2.30 13.9 6.96 1112 2.97 3.17 13.9 6.99 1009 2.97 3.17 14.0 6.99 1101 3.41 2.17 14.0 6.97 1101 3.31 2.17 14.1 6.97 110 3.34 2.48 14.1 6.97 110 3.32 2.48 14.1 6.99 1110 3.32 2.48	14.0
9 6,96 1112 2,97 3,17 6,97 1109 2,97 3,17 10,97 1,091 3,56 2,46 10,97 110 3,41 2,17 10,97 110 3,38 2,46 10,99 1110 3,32 2,48	13.9 6.96 1112 2.974 1.69 14.1 6.97 1109 2.977 3.17 14.1 6.99 1107 3.41 2.17 14.1 6.97 1108 3.38 2.46 14.1 6.97 1108 3.34 2.48 14.1 6.99 1110 3.38 2.49 14.1 6.99 1110 3.38 2.49 14.1 6.99 1110 3.38 2.49 14.1 6.99 1110 3.32 2.49	14,0
9 6,97 1109 2,977 3,17 1 6,99 101 3,41 2,17 1 6,97 110 3,34 2,146 6,99 1110 3,34 2,48 6,99 1110 3,32 2,48	143.9 6.99 1.091 3.56 7.34 14.1 6.99 1.107 3.41 2.17 14.1 6.97 1.107 3.34 2.48 14.1 6.97 1.109 3.34 2.48 14.1 6.99 1.110 3.32 2.49 14.1 6.99 1.110 3.32 2.49 ABBEV	13.9
9 6,99 1091 3,56 7.34 1 6,97 1101 3,41 2.7 6,97 1109 3,38 2,46 6,99 1110 3,32 2,48 1110 3,32 2,49	13.9 6.99 1091 3.56 734 14.1 6.97 1107 3.41 2.77 14.1 6.97 1108 3.38 2.46 14.1 6.99 1110 3.38 2.46 14.1 6.99 1110 3.32 2.48 14.1 6.99 1110 3.32 2.49	14,1
1 6,97 1107 3,41 2.17 5 6,97 1108 3,34 2,46 6,99 1110 3,34 2,48 6,99 1110 3,32 2,49	14.0 6.97 1107 3.41 217 14.0 6.97 1108 3.38 2.46 14.1 6.97 1108 3.34 2.048 14.1 6.99 1110 3.32 2.48 14.1 8.99 1110 3.32 2.49 14.1 8.99 1110 3.32 2.49	13.9
1110 3.38 2.46  6.47 1109 3.34 2.48  6.48 1110 3.32 2.49  1110 3.32 2.49	14.0 6297 1110 3.38 2.46 14.1 6297 1109 3.34 2048 14.1 6299 1110 3.32 2.49 1110 3.32 2.49 ABBREV CONT. ACTUAL CONDUCTING FIRTOC. Feet Below Top of Courg. Top.	12-1
108 3,34 2,48 6,99 1110 3,32 2,49	14.1 6297 1109 3,34 2,48 14.1 6299 1110 3,32 2,48 ABBREV CONT. ARIAL CONT. ARI	14.0
1110 3,32 2,49  1110 6,32 2,49  ABBREV  Cond Armal Conductority FT BTOC. Free Bason Top of Cassing na-	141 6.99 1110 3,32 2,49 ABBREV CONT ARIMI CONDUCTORY FILTIOC. Feet Book Top of Cherry 12- FILTIOC. Feet Book Top of Cherry 12- FILTIOC. Feet Book Top of Cherry 12- FILTIOC. Feet Book Top of Cherry 13- FILTIOC. Feet FILTOC. Fee	1.4.1
	ABBREV  CONTATLAIL CONDUCTORY FT BLOCFeet Below Top of Cleany in-	7
ו וגר	BUBBLES IN WATER Love &	
1 1	BUBBAS IN WATER Live &	
	BUBBles in Water L	

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olle	Hennenin		Client:	Vistra		,					
Project Number:Z	Project Number: <b>2</b> っ2 <i>十・ロの</i> びask #: Field Personnel: AB/LF	ı.	Start Date: 1,257.4 Finish Date:	Time: 1/25/	1355	Time: 14.6				ļ	
	WELL INFORMATION	NC				24	EVENT TVDE	10,			
Well D: 13	1.000		Mel Designation	100			LACINI	יר			
Transducer	Transducer Serial #: 7   Ui 5 (1009)	600	Well Volume Approach Sampling	pproach Sam	pling		Low-Flow / Lo	ow Stress San	npling Other (s	Low-Flow / Low Stress Sampling Other (specify):Low Flow	
			IWA	TER QUALIT	TY INDICATOR	WATER QUALITY INDICATOR PARAMETERS (continued)	intinued)				
Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	Hd (ns)	SEC or Cond	Dissolved Oxygen (ma/L)	Turbidity (NTU)	ORP (mV)	Visual
fe.	1355		05:07		3%	+.1	3%	10%	10%	+10	
Purse	1355		4050		13,6	7.29	178	1.22	25,28	36.6	
>	1000		40.50		1.71	7.29	858	1.14	31.24		
	1405		40.53		14.2	7.29	200	1,07	34.00	35.4	
	14,0		40.53		14.2	7.28	858	01.1	42.87	72.7	
57	1415		40,53	17	141	7.30	859	1,10	30.29	- 7	
	1450		40.54		141	7.30	858	1.05	24.60	- 14.7	
2.5	1428		40.54		(4.3	7.29	851	20.1	34.29	0.4.1	
	1430		40. 84		14.5	7.29	828	1.07	22.82	712.6	
	1436		42.55		14.5	82.7	856	69°	28.40	-11.2	
10,	44	5.5691	40.55		14.5	7.29	856	.95	28.20	5:01-	
			NOTES (continued)	(pé					ABBREV	ABBREVIATIONS	
5	م مام	17 17	1440					Cond - Actual Cond- FT BTOC - Feet Belo	Cond - Actual Conductivity FT BTOC - Feet Below Top of Cusing na -	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units	- Specific Electrical
} -	5 30TC										

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Project Number: 2c.24sc 54 Task #: Field Personnel:  AB/LF					LINOSEOLIN	PROJECT INFORMATION					
Project Number: 😂	III.		Client:	/ist							
	AB/LF		Start Date: 1725 24	200	1/25/24	Time: 12.22				J	
WELL	WELL INFORMATION	7				200	EVENT TYPE	/PE			
Well ID: Hen 18# S	8#5 711015487	282	Well Develo	Well Development Well Volume Approach Sampling	pling		Low-Flow / L	ow Stress San	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	ecify):Low Flow	
			M	ATER QUALI	TY INDICATOR	WATER QUALITY INDICATOR PARAMETERS (continued)	continued)				
Sampling Time Stage (military)	۷)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	Hd (ns)	SEC or Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
Pre 130	1300		4035		3%	+.1	3%	10%	10%	+10	0001
Porol 13	300		4035		13.2	25'1	828	093	17.7	70,1	
1305	25		40.35		13.2	7.49	826	413	5,79	611	-
(2)	310		40.35		2'2?	87·L	\$28	1,20	3.55	53.5	
1315	V		7604		+ 21	5+16	979	1.25	3.76	400	
1320	0		40.35		13.5	7.49	223	2:2		45.6	
(328)	7		NB.35		124	7.48	178	111	2,87	45.0	
į	3,30		40,35		13.3	749	827	17.1	18,2	00 PT	>
35		3630L									*
	(		NOTES (continued)	(panu					ABBREVIATIONS	IATIONS	
Sand	0 0 0 i	1330						Good - Actual Cons. FT BTOC - Feet Beld	Good - Astual Conductivity FT BTOC - Fart Below Too of Casing na -	ORP - Ovalation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units	5 - Specific Electrical

HEN-257-801 MURKY Visual Clarity ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units +10 ORP (MV) 131.83 - 180.0 132.90 - 180.0 1.80.4 -179.7 Low-Flow / Low Stress Sampling Other (Specify): Low Flow 4 **ABBREVIATIONS** 135.42 130.21 21.0t Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na -10% Dissolved Oxygen (mg/L) 1.82 .26 ώ οο 10% 1.35 **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 1125 SEC or Cond. (µs/cm) Sending air through 1122 1711 171 \* WRII 1610000 MONY be WATER QUALITY INDICATOR PARAMETERS (continued) 17 THE SOM TO THE 1305 PROJECT INFORMATION PH (SU) +.1 500 7.59 Time: 5°20 759 7.50 damazed Stable Time: 12.00 10.01 Temp (°C) 70.7 10'01 3% 16.3 Well Development Well Volume Approach Sampling 1/23/24 Drawdown (Feet) Client: 1024,0054 Start Date: 1/23/24 NOTES (continued) Finish Date: Depth to Water (Feet) 5.33 39 5.38 98.9 5.3 ŝ Sampled @ 1240 ASW/S/W Volume Removed (gallons) SI WELL INFORMATION Transducer Serial #: 216 15 1013 AB/LF 1220 1225 1202 1230 1235 1240 Well D: HEN\_ZIP Time (military) Project Number Field Personnel Sampling Stage Pre

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					PROJECT IN	PROJECT INFORMATION					
Site: Hennepin Project Number 2024 - 0054 Task #: Field Personnel: AB/LF	<b>&gt;5- </b> Task #: AB/LF		Start Date: 1/23/2	Vistra Tim //23/	Time: 1440	Time: 1535	10				
WELL INF	WELL INFORMATION					-1	EVENT TYPE	YPE			
Well ID: 片E N - 22 Tansducer Serial #: 21 0 1 5 4 の 4	t612497		Well Develop Well Volume	Well Development Well Volume Approach Sampling	guild		Low-Flow /	Low Stress Sar	Low-Flow / Low Stress Sampling Other (Specity):Low Flow	ecity):Low Flow	ľ
			W.	ATER QUALI	TY INDICATO	WATER QUALITY INDICATOR PARAMETERS (continued)	ontinued)	ŀ			
Sampling Time Stage (military)	R ×	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	Hd Hd	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Visual
			17.95		3%	+.1	3%	10%	10%	+10	Cloar
041H1 3000	Q		17.95		13.6	7.63	9.35	300	4.00	77.6	-
カナー	S		, 59, Li		13.8	7.64	936	0.34	5.58	66.9	
145	0				17.51	7.65	935	17.0	35:01	57.8	
ンサン	\ \		17.95		14.0	7.66	935	٥	8.80	51.9	
1500	۵		17.95		14.00	7.67	434	21.0	13.69	465	
1505	~		12.95		14,2	7.66	933	01.0	拉雪花	41.3	
-1			17,98		14.2	7.66	733	01.0	19.76	37.4	
1515		+	17.95		14.1	7.66	936	01.0	19.94	36.3.	
	2	3626L									
			NOTES (contin	inued)					ABBREVIATIONS	ATIONS	
								Cond - Actual Condl FT BTOC - Feet Belc	Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - C	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units	- Specific Electrical
Samo	Sampled 44	7	1520								

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Client							PROJECT	PROJECT INFORMATION					
Finish Date:	Numb	Hennepin Der.	Task#: 2	7Sne Hon	1	Vistra	ne: 1430	Ī	k				
Volume	ersonr	iel	AB/LF		Finish Date:	1/23/2	4	Time:	120				
Well Development		WELL INF	ORMATION						EVENT T	YPE			
Volume	子 Singer S	7N / 2	28D 15041	34	Well Deve Well Volur	lopment ne Approach San	npling		Low-Flow /	Low Stress San	npling Other (s	specify):Low Flow	
Secondary   Cond.						<b>NATER QUALI</b>	TY INDICAT	OR PARAMETERS (	continued)				
44	pling	Тіте (military)		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		Hd Hd	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
1440 1440 1683 17440 17880 17.8 7.37 1086 14.43 14.50 18.80 17.9 7.37 1086 11.43 19.8 11.45 11.8 7.37 1086 11.43 19.8 11.45 11.8 11.8 11.8 11.8 11.8 11.8 11.8 11.	-	24/	\$ 30	0	(873		3%	+.1	3%	10%	10%	+10	1001)
12.8 7.37 1036 1.43 19.08 18.80 12.8 7.37 1086 1.43 19.08 18.80 12.9 7.37 1086 1.29 18.19 18.80 12.9 7.37 1085 1.23 17.47 18.80 12.0 7.35 1083 1.24 17.22 18.80 NOTES (continued)  **Ablandar/ pump 13 Sanding miv into	36	143	<b>S</b>		18.83		141	たり と	£401	1,80	12.23	1.81-	222
18.80 18.80 18.80 18.80 18.80 18.8 18.80 18.8 18.8	,	1441	9		19.80		12.8	£8.7	1072	2.42	21.70	-101.10	8
18.80 12.8 7.37 1080 1.29 18.101 18.80 12.9 7.37 1085 1.23 17.47 18.80 12.0 7.35 1.37 19.81 17.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12		1443	5	, ,	08 87		12.8	7.37	1081	1.43	19.08	-(19.1	3
18.80 12.8 7.37 10.83 1.24 17.22 18.80  NOTES (continued)  ** blandour pump 15 Sending air into fattoms.		1450	0		18.80		12.9	7.37	1080	1.29	18,101	-124.3	5
18.80  NOTES (continued)  NOTES (continued)  * blandder/ pump 15  Sending air into		1450			18.87			7.37	1085	1.23	44.41	-128.5	s
NOTES (continued)  * blandder/ pump 13  Rending mir into		8		5.2			120		1083	1.24			5
NOTES (continued)  * bladden/ pump 13  Sending air into													
NOTES (continued)  * bladder/ pump 13  Sending air into													
NOTES (continued)  * blandder/ pump 13  Rending mir into  1500  * VST, bit is still													
Sending oivinto  1500  1500  ABBRE  ABBRE  THOO FREE CONTINUED IS  SENDING OIVINTO  1500	П				C. L. C.								
Sending oir into 1500 YST, but is still					NOTES (cont	(panul					ABBRE	VIATIONS	
1500 YCI, but is still	$\omega$	8	pred	6			* blac	Adur/pun	NP 15	Cont - Act Cond.		ORY - Outstoon Recurson Pergrant SEC - Specific Electrical Correlaciance SU - Standard Units	SEC - Specific Electrosis
6/9045					158		¥ \$	I, but is	St.11				

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Vistra  1/24  1/24  opment  opment  Drawdown  (Feet)  inued)	ish Date:  Water  Water  D  S  S  S  S  S  S  S  S  S  S  S  S
	WELL INFORMATION   WELL INFORMATION   WELL INFORMATION   Wolume   Imme   Removed   Wolume
I

### FUENT TYPE    Low-Flow   Low Stress Sampling Other (Specify); Low Flow	EVENT TYPE   Low-Flow / Low Stress Sampling Other	тие: В В В В В В В В В В В В В В В В В В В	173 2十
T TYPE  W / Low Stress Sampling Other (Specify):Low Flow  or Dissolved Turbidity (mv)  (mg/L) (vrU) (mv)  f . SO   12.58 7.8 (mv)  f . SO   12.58 7.8 (mv)  f . SO   12.58 7.8 (mv)  f . SO   12.58 7.8 (mv)  f . O.20   46.75 - 38.0 (mv)  S -0.20   46.75 - 38.0 (mv)  S -0.20   46.75 - 38.0 (mv)  S -0.20   46.75 - 38.0 (mv)  S -0.30   24.54 - 52.4 (mv)  F -0.32   16.02 - 52.5 (mv)  S -0.32   16.02 - 52.5 (mv)  O -0.32   16.02 - 52.5 (mv)  ABBREVIATIONS  Cond. Actual Conducting Tas. Conductore SU. Standard Units	EVENT TYPE   Low-Flow / Low Stress Sampling Other (April 1982)   Low-Flow / Low Stress Sampling Other (April 1982)   SEC or Dissolved (Cond. Cond. (Cond.	PARAMET (SU) +1.1 +1.2 52.25 7-25	Toach Sampling  R QUALITY INDICATOR  awdown Temp. (*c*)  3%  9.1
Continued   Cont	NETERS (continued)   NETERS	R PARAME PH (SU) 7:37 7:37 7:27 7:25	Toach Sampling  R QUALITY INDICATOR  Reet) ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C') ('C')
or Dissolved Turbidity ORP (mg/s) (mg/s) (NTU) (MV) (mV) (mV) (mg/s) (NTU) (MV) (MV) (MV) (MV) (MV) (MV) (MV) (MV	or Dissolved Oxygen (mg/L)	PARAME BH (SU) +11 +12 +12 +12 +12 +12 +12 +12 +12 +12	awdown Temp. (°C) (Feet) 3%
SEC or Dissolved Turbidity ORP (mV)  Cond. Oxygen (NTU) (MV)  3% 10% 10% +10  PS 9 (S0   [2.58 7.18 0	SEC or Dissolved Cond. Oxygen (iss/cm) (mg/L)		Temp. (°C) 3% 3% 9.5
3% 10% 10% 10% 059 (59 (2.58 054 05) (2.58 054 05) (4.75 03) (4.75 0	3% 10%		% - Niti
059 (.50 (2.58 049 0.15 (0.19 084 -0.17 (0.90 088 -0.20 40,75 088 -0.29 42,74 088 -0.30 32,37 089 -0.30 32,37 089 -0.30 18,85 089 -0.32 18,22 089 -0.32 18,22 089 -0.32 18,22 089 -0.32 18,22 089 -0.32 18,22 089 -0.32 18,22	0/OT 0/C		- with
059 (.50 (2.58 094 0.15 (6.19 088 -0.21 70.71 088 -0.20 46.75 088 -0.29 416.85 089 -0.30 32.37 089 -0.31 24.54 089 -0.31 24.54 089 -0.31 (8.21 089 -0.32 (8.51 089 -0.32 (8.51 089 -0.32 (8.51 089 -0.33 (8.22 089 -0.33 (8.22 089 -0.35 (8.51		I I I I I I I	- with
079 0.15 10.19 087 -0.21 70.91 088 -0.20 40.75 088 -0.29 41.85 0.89 -0.30 32.37 0.89 -0.31 24.54 0.89 -0.31 14.02 0.89 -0.32 18.21 0.89 -0.32 18.21 0.89 -0.32 18.22 0.89 -0.32 18.22 0.89 -0.32 18.22	1059 1.50 17	7.25 7.25	Niti's
087 -0.17 (49.90 088 -0.21 70.71 088 -0.29 116.85 0.89 -0.30 32.37 0.89 -0.31 24.54 0.89 -0.32 [6.12 0.89 -0.32 [8.51 0.89 -0.32 [8.51 0.89 -0.32 [8.51 0.89 -0.30 [8.13 ABBREN  FIRICE: First Discussion Top of Caring Inc.	1.01 70.0 10.01	F.25	4.
088 -0.21 70.71 088 -0.26 46.75 088 -0.29 16.85 088 -0.31 24.54 089 -0.31 24.54 089 -0.32 16.02 089 -0.32 18.22 089 -0.32 18.22 089 -0.33 18.22 089 -0.33 18.22 089 -0.35 18.22	F1.0- F801		1
088	1088 -0.21	١.	+.
088 -0.29 HE 85 089 -0.30 32.37 089 -0.31 24.54 089 -0.32 [6.42 089 -0.32 [8.51 087 -0.33 [8.22 089 -0.35 [8.22 089 -0.35 [8.22 089 -0.35 [8.22 089 -0.35 [8.22 089 -0.35 [8.22	1088 -020	57	0
088 -0.30 32.37 089 -0.31 24.54 089 -0.32 [16.102 087 -0.33 [18.51 089 -0.33 [18.22 089 -0.33 [18.22 089 -0.35 [18.13 ABBREY	1088 -0.29 45	-25	F   F.P
089 -0.31 24.54 089 -0.32 [6.102 089 -0.33 [8.51 089 -0.33 [8.22 089 -0.30 [5.13 ABBREV FISTOC. Foot Balow Top of California	1088 -0.30 32	57	9.7 F
089 - 6.32 [6.12] 089 - 6.32 [8.51] 087 - 6.33 [8.22] 089 - 730 [8.13] ABBRE  Cord - Actual Conductivity FT STOC - Freet Balow Top of Casting re-	1089 -0.31	.25	
089 -0.32 [18.5] 087 -0.33 [18.22 089 -0.30 [18.13 ABBRE FISTOC. Feet Below Top of Casting na-	1089 -6.37	: 15	0
089 -0.33   18, 22 089 -0.30   15, 13 Cond Actual Conductions FT STOC Feet Bellow Top of Casing res	1088 -0.32 18.	.75	4.9 7
0 8 9 -030   18, 13  ABBREY Cond - Actual Conduction; FT BTOC - Feet Balow Top of Casting na-	-0.33	572	~
ABBREY Cond - Actual Conductivity FT BTOC - Feet Baley Top of Casting Tra	-030	57	t   t   b
Cord - Achail Conclusivity FT BTOC - Feet Below Top of Casing na-			inued)
- Stabilize			
	abilize	- 840	Loud hot

Single   Name	Site:					PROJECT	PROJECT INFORMATION					
Frotect Number:   Constitution   C		-Iennepin			Vistra							
Field Personne    Field Pers	Project Number:	SOOS CONTRACTOR	2024.00s	Start Date: 1/23/	4 Tim	ne: 08 15						
Volume   Volume   Volume   Volume   Volume   Volume   Volume   Volume   Approach Sampling   Temp.   Parameters (continued)   Volume   Volume   Approach Sampling   Temp.   Parameters (continued)   Volume   Volume   Volume   Volume   Temp.   Parameters (continued)   Temp.   Parameters (continued)   Temp.   Temp.   Parameters (continued)   Temp.   Parameters (continued)   Temp.   Parameters (continued)   Temp.   Parameters (continued)   Temp.   Temp.   Parameters (continued)   Temp.   Temp.   Parameters (continued)   Temp.   Temp.   Parameters (continued)   Temp.   Tem	Field Personnel:			Finish Date:	1123/2	E	Time: 00 4	0				
Tennestocan Sampling   Time   Well Development   Tennestocan Sampling Other (speedy) Low Flow   ow   Tennestocan Sampling Other (speedy) Low Flow Flow Flow Flow Flow Flow Flow Fl	-	WELL INFORMATION	7					EVENT T	rPE			
Sampling   Time   Petroval   Pe	Well ID: HE	N-32	(+	Well Develoy Well Volume	pment Approach Sarr	guild		Low-Flow / E	ow Stress San	npling Other (Sp	secify):Low Flow	
Sampling         Time         Volume (gathors)         Death to Water (gathors)         Temp.         PH (SEQ)         Cond. (Gathors)         HO (Gathors)         HO (Gathors)         HO (Gathors)         Cond. (Gat				'M	ATER QUALI	TY INDICAT	OR PARAMETERS (	continued)				
10	Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	Hd (ns)	SEC or Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
PCR						3%	+,1	3%	10%	10%	+10	
10   10   10   10   10   10   10   10	0	840	0.85	4.54								Sept State
1		28.00 44		4.04		10.5	_	S 1012	1.43	1410.01e		SOLK C
100   103   72.78   100	)	0849		-		10 G		1011	0.08	87.20	176.7	-
0%69 1.75 4.42 10.7 7.16 1001 0.07 54.83 09707 4.40 10.8 7.16 1032 0.01 47.03 09707 7.16 10.8 7.16 999 -0.05 30.09 09714 3 4.40 10.8 7.16 998 -0.05 30.09 09724 4.40 10.1 7.16 998 -0.05 30.09 09724 4.40 10.1 7.16 998 -0.05 30.01 09724 1.40 10.1 7.16 998 -0.05 30.01 09729 1.50 10.1 7.16 998 -0.05 30.01 09729 1.60 10.1 7.16 998 -0.05 30.01 NOTES (continued) ABBREV	O	2842 H		4.40		10.7		DOOL	0.33	72 78	١.	
6964	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0889	1.75			10.子		1001	45,0	54.83	105.9	
0914 3 4.40 10.8 7.10 999 -0.34 37.19 0914 3 4.40 10.8 7.15 949 -0.05 30.09 0924 4.40 10.1 7.10 999 -0.05 30.01 0924 4.5 4.00 10.1 7.10 999 -0.05 30.01 16.2 7.10 1001 -0.07 29.73  NOTES (continued) SAMMP(LA & ON33)  ABBREN THEORY FOR THE BOOK FOR THE BOOK FOR THE BOOK FOR THE BOOK FOR THE BOOK FOR THE BOOK FOR THE BOOK TO GENERAL FOR THE BOOK FOR THE BOOK TO GENERAL FOR THE BOOK FOR THE BOOK TO GENERAL FOR THE BOOK FOR THE BOOK TO GENERAL FOR THE BOOK TO GENERAL FOR THE BOOK TO GENERAL FOR THE BOOK TO GENERAL FOR THE BOOK TO GENERAL FOR THE BOOK TO GENERAL FOR THE BOOK FOR THE BOOK TO GENERAL FOR THE FOR THE BOOK TO GENERAL FOR THE FOR THE BOOK TO GENERAL FOR THE FOR TH		09.04		4.40		10.8	_	1002	0.0	47.03	163,6	
0914 3 4.00 10.8 7.15 909 -0.05 30.09 0919 4.0 10.12 7.16 998 -0.03 29.80 0924 4.5 4.00 10.12 7.10 999 -0.08 30.01 0929 10.1 7.10 1001 -0.07 29.73 NOTES (continued) SOMMP(LO) 0930		09.09		H-100			7.16	999	-0.04	37.19	159.8	
0924 4.90 10.12 7.16 998 -0.33 29.50 10.1 2.16 992 -0.35 29.50 20.01 10.1 2.16 992 -0.05 20.01 10.1 2.16 992 -0.05 20.01 10.1 2.16 992 -0.05 20.01 10.1 2.16 992 -0.05 20.01 10.1 2.16 992 90.01 10.1 2.16 90.		4160	3			9 '0(	7.15	9999	-0.05	30.09	158.3	
0924		0919		4.00		10.12	417	866	-0.03	29.80	158:0	
16.2 7.10 16.1 -0.07 29.73 NOTES (continued)  SOMMP(201 3) 00.33		0924		4.40		10, 1	4.16	999	-0.08	30.001	157.5	
NOTES (continued)  SOMMO(201)		6260	4.9			16.2	7.10	1001	-0.07	29.73	157.1	
continued)  Cana - Actual Conductivity FT BTOC - Feet Balow Top of Casting na -												
ABBREV Cond - Actual Conductivity FT BTOC - Feet Below Too of Casing na -				CLEON							100	
Cono - Actual Conductivity FT BTOC - Fiest Below Top of Caering in a				NOTES (contin	nea)					_	IATIONS	
		JORNEY	さってっ	, 0930					Cond - Actual Cond. FT BTOC - Feet Belo		ORP - Oxidation-Reduction Potential S Conductance SU - Standard Units	EC - Specific Electrical
		1	ار د د									

Size   Homeron				WELL DEVELO	I AN	PROJECT	-OFMEN I AND GROUNDWATER SAMPLING FIELD FORM PROJECT INFORMATION	G FIELD FO	NEW!			
Project Number 1024  Dec   123pt   Time   12.00	Site:	Hennepin		Client:	Vistra							
Finish Date	Project Nu	mber: 2024, 0054 Таsk #:		Start Date: 1/23/1		ne: 1115						
Well D.   H.E.N.   34     Well Development   Time   Perph to Walter   Depth to Wal	Field Person			Finish Date:	-	3124	Time: 1200	0				
Supplied   Control   Con		WELL INFORMATION	-						YPE	1		
Stage   Time   Noturne   Depth to Water   Depth to Wate	Well ID: 1	4EN-34 Serial#: 21101550	<u>ا</u>	Well Develop Well Volume	oment Approach Sam	guilde		Low-Flow /	Low Stress San	opling Other (s	pecify):Low Flow	
Sampling   Time   Wolume   Depth to Water   Drawdown   Temp.   PH   SEC or Dosphera   Turbidity   ORP   Visual   ORP   Visual   ORP   OR				M	ATER QUALIT	TY INDICAT	OR PARAMETERS (c	continued)				
1123	Samplin Stage		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	Hd Hd	SEC or Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Visual
1125	<b>ADDRESS</b>			4.05		3%	+.1	3%	10%	10%	+10	CHOX
1136	purg	+		4.05		10.0	7.10	1256	£2.0	13.47		
135		(130		405		162	7.09	1280	-0.11	十2.11	-129.2	
1140		1135	_	4.05		10,4	7.09	1293	-0.22	17.18	-138.2	2
1150 2 4.05 10.4 7.09 1304 -0.22 12.45 -148.3 \\ 1150 2 4.05 10.5 7.09 1304 -0.27 12.45 -148.3 \\ 1150 2 4.05 10.5 7.09 13.04 -0.27 12.45 -148.3 \\ 1150 2 4.05 10.5 7.09 12.45 -148.3 \\ 1150 3 -0.28 11.809 -144.2 L \\ 1150 2 12.45 -148.3 \\ 1150 12.45 -148.3 \\		0411		4.05		10 4	5.09	1303	-0.24	12.17	-145,0	2
1150		1145		4.8			P0.F	1303	-0.28	-	-1410,2	,
NOTES (continued)  SAMMO W. C. Acta Blow Top of Casing na-		1150	2			10.5		1304	£7.0-	12.45	48	
NOTES (continued)  SAMPLE ABBREV  TENCO- Feat Balow Top of Casting na -												
SAMPURA OF 1150												
NOTES (continued)  SAMP US A A THE TOTAL CONSTRUCTION OF THE TOTAL CON												
NOTES (continued)  SAMP US A BIO 1150												
NOTES (continued)  ABBREV  Cord - Actual Conductority FT BTOC - Feat Below Top of Casting na -												
NOTES (continued)    ABBREV   Cord - Actual Conductivity   FT BTOC - Frest Ballow Top of Classing ra.												
1150				NOTES (continu	(pen					ABBREV	IATIONS	
1		James C	700						Cond - Actual Condu	covity w Top of Casing na -	ORP - Oxdation-Reduction Potential ( Conductance SU - Standard Units	SEC - Specific Electrical
		エニニの	5	\	)							

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								Visual Clarity	Avid	Ward March	3	A A	0 4	CLOVAN &							- Specific Exertical
					city): Low Flow			ORP (mV)	+10	40,8	3(0.1	33.1	30.7	29.5	78.5					ATIONS	ORP - Oxidation-Reduction Palantal SEC - Specific Electrical Conductance SU - Standard Units
					Low-Flow / Low Stress Sampling Other (Specify):Low Flow			Turbidity (NTU)	10%	3942	13.35		5	5.91						-	7.0
				H H	w Stress Sam			Dissolved Oxygen	10%	450	0,08		-0.03		-0.17						Cond - Actual Consuctivity FT BTOC - Feet Below Top of Casing ha
				EVENT TYPE	Low-Flow / Lo		tinued)	SEC or Cond	3%	796+ @ CO	806	8/8	839	847	266						
PROJECT INFORMATION		1305	インアim				WATER QUALITY INDICATOR PARAMETERS (continued)	Hd (ns)	+.1		7.11	7.11	7.10	7.10	01.4						
PROJECT II		Time: #555	24			pling	Y INDICATO	Temp.	3%	11.3	11.3	11.4	11.4	11.4	11.5						
	Vistra		123124		ment	Approach Sampling	TER QUALIT	Drawdown (Feet)											(por	na	
	Client	Start Date: 123124	Finish Date:		Well Development	Well Volume	WA	Depth to Water (Feet)	7.90	190	7.91	7.92	4.91	790	7.90				NOTES (continued)	NOTES (CONTINUE	(0) 13书
								Volume Removed (gallons)	0						2.5						2 2
	Hennepin	Project Number: 2624,0054Task #:	nel: AB/LF	WELL INFORMATION	5N-35	Transducer Serial #: 2/10/155/10		Time (military)	1 1310	1315	1320	1325	1330	1335	1340						Sampled @ 1340
	Site:	Project Numb	Field Personnel:		Well ID: HEN_35	Transducer		Sampling Stage	MARKET NO	purge											

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clear Visual Clarity ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units +10 ORP (MV) 22.5 Low-Flow / Low Stress Sampling Other (Specify): Low Flow 4.86 93.5 28.3 87.3 ABBREVIATIONS Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na-3.86 0.20 0.87 0.4x 10% .28 0.0 Dissolved Oxygen (mg/L) 8.33 0.08 420 0.74 0.16 10% 0.00 **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 777 787 786 786 784 SEC or Cond. (µs/cm) WATER QUALITY INDICATOR PARAMETERS (continued) PROJECT INFORMATION 8.03 7.96 PH (S∩) +.1 06 40.F 46.4 40 Time: Time: 1330 15.0 Temp. 0 14.9 3% 14.0 15.0 125/24 Well Development
Well Volume Approach Sampling Drawdown (Feet) NOTES (continued) Start Date: 1/25/24 Finish Date: Depth to Water (Feet) 40.310 40.36 40.36 40.3h 4030 40.36 Sampled @ 1415 Volume Removed (gallons) V (4) 0 WELL INFORMATION Task #: AB/LF Well ID: HEN 40#S Transducer Serial #: N/A 1338 1352 **458** 404/ 347 412 Time (military) Hennepin Project Number: Field Personnel: Sampling Stage 1/2 000 38

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(Lobday Visual Clarity DRP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units +10 ORP (mV) Low-Flow / Low Stress Sampling Other (Specify): Low Flow 5 ABBREVIATIONS و -0 ø Ö 174.15 51.25 5176 Turbidity (NTU) 38.92 38.93 34.2 10% 0.07 20.0 Oxygen (mg/L) Dissolved 0,58 0.10 10% 0.02 100 **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 976 たもし SEC or Cond. (µs/cm) 976 446 のもし 186 WATER QUALITY INDICATOR PARAMETERS (continued) 1205 PROJECT INFORMATION 7.30 B (S) +.1 7.23 7.50 7.70 Time 4.19 Time: 1105 16.0 Temp. 9.4 七七 17.8 3% カナ 4.4 1/25/24 Well Development Well Volume Approach Sampling Drawdown (Feet) NOTES (continued) Task # 2024 9054 Start Date: 1/25/24 Finish Date: Depth to Water (Feet) Salmplad @ 1145 20.12 20.12 20.12 20.12 21.02 20.12 Volume Removed (gallons) 50 ۵ WELL INFORMATION OUT 110 AB/LF 1130 EST 4/2 1135 1145 140 Well ID: HEN-45#S 120 Time (military) Hennepin Transducer Serial #: Project Number. Field Personnel: Sampling Stage かんなる bre

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Simpling   Time						PROJECT INFORMATION	FORMATION					
Time   12 25   Time   12 15   Time	Site:	Hennepin		Client ,	Vistra							
LINFORMATION	Project Num	iber:	Task #: 2014, 63	Start Date: 1/24/	-	ne: (225	ľ					
	Field Person		AB/LF		1/24/	42	_ Time: 1310				Į	
Well Development   Well Development   Well Development   Well Development   Well Volume Approach Sampling   Well Volume Approach Sampling   Well Volume Approach Sampling   Well Volume Approach   Secondary   Well Volume   Well Volume Approach   Secondary   Well Volume   Well Volum		WELL INFO	DRMATION					EVENT T	YPE			
Time   Volume   Depth to Water   Depth	Well ID: H	en to	21015491	Well Devel	lopment ne Approach Sarr	guild		Low-Flow / L	ow Stress Sarr	pling Other (Sp	ecify):Low Flow	
Time   Noticine   Depth to Water   Drawdown   Temp   pH   Coord   Co					VATER QUALI	TY INDICATOR	R PARAMETERS (C	ontinued)				
225   51,6    3%   +1   3%   10%   10%   100   110   1225   122	Sampling Stage		Volume Removed (gallons)		Drawdown (Feet)	Temp.	Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
12.25   13.6   14.2   7.36   842   2.45   1.33   136.7   123.0   123.0   125	19	1225		51.61		3%	+.1	3%	10%	10%	+10	SUBIN
51.61 H.5 7.36 842 2.41 1.19 51.61 H.5 7.36 849 2.37 1.06 51.61 H.7 7.35 849 2.33 39 51.61 H.7 7.35 849 2.33 39 51.61 H.7 7.35 849 2.35 37 14.6 7.35 847 2.29 37 51.61 H.4 7.35 847 2.29 37 51.61 H.4 7.35 847 2.29 37 51.61 H.4 7.35 847 2.29 37 51.61 H.4 7.35 849 2.26 37 NOTES (continued) NOTES (continued) REBREY	Parge	1225		-		14.2	7.35	846	2.45	1.33	136.7	
51.61 14.4 7.36 849 2.37 1.06 14.4 7.35 849 2.35 3.96 51.61 14.7 7.35 849 2.35 3.7 7.36 849 2.35 3.7 7.36 849 2.35 3.7 7.36 849 2.35 3.7 7.36 849 2.35 3.7 7.36 849 2.26 3.7 7.20 14.6 7.35 847 2.26 3.7 7.20 14.6 7.35 849 2.27 3.7 ABBREV	,	1230		51.61		13.6	7.36	845	241	61.1	135.0	
51. Le		1033		-		H.S	7.36	848	2.37	1.06		
51.61 51.61 14.7 7.35 849 2.33 95 51.61 14.7 7.35 849 2.29 37 51.61 14.6 7.35 849 2.26 37 51.61 14.6 7.35 849 2.26 37 ABBREV NOTES (continued) ABBREV  AGGIVENTE (Continued)		1240				4,41	7.35	848	1.35			
51.61 51.61 14.7 7.35 847 2.31 37 51.61 14.6 7.35 847 2.26 37 37 46pL 51.61 14.6 7.35 848 2.26 37 30 NOTES (continued) ABBREV		1545		51.6)		14.5	7.35	648			129,3	
51.61		1250		51.61		14.7	7.35	847	2.31	277	127.1	
(4.16 7.35 847 2.78 3.75 3.16) 14.16 7.35 848 2.26 3.72 3.72 3.72 3.72 3.72 3.72 3.72 3.72		1255		51.61		14.4	7.35		2.29	100	124 5	
14,16		1300		-		07,10		547	2.28	22°	122.5	
14.6 7.35 848 2.27 • 70  NOTES (continued)  NOTES (continued)  ABBREV		1305		_		14,6	7.35	8+8	2.26	172	120.0	
ABBREV  Conn Actual Conducting  FT 8TOC Frest Below Top of Casaring na -		1310	148p	5).		14.6	7.35	848	2.27	06.	118.5	7
ABBREV  Conn Actual Consuming  FT BTOC Feet Below Top of Cashing na -												
ABBREV Gora - Attail Carductory F1 BTOC - Feet Bloow Top of Claiming no -												
-				NOTES (conti	(penu					ABBREV	IATIONS	
	7	(٢		î					Cons Actual Cordus FT BTOC - Feet Below	-	ORP - Oxedaton-Heduston Potential SEC Conductance SU - Standard Units	> Specific Electrical

HENNEPIN POWER PLANT, LANDFILL HEN-257-801 Mean Visual Clarity ORP - Oxidation-Reduction Patertl Conductance SU - Standard Units 30,6 1269 +10 ORP (ve) 26.3 134,9 36.4 Low-Flow / Low Stress Sampling Other (Specify): Low Flow 27 **ABBREVIATIONS** Turbidity (NTU) +400 10% + 64 46 \$50 7.2 Dissolved Oxygen (mg/L) 7.50 2.61 10% 2,57 70,5 **EVENT TYPE** 960 960 SEC or Cond. (µs/cm) 95 826 959 3% 959 WATER QUALITY INDICATOR PARAMETERS (continued) 7.11 7, 11 7.11 PROJECT INFORMATION 7.11 +.1 Hd (NS) Time: Time: 1355 16.9 16.4 16,7 110.4 170 167 10.1 Temp. 3% Well Development Well Volume Approach Sampling Drawdown (Feet) NOTES (continued) Start Date: (-24-25 Finish Date: 57.82 7.87 Depth to Water (Feet) 63 Client Volume Removed (gallons) 1001 0 ransducer Serial #: 21 6 | SSO 5 WELL INFORMATION Project Number: grant pask#: Field Personnel: 2024-2054 1400 450 0171 415 430 358 1405 425 THIN HEN- HT

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

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Time (military)

Sampling Stage Pre Service of

HEN-257-801 CIOVAN 000 Visual Clarity ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units ORP (av) +10 Low-Flow / Low Stress Sampling Other (Specify); Low Flow 0 78.C ABBREVIATIONS 5 38.8t 10,27 Turbidity (NTU) 10% Dissolved Oxygen (mg/L) .88 9:0 10% 0.63 ó **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 七いつ 1652 SEC or Cond (µs/cm) 1054 bes 8501 87**0** 127 WATER QUALITY INDICATOR PARAMETERS (continued) Time: / U 1800 40 4.0 PROJECT INFORMATION Ha (s) +.1 カード 7 1 サー Time: 1520 1/23/24 Temp. (°C) 3% 9.8 8.8 12.9 30.0 3 13 Well Development Well Volume Approach Sampling Drawdown (Feet) NOTES (continued) Start Date: 1/23/7 Finish Date: Depth to Water (Feet) 1.25 527 21.25 Client 52 21.25 Sampled Volume Removed (gallons) 52.0 Salled . in Transducer Serial #: (2) 2/307307 WELL INFORMATION Task #: AB/LF 1533 からの Well ID: HEN 49 548 553 003 Time (military)

Page 75 of 84

Project Number: Field Personnel:

Sampling Stage

200

500 50 32 5 23 5 W 3

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6

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12

14

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Simple   Hemegane   Start Decient   Finds task   Start Decient   Finds task   Start Decient   Finds task   Start Decient   Finds task   Finds task   Start Decient   Finds task   Start Decient   Finds task   Find				PROJECT INFORMATION		PROJECT INFORMATION	FORMATION					
Volume   Volume Approach Sampling   her (Space)   Volume   Volume Approach Sampling Other (Space)   Volume   Volume   Volume Approach Sampling Other (Space)   Volume   Volume   Volume Approach Sampling Other (Space)   Volume   V	Site	Hennepin		Client								
Finish Date: 1/23/24   Time:   1/25/24   Time:	Project Num	ber 2024 - 2054 Task #.		Start Date: 1/23/2		15 4c						
Volume   Volume Approach Sampling   Volume   Volume Approach Sampling   Volume   V	Field Person			Finish Date:	1/23,	124						
Well Volume Approach Sampling   Note Development		WELL INFORMATIO	Z				-		'PE			
Volume	Well ID: H	EN_50 Serial #: 21 16 15 48	6	Well Develo	pment PApproach Sam	pling		Low-Flow / Lo	ow Stress Sam	pling Other (Sp	recify):Low Flow	
Time   Notitine   Depth to Watter   Disastohed   Temp   Temp   Time   Temp   Time				×	ATER QUALIT	IY INDICATO	R PARAMETERS (c	ontinued)				
1546 17.57 3% +1 3% 10% 10% +10 C1 1545 17.68 840 178 73.20 446.0 17.52 17.52 18.7 7.60 895 1.42 89.70 50.7 1600 17.52 13.7 7.60 895 1.42 89.70 50.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 17.52 13.7 7.60 70 1.49 69.3 54.7 1600 1800 1800 1800 1800 1800 1800 1800	Sampling Stage		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp.	Hd (ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
15 45  11.52  11	Pre	1540		1		3%	+.1	3%	10%	10%	+10	000
17.52 17.52 17.52 17.52 17.52 17.60 19.0 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.42 1.60 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.50 1.40 1.60 1.40 1.60 1.40 1.60	800	1545		17.52		14.3	7.68	840	1.78	73.20	46.0	1
17.52 17.52 17.52 17.52 17.60 901 1.48 69.23 17.52 13.7 7.60 901 1.48 69.23 17.54 19.0 13.2 69.4 19.0 13.2 13.2 13.7 1.60 13.4 19.0 13.4 19.0 13.4 19.0 13.4 19.0 13.4 19.0 13.4 19.0 13.4 19.0 13.4 13.4 13.4 13.7 1.60 13.4 13.4 13.4 13.4 13.4 13.4 13.4 13.4		18.80		75.71		13.7	7.60	895		53.70	50.1	
17.52 13.7 7.60 1.48 69.23 17.52 11.52 69.4 69.13 17.52 17.53 17.60 1.37 69.4 69.13 17.52 17.60 1.37 69.4 69.13 17.52 17.60 1.37 69.4 69.13 17.50 1.37 17.59 17.60 1.37 69.140 1.37 17.59 17.60 1.37 17.60 1.37 17.60 17.40 17		1555		17.52		13.60	7,60	801	1.56	73.80	68-35-56	
17.57 13.2 68.04 GAL 17.52 13.7 759 910 1.32 68.04 NOTES (continued)  NOTES (continued)  ABBREV  FT BTOC - Feet Balow, 1cp of Casing ins		0097		17.52		13.7	7.60	9,0	1.48	69.23	54.2	
Salt 17,52		1605	1	17.52		13.7	159	016	-	4089	56.3	-
NOTES (continued)  ABBRE  LO L O		(010)	N	-17,52			159	940	(32	67.40	57.5	>
NOTES (continued)  ABBRE  Cond Actual Conductivity FI BTOC Feet Below Top of Casing in a												
NOTES (continued)  Cond Actual Conductivity FI BTOC Feet Below Top of Casing ma												
NOTES (continued)  Cord - Actual Conductority FT BTOC - Feet Below. Top of Coaring na												
NOTES (continued)  Cord - Actual Conductionly FT BTOC - Feet Below Top of Casing Ins												
NOTES (continued)  ABBREV  Cond Actual Conductivity  FT BTOC Feet Below Top of Casing ins												
NOTES (continued)  ABBREV  Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing ma												
Cord - Actual Conductionity   FT BTOC - Feed Below Top of Casing Its				NOTES (contin	(pan					ABBREV	TATIONS	
7									Cond - Actual Conduc FT BTOC - Feet Below		ORP - Oxidation-Reduction Potential SEC - Conductance SU - Standard Units	- Specific Electrical
	4	2 Amy 16	1	191	$\mathcal{C}$							

PosiBle DiAPHram FroBlem, Burbles in WATER Line

<u>-</u> 

Time:					y:Low Flow		ORP Visual (mV) Clarity	+10 (Joseph	7	- 128.6	- 156.8	+165.0	- 171,2	0.721 -	7.76.4	1 0.221 -	- 178.2 V			TIONS	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
B 20 H Time: QB2 HIDICATOR PARAMETERS (continuous)  ST. 26 T. 37 T. 36 T. 42 T. 42 T. 42 T. 43 T. 43 T. 42 T. 43 T. 44 T. 44 T. 44 T. 44 T. 44 T. 44 T. 45 T					Sampling Other (Specif			H		1		L133.17		-						ABBREVIA	
B 20 H Time: QPE  W Time: QPE			4 000	EVENT TYPE	Low-Flow / Low Stress	inued)		H		-	•	•	•	Þ	1	L	1				Cond - Actual C
Temp. (C) 1 (C) 0	ORMATION		Time:			PARAMETERS (cont	(ns)	+.1	7.36	7.37	7.40	7.41	7.42	7.42	7,43	7.43	27.45				
	PROJECT INF		177		npling	ITY INDICATOR	Temp.	3%	2.5		9.9	101	- 4		2.8	2.8	8.8				
		Start Date: 1.24.24	Finish Date:		Well Development Well Volume Approach Sampling	W,	Depth to Water (Feet)	1871	12.81	12.25	17.95	17,95	17.95	17.85.	17.95	12.95	17.95			NOTES (continued)	
					80		Volume Removed (gallons)										K	-			
Client: Start Date: 1.2.4 Finish Date: Well Development (Feet) Mount (Feet) 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9		Site: Hennepin Project Number: Z = Z d DO Sis #:	el: AB/LF	WELL INFORMATION	EN-61		Time (military)	820	8 20	823	830	835	840	848	850	25.50	006				
Client: Start Date: 1.2.4 Finish Date:  N Well Developme (Feet) (gallons) 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9		Site: Project Numbe	Field Personnel:	2	Well ID: +		Sampling Stage	Sco	Porale	>											



1000C Visual Clarity 89.3 S 500 +10 ORP (TV) . 88 Low-Flow / Low Stress Sampling Other (Specity): Low Flow 900 ABBREVIATIONS Cond - Actual Conductivity FT BTOC - Feet Bolow Top of Casing na -5,08 2,44 2,01 3,75 10% 3,60 67 4.60 3060 Dissolved Oxygen (mg/L) 30,61 10% WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM **EVENT TYPE** 9/20 966 998 966 966 796 SEC or Cond. (µs/cm) 3% WATER QUALITY INDICATOR PARAMETERS (continued) Filter Samples 21,0 7.16 PROJECT INFORMATION +.1 PH (SO) Time: Time: / 000 3,0 30 3,9 7 4 Temp (°C) 3% Well Development Well Volume Approach Sampling Drawdown (Feet) NOTES (continued) Start Date: 1/24/24 Finish Date: Depth to Water (Feet) 3.95 3.95 00 53.9 58.85 a, 0 53. 2 Volume Removed (gallons) OFFLES Transducer Serial #: 2] VIS/45 WELL INFORMATION Project Number: 2c24-605-Task#. AB/LF HEN-52 0.00 000 005 020 210 Time (military) 0 9 Field Personnel: Sampling Stage Jose

9

Well ID:

Visual Clarity Che Or ORP (mV) +10 Low-Flow / Low Stress Sampling Other (Specify): Low Flow 44.3 53.3 39.8 40.7 ABBREVIATIONS 4.28 4.59 10% 7.4 12 bottles line dupe Dissolved Oxygen (mg/L) 1.68 69. 94 .84 **EVENT TYPE** WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 870. SEC or Cond. (µs/cm) 869 3% 849 WATER QUALITY INDICATOR PARAMETERS (continued) 25.4 26.4 7.36 PROJECT INFORMATION PH (su +:1 Time: 13 15 Temp. 14-3 3% 3.4 4.4 14: 1 14 Well Development Well Volume Approach Sampling 17/17/ Time: Drawdown (Feet) NOTES (continued) Start Date: 1/24 12 1357 Finish Date: Depth to Water (Feet) 53.20 53.20 53.2 53.21 1ask # 2024, 0054 Volume Removed (gallons) SAMPRA 0 ransducer Serial #: 2/0/5/43 WELL INFORMATION 1340 345 29 WEILD: TEN ST Hennepin Time (military) Project Number: Field Personnel: Sampling Stage Series de STO

0 5328

\* Used peristaltic pump

bindden

			(8)		PROJECT	PROJECT INFORMATION					
Site:	lennepin		- 1	Vistra							
Project Number:		Task #: 2024.3054	4 Start Date: 1/25/	47,	Time: 0750	0					
Field Personnel:	nnel: AB/LF		Finish Date:		1/26/24	Time: 00/00					
	WELL INFORMATION	2					EVENT TYPE	YPE			
Well ID: H	Well ID: HEN, XP MOI- POYE	9	Well Deve	Well Development Well Volume Approach Sampling	nolina		Low-Flow / L	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	pling Other (S	secify):Low Flow	
Transducer Serial #:	Serial #: NA				9						
	east. We			WATER QUAL	ITY INDICAT	WATER QUALITY INDICATOR PARAMETERS (continued)	ntinued)				
Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp.	Hd (US)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual
O PVR	0752		10.50	The state of	3%	+.1	3%	10%	10%	+10	Hear
DUMOR	2550		19.51		14.6	11.44	1080	0.53	54.5	-146.1	3
	8800	0.850	10.50		13.9	七九11	1881	01.0	1.36	したもっ	3
	5080		10.51		7:41	01/1	1682	-0.05	11.33	213.4	7 3
	0810	1.25	10.52		14.1	th:11	1085	£0.02	11.21	721.5	2
	0815		10.52		14.0	th://	1000	VOCAD (SQ	807	7.022-	£
	0850	2.0	10.52		14.1	11. 那小工	1093	10.01	40.6	-2335	74
	2260		10.52		14.2	11.47	F601	F0.0-1	12.40	8.EZ-	h
3	0880	5.2	15.0		14.3	11.48	1104	+0.0-	18.99	5'152-	交
3	0835		10.52		13.9	11.49	10011	-0.18	11.22	t.832-	14
0.5	0 4 4 0		10.52		144	11.48	11116	-0.18	12.20	5.452-	4 %
	2848	3.8	16.52		14.4	11:40	1113	- 0.18	11.89	-259.9	4
209	0680										
Sa	0855										
			NOTES (conti	tinued)					<b></b> I	ABBREVIATIONS	
05	sompled (		54800			0.00		Gond - Actual Canductivity FT BTOC - Feet Below Top of Casing na-		ORP - Oxidation-Reduction Penemal SEC - Specific Electrical Conductance SU - Sandard Units	BEC - Specific Electrical
	040N1*	NS >	ened iii	Le Su	かりが	*INONEW SMELLED LIKE SUFUY & had a sheen	6	Shee	3		
						2	9	Ildi coppe	pd		
,							>	•	)		

DRP - Ordaton-Roducton-Popmen SEC - Specific Energian Conductance SU - Standard Units

Core - Actual Conductory 51 BTOC - Fast Below Top of Coung na -

ABBREVIATIONS

Gusta peristatic pump \*NO ORDICATED BIODIDE

M bottles

Sample d 6,0930

cheon Visual 410 ORO (ME) -161.8 -161.8 -156.6 158.6 - ibo. 3 EVENT TYPE
Low-Flow / Low Stress Sampling Other (Specify):Low Flow 1159.4 23.24 23.19 Turbidity (NTU) 25,00 35.09 20.9 21.01 10% Dissolved Oxygen (mg/L) 40,20 010 0.00 10% 15 WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM 3770 277 3723 3754 SEC or Cond. (µs/cm) 3720 3% WATER QUALITY INDICATOR PARAMETERS (continued) 0940 12.25 PROJECT INFORMATION 12.25 F (S) +.1 12.14 12.20 12.24 Time: 00000 125/24 13.9 13.8 13.9 13.0 Temp (30) 3% 14 Well Development Well Volume Approach Sampling Time: W Drawdown (Feet) Vistra 125/24 NOTES (continued) Finish Date: Depth to Water (Feet) 14.46 14.27 14.27 Start Date: 790. F. 97 : 4 SEL Volume Removed (gallons) 5 Well ID: HEN-XR WOZ-POK WELL INFORMATION 0902 5060 0660 6925 Transducer Senal #: N/A 915 260 Time (military) Hennepir 0 Project Number: Field Personnel: Sampling Stage CVICA かんの 5 2325 V

					PROJECT	PROJECT INFORMATION					
Site:	Hennepin		Client	Vistra	3						
Project Number:		2024.00	Task #: 202 4 . 00 54 Start Date: 1/25/24		Time: 0 0 50						
Field Personnel:	AB/		Finish Date:	1/25/24	24	Time:					
	WELL INFORMATION	z					EVENT TYPE	YPE			
Well ID: HEN.	Well ID: HEN-XPW03_P07-C	20%	Well Develo Well Volume	Well Development Well Volume Approach Sampling	pling		Low-Flow /	Low Stress San	npling Other (s	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	
			'M	ATER QUALI	TY INDICAT	WATER QUALITY INDICATOR PARAMETERS (continued)	ontinued)				
Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp.	(ns)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mv)	Visual
pre	4560	0	17.10		3%	+.1	3%	10%	10%	+10	CHAC
pyr of	0000		U. 2.7.		11.3	11.15	1638	2.49	3.49	1-52.1	3
	iction 100 i		427		11.5	11.91	2651	0.03	1.31	-44.5	s
	0001		4.25		11.5	11.92	£651	0.30	1.21	p.pt-	3
	110)		W.25		11.5	11.92	1894	0.20	ر 	1.95-1	3
	2101		(1.15		11.4	11.93	1598	0.09	1.59	- 82.3	5
	1201		0.25		11.3	11.93	8 6 SI	0.00	1.13		3
	1020	2.8	6.25		11.4	11.93	1598	8 0 0	1.00	£38-	4
			NOTES (continued)	(pen					ABBRE	ABBREVIATIONS	
V.	MANN	100	Ch Mar					Cond - Actual Condu FT BTOC - Feet Belo	Cond Actual Conductivity FT BTOC Feet Below Top of Casing na -	ORP - Oxdation-Reduction Patential SEC - Specific Electrical Conductance SU - Standard Units	EC - Specific Electrical
Ć		ーンメ	) ) )								

\*No cledicated bladder Guad peristatic

# SAR-3: Episodic Depth to Groundwater Measurements All DTWs on SAR-3 must be collected within 24 hours.

Plant: HEN

Event: HEN-24Q1 Rev 0

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
02	HEN_02	1/22/24	1222	\$144.93	DTB:51.13	AB
04R	HEN_04R	1/22/24	11/2	39.39	DTB:45.43	AR
05DR	HEN_05&DR	1/22/24		41.26	DTB: 71.29	AP
05R	HEN_05!R	1/22/24	1147	4.17	DTB: 48,79	AR
06	HEN_06	1/22/24	1002	22.54	DIB: 33.8	AR
10	HEN_10	1/22/24	1023	50.72	MB: 51.45	AR
11	HEN_11	1/22/24	1025	50.95	DTB: 69.5	AF
.5	HEN_15	1/22/24	1107	49.73	DTB:52.81	AR
9D	HEN_19&D	1/22/24	1125	40.03	PTB: 65.44	AB
95	HEN_19#S	1/22/24	1126	40.17	DTB:42.57	AB
5	HEN_25	1/22/24	1527	15.62	1. 16	AB
5	HEN_26	1/22/24	1529	15.67		AB
	HEN_30	1/22/24	1544	4.25	DTB: 21.30	AB
	HEN_31	1/22/24	1543	6.17	10.03:DTB	AB
- 1	HEN_33	1/22/24	1606	3.71	DTB: 38.16	AB
H	HEN_36	1/22/24	1430	15.70	DTB:28.85	AB
5 H	HEN_40#S	1/22/24	1133	11 - 0	MB: 42.37	AB
Н	IEN_45#S		1015		DTB:38.52	AR
	EN_48	1/22/24	1137		DTB: 45.13	AB
	EN_XPW01_pore		1340	10.51	DTB:19.73	AB
	EN_XPW02_pore	1/22/24	1350	111	H7: 2172	AB
		1/22/24		1 - 6	h+0 20 01	AB
	N_YSG_ILRIVER	122/24	420	1000	From higher elev	AP
111	EN_53	122/24/1	345	_	DTB: 66.72	AF

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads

ALL DTWo on CAR - form may be collected at anytime during the sampling area.

2 Y Gov CS ! !

Flant: HEN

Event: HEN-24Q1 Rev 0

HEN HEN-24Q1 Rev 0

Event:	HEN-24Q1 Rev 0					On-site Tr	ansducer Data				
Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down- loaded?	Batt (H/M/L)	Comments	Initials
3R	HEN_03R	1/22/24	1212	3496	21615140	V	447.38	1	#	DTB: 46.93	AB
7	HEN_07		0720	1878	21615139	V	449.61	7	14	100	AB
8	HEN_08	1/22/24	1245	53.82	21615138	Y	447.54	1	H	DIB:	AR
8D	HEN_08&D	1/22/24		54.2	21615598	4	44721	7	H	MB: 84.13	AB
2	HEN_12	1/22/24		5134	21615520	Y	447.44	4	H	DTB:51.35	AR
	HEN_13	422/24	1049	51.36	21615515	4	447.44	Y	H	DLB:11-01	Aif
5	HEN_16	422424	1315	54.38	21615534	Y	447.15	Y	H	DTB: 60.82	-
	HEN_17	1/22/24		58.98	21615500	1	448.39	4	H	DTB:61.70	A
BD	HEN 18&D	1/22/24	1154	40.57	21615609	4	447.41	Y	#	DTB: 72.47	AR
s	HEN_18#S	-1	IISU	40.42	21615482	V	447.38	4	H	DTB:42.87	AR
R	HEN_21R		1440	15.48	21615613	V	444.92	4	H	DTB:45.03	A
	HEN_22	1 1	1505	17.95	21615497	V	446.82	Y	4	DTB: 27.39	A
	HEN 22&D	111	1502	18.79	21564134	Y	446.92	4	H	DTB:53.45	A
	HEN_23		1450	1448	21615600	1	447.08	1	#	DIB:35.34	+ A
	HEN_27	1/22/24	- 1	3.82	21615576	i	446.98	V	H	DTB: 29.15	A
	HEN_32		1550	4.64	21615487	V	447.08	V	H	DTB: 13.25	
	HEN_34		1633	4.09	21615509	Y	445.9	J	H	DTB: 30.23	-
	HEN_35		1535	7.97	21615510	9	447.05	y	H	DTB: 16.03	A
	IEN 46	1.0		51.58	21615491	V	446.75	y	H	OTB:593	_
	EN_47			55.84	21615505	V	当750	J	#	DTB:57.4	
	EN_49		455	21.33	21629307	V	447.08	VI	H		-
		1/22/24 1		17.54	21615489	1	446.69		H	DTB: 38.50	_
	EN_50	1/22/24 /		18.04	21615608	V	111 - 4	Y	1	DTB: 22.	
	EN_51	Transmission in		53.98	21615145	V	447.08	1	17	OTB:58.25	
	N_52 N_54	-1		53.92	21615143	7	447.24	14	1	DTB: 4121	P
7	N_55			51.55	21615612	V	447.18	1	#	DTB: 48.29	
	N_XSG01	THE RESERVE THE PERSON NAMED IN		10.1	21768087	-	447.24	17	H	DIB: 93.11	P
	N_YSG_ILRIVER	122/24 14		22.97	21768088	1	463.63	1	#	NO DTB	F
11121	SO_ILMIVER	1-1-1	100	<b>ことい</b>	21708088	4	11.25	4	#	NO DTB	1

U: 12/19/23 JRK

## **ANALYTICAL REPORT**

#### PREPARED FOR

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

Generated 08/26/24 15:53:43

### **JOB DESCRIPTION**

HEN-24Q3 HEN\_257\_801

#### **JOB NUMBER**

500-253560-3

Eurofins Chicago 2417 Bond Street University Park IL 60484



#### ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

## **Eurofins Chicago**

HEN-257-801

## **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 08/26/24 15:53:43

Authorized for release by Dirk Nelson, Project Management Assistant II Dirk.Nelson@et.eurofinsus.com (708)534-5200

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN PONCERADANIOLANDEFIDE253560-3
HSDC:5746NI\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q3

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Client: Vistra Energy Corp Project: HEN-24Q3

Job ID: 500-253560-3 **Eurofins Chicago** 

> Job Narrative 500-253560-3

### Receipt

The samples were received on 07/16/24 13:05. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 18 coolers at receipt time were -0.2° C, 0.8° C, 0.9° C, 0.9° C, 0.9° C, 1.6° C, 1.7° C, 3.1° C, 4.0° C, 4.2° C, 5.7° C, 5.7° C, 5.9° C, 9.1° C, 11.3° C, 11.8° C, 11.8° C and 12.7° C.

#### Receipt Exceptions

The following samples from the July sampling event were received at the laboratory outside the required temperature criteria: HEN\_17 (500-253560-24), HEN\_21R (500-253560-25), HEN\_21R\_MS (500-253560-25[MS]), HEN\_21R\_MSD (500-253560-25[MSD]), HEN\_22 (500-253560-26), HEN\_22&D (500-253560-27), HEN\_27 (500-253560-28), HEN\_32 (500-253560-29), HEN\_34 (500-253560-30), HEN\_35 (500-253560-31), HEN\_35\_FD (500-253560-32), HEN\_46 (500-253560-33), HEN\_47 (500-253560-34), HEN\_49 (500-253560-35), HEN\_49\_MS (500-253560-35[MS]), HEN\_49\_MSD (500-253560-35[MSD]), HEN\_50 (500-253560-36), HEN\_52 (500-253560-37), HEN\_54 (500-253560-38) and HEN\_54\_FD (500-253560-39). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to cancel analysis, pending resamping.

Affected samples were recollected on 08/06/24 and added to the existing login to report together.

Method Field Sampling: Field Conductivity for the following samples was recorded on the field forms in ms (mmhos) instead of the usual us (umhos). Results have been converted to umhos to maintain consistency in reporting. HEN\_07 (500-253560-1), HEN\_08&D (500-253560-10), HEN\_40#S (500-253560-16) and HEN\_17 (500-253560-24)

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

#### **General Chemistry**

Method SM 2320B: The method blank for analytical batch 500-779286 contained Alkalinity above the reporting limit (RL). Associated sample(s) were not re-analyzed because results were greater than 10X the value found in the method blank.

Method SM 2320B: The method blank for analytical batch 500-781135 contained Alkalinity and Bicarbonate Alkalinity as CaCO3 above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 300.0: The method blank for analytical batch 500-779304 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The method blank for analytical batch 500-780474 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

**Eurofins Chicago** 

Jan 1257500-253560-3 SDG: HEN\_257\_801

Client Sample ID: HEN\_07

Client: Vistra Energy Corp Project/Site: HEN-24Q3

## Lab Sample ID: 500-253560-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.093	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	170		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	63		0.20	0.049	mg/L	1		6020B	Total
					<b>.</b>				Recoverable
Potassium	3.8		0.50	0.11	mg/L	1		6020B	Total
Ca dissar	77		0.00	0.077	/I	4		COOOD	Recoverable
Sodium	77		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	170	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	63		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	400		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	0.12		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	67.77				ft	1		Field Sampling	Total/NA
Field pH	6.65				SU	1		Field Sampling	Total/NA
Field Temperature	16.4				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	192.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	6.82				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1662				umhos/cm	1		Field Sampling	Total/NA
Turbidity	2.66				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_05&DR

## Lab Sample ID: 500-253560-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.78	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	83		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	32		0.20	0.049	mg/L	1		6020B	Total
D-1:			0.50					COOOD	Recoverable
Potassium	6.7		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	46		0.20	0.077	ma/l	1		6020B	Total
Codium	40		0.20	0.011	mg/L	'		00200	Recoverable
Chloride	77	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	130		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	240	В	5.0			1		SM 2320B	Total/NA
Total Dissolved Solids	560		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.16		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	41.11				ft	1		Field Sampling	Total/NA
Field pH	7.41				SU	1		Field Sampling	Total/NA
Field Temperature	19.9				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	156.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.76				mg/L	1		Field Sampling	Total/NA
Specific Conductance	913				umhos/cm	1		Field Sampling	Total/NA
Turbidity	7.82				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_05!R

## Lab Sample ID: 500-253560-8

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D Method	Prep Type
Boron	0.65 B	0.050	0.013 mg/L	1 6020B	Total
					Recoverable

This Detection Summary does not include radiochemical test results.

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## Client Sample ID: HEN\_05!R (Continued)

Client: Vistra Energy Corp Project/Site: HEN-24Q3

## Lab Sample ID: 500-253560-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	84		0.20	0.044	mg/L	1	_	6020B	Total
									Recoverable
Magnesium	33		0.20	0.049	mg/L	1		6020B	Total
									Recoverable
Potassium	8.8		0.50	0.11	mg/L	1		6020B	Total
0	00		0.00	0.077				00000	Recoverable
Sodium	83		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	81	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	73		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	220	В	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	500		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.14		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	41.11				ft	1		Field Sampling	Total/NA
Field pH	7.63				SU	1		Field Sampling	Total/NA
Field Temperature	20.4				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	158.5				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.60				mg/L	1		Field Sampling	Total/NA
Specific Conductance	917				umhos/cm	1		Field Sampling	Total/NA
Turbidity	3.35				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN 08

## Lab Sample ID: 500-253560-9

onent oumple ib. HEN_00						Lub ou	inpic ib. ooc	200000
- Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	O Method	Prep Type
Boron	0.099	В	0.050	0.013	mg/L	1	6020B	Total
								Recoverable
Calcium	180		0.20	0.044	mg/L	1	6020B	Total
								Recoverable
Magnesium	50		0.20	0.049	mg/L	1	6020B	Total
	<u>-</u> - <u>-</u> -							Recoverable
Potassium	7.7		0.50	0.11	mg/L	1	6020B	Total
Sodium	58		0.20	0.077	ma/l	1	6020B	Recoverable Total
Sodium	30		0.20	0.011	mg/L	Į.	00200	Recoverable
Chloride	150	В	10	1.2	mg/L	10	300.0	Total/NA
Sulfate	110		10		mg/L	10	300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	480	В	5.0	3.7	-	1	SM 2320B	Total/NA
Total Dissolved Solids	870		10	4.3	mg/L	1	SM 2540C	Total/NA
Fluoride	0.11		0.10	0.056	mg/L	1	SM 4500 F C	Total/NA
Depth to Water (ft from MP)	53.62				ft	1	Field Sampling	Total/NA
Field pH	6.65				SU	1	Field Sampling	Total/NA
Field Temperature	18.1				Degrees C	1	Field Sampling	Total/NA
Oxidation Reduction Potential	189.4				millivolts	1	Field Sampling	Total/NA
Oxygen, Dissolved	2.21				mg/L	1	Field Sampling	Total/NA
Specific Conductance	1597				umhos/cm	1	Field Sampling	Total/NA
Turbidity	1.78				NTU	1	Field Sampling	Total/NA

## Client Sample ID: HEN\_08&D

## Lab Sample ID: 500-253560-10

Analyte Boron	0.10	<b>Qualifier</b> B		<b>MDL</b> 0.013		Dil Fac	<u>D</u>	Method 6020B	Prep Type  Total
Calcium	190		0.20	0.044	mg/L	1		6020B	Recoverable Total Recoverable

This Detection Summary does not include radiochemical test results.

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**Eurofins Chicago** 

Client: Vistra Energy Corp Project/Site: HEN-24Q3

## Client Sample ID: HEN\_08&D (Continued)

## Lab Sample ID: 500-253560-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	57		0.20	0.049	mg/L	1	_	6020B	Total
									Recoverable
Potassium	4.0		0.50	0.11	mg/L	1		6020B	Total
									Recoverable
Sodium	160		0.20	0.077	mg/L	1		6020B	Total
									Recoverable
Chloride	300	В	10	1.2	mg/L	10		300.0	Total/NA
Sulfate	170		10	2.1	mg/L	10		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	490	В	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	0.11		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.09				ft	1		Field Sampling	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA
Field Temperature	15.4				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	195.6				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.28				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1824				umhos/cm	1		Field Sampling	Total/NA
Turbidity	4.41				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_16

## Lab Sample ID: 500-253560-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.18	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	73		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	27		0.20	0.049	mg/L	1		6020B	Total
,,									Recoverable
Potassium	4.5		0.50	0.11	mg/L	1		6020B	Total
Sodium	43		0.20	0.077	ma ar /1	1		6020B	Recoverable Total
Sodium	43		0.20	0.077	mg/L	ı		0020B	Recoverable
Chloride	70	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	59		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	220	В	5.0			1		SM 2320B	Total/NA
Total Dissolved Solids	450		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.27		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.22				ft	1		Field Sampling	Total/NA
Field pH	7.27				SU	1		Field Sampling	Total/NA
Field Temperature	22.1				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	192.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.48				mg/L	1		Field Sampling	Total/NA
Specific Conductance	823				umhos/cm	1		Field Sampling	Total/NA
Turbidity	1.12				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_16\_FD

## Lab Sample ID: 500-253560-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.18	В	0.050	0.013	mg/L		_	6020B	Total
									Recoverable
Calcium	74		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	27		0.20	0.049	mg/L	1		6020B	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

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**Eurofins Chicago** 

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Jan 1257500-253560-3 SDG: HEN\_257\_801

## Client Sample ID: HEN\_16\_FD (Continued)

## Lab Sample ID: 500-253560-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	4.6		0.50	0.11	mg/L	1	_	6020B	Total
									Recoverable
Sodium	40		0.20	0.077	mg/L	1		6020B	Total
									Recoverable
Chloride	70	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	58		5.0	1.0	mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	220	В	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	430		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.27		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	54.22				ft	1		Field Sampling	Total/NA
Field pH	7.27				SU	1		Field Sampling	Total/NA
Field Temperature	22.1				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	192.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.48				mg/L	1		Field Sampling	Total/NA
Specific Conductance	823				umhos/cm	1		Field Sampling	Total/NA
Turbidity	1.12				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_40#S

## Lab Sample ID: 500-253560-16

- Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.3	В	0.25	0.064	mg/L	5	_	6020B	Total
									Recoverable
Calcium	71		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	33		0.20	0.049	mg/L	1		6020B	Total
									Recoverable
Potassium	7.4		0.50	0.11	mg/L	1		6020B	Total
Q. Farm	47		0.00	0.077				00000	Recoverable
Sodium	47		0.20	0.077	mg/L	1		6020B	Total Recoverable
Chloride	74	D	10	1 2	mg/L	10		300.0	Total/NA
Sulfate	120		10			10		300.0	Total/NA
		_			mg/L	10			
Bicarbonate Alkalinity as CaCO3	190	В	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	550		10		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)	40.38				ft	1		Field Sampling	Total/NA
Field pH	7.83				SU	1		Field Sampling	Total/NA
Field Temperature	17.8				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	118.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18				mg/L	1		Field Sampling	Total/NA
Specific Conductance	714				umhos/cm	1		Field Sampling	Total/NA
Turbidity	8.56				NTU	1		Field Sampling	Total/NA

## Client Sample ID: HEN\_48R

## Lab Sample ID: 500-253560-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2	В	0.25	0.064	mg/L	5	_	6020B	Total
									Recoverable
Calcium	83		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	32		0.20	0.049	mg/L	1		6020B	Total
									Recoverable
Potassium	6.4		0.50	0.11	mg/L	1		6020B	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

**Eurofins Chicago** 

08/26/24

Jan 1257500-253560-3 SDG: HEN\_257\_801

Client Sample ID: HEN\_48R (Continued)

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Lab Sample ID: 500-253560-20

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		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	190	В	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	0.20		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	40.53				ft	1		Field Sampling	Total/NA
Field pH	7.69				SU	1		Field Sampling	Total/NA
Field Temperature	18.6				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	109.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18				mg/L	1		Field Sampling	Total/NA
Specific Conductance	910				umhos/cm	1		Field Sampling	Total/NA
Turbidity	8.56				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN\_17

Lab Sample ID: 500-253560-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.11	В	0.050	0.013	mg/L	1	_	6020B	Total
									Recoverable
Calcium	65		0.20	0.044	mg/L	1		6020B	Total
									Recoverable
Magnesium	26		0.20	0.049	mg/L	1		6020B	Total
Defending			0.50					COOOD	Recoverable
Potassium	4.3		0.50	0.11	mg/L	1		6020B	Total Recoverable
Sodium	47		0.20	0.077	ma/l	1		6020B	Total
Codium	77		0.20	0.011	mg/L			00200	Recoverable
Chloride	68	В	5.0	0.58	mg/L	5		300.0	Total/NA
Sulfate	55		5.0		mg/L	5		300.0	Total/NA
Bicarbonate Alkalinity as CaCO3	200	В	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	400		10	4.3	mg/L	1		SM 2540C	Total/NA
Fluoride	0.27		0.10	0.056	mg/L	1		SM 4500 F C	Total/NA
Depth to Water (ft from MP)	56.12				ft	1		Field Sampling	Total/NA
Field pH	7.24				SU	1		Field Sampling	Total/NA
Field Temperature	23.0				Degrees C	1		Field Sampling	Total/NA
Oxidation Reduction Potential	88.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	6.79				mg/L	1		Field Sampling	Total/NA
Specific Conductance	789				umhos/cm	1		Field Sampling	Total/NA
Turbidity	1.43				NTU	1		Field Sampling	Total/NA

Client Sample ID: HEN\_YSG\_ILRIVER

Lab Sample ID: 500-253560-49

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac	D Method	Prep Type
Depth to Water (ft from MP)	5.25		ft		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

## APPENDIX A. AMETHOR SOLVETTER AND ITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOEN 12:500-253560-3

SDG: H

D8W-23330U-3	
HEN_257_801	

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI

#### **Protocol References:**

Client: Vistra Energy Corp Project/Site: HEN-24Q3

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

# APPENDIX A. ASTAM FRO SOUTHFRAM ITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL JOHN 12:500-253560-3 SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-253560-1	HEN_07	Water	07/15/24 15:20	07/16/24 13:05
500-253560-7	HEN_05&DR	Water	07/16/24 12:15	07/17/24 09:40
500-253560-8	HEN_05!R	Water	07/16/24 11:20	07/17/24 09:40
500-253560-9	HEN_08	Water	07/16/24 14:00	07/17/24 09:40
500-253560-10	HEN_08&D	Water	07/16/24 15:46	07/17/24 09:40
500-253560-12	HEN_16	Water	07/16/24 15:30	07/17/24 09:40
500-253560-13	HEN_16_FD	Water	07/16/24 15:40	07/17/24 09:40
500-253560-16	HEN_40#S	Water	07/16/24 14:43	07/17/24 09:40
500-253560-20	HEN_48R	Water	07/18/24 09:05	07/18/24 13:00
500-253560-24	HEN_17	Water	08/06/24 09:10	08/07/24 09:05
500-253560-49	HEN YSG ILRIVER	Water	07/15/24 12:30	07/16/24 13:05

SDG: HEN\_257\_801

Client Sample ID: HEN\_07

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Date Collected: 07/15/24 15:20 Date Received: 07/16/24 13:05

Lab Sample ID: 500-253560-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.093	В	0.050	0.013	mg/L		07/22/24 15:20	07/23/24 13:32	1
Calcium	170		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 14:33	1
Magnesium	63		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 14:33	1
Potassium	3.8		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 14:33	1
Sodium	77		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 13:32	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	170	В	5.0	0.58	mg/L			07/31/24 21:24	5
Sulfate (EPA 300.0)	63		5.0	1.0	mg/L			07/31/24 21:24	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	400		5.0	3.7	mg/L			07/19/24 19:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/19/24 19:51	1
Total Dissolved Solids (SM 2540C)	1100		10	4.3	mg/L			07/18/24 00:54	1
Fluoride (SM 4500 F C)	0.12		0.10	0.056	mg/L			08/08/24 14:33	1
Method: EPA Field Sampling - Fi	ield Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	67.77				ft			07/15/24 15:20	1
Field pH	6.65				SU			07/15/24 15:20	1
Field Temperature	16.4				Degrees C			07/15/24 15:20	1
Oxidation Reduction Potential	192.1				millivolts			07/15/24 15:20	1
Oxygen, Dissolved	6.82				mg/L			07/15/24 15:20	1
Specific Conductance	1662				umhos/cm			07/15/24 15:20	1
Turbidity	2.66				NTU			07/15/24 15:20	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_05&DR

Date Collected: 07/16/24 12:15 Date Received: 07/17/24 09:40

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Lab Sample ID: 500-253560-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.78	В	0.050	0.013	mg/L		07/22/24 15:20	07/23/24 13:56	1
Calcium	83		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 14:58	1
Magnesium	32		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 14:58	1
Potassium	6.7		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 14:58	1
Sodium	46		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 13:56	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	77	В	5.0	0.58	mg/L			08/01/24 02:52	5
Sulfate (EPA 300.0)	130		5.0	1.0	mg/L			08/01/24 02:52	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	240	В	5.0	3.7	mg/L			07/30/24 17:58	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 17:58	1
Total Dissolved Solids (SM 2540C)	560		10	4.3	mg/L			07/22/24 21:01	1
Fluoride (SM 4500 F C)	0.16		0.10	0.056	mg/L			07/23/24 14:11	1
Method: EPA Field Sampling - Fi	eld Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	41.11				ft			07/16/24 12:15	1
Field pH	7.41				SU			07/16/24 12:15	1
Field Temperature	19.9				Degrees C			07/16/24 12:15	1
Oxidation Reduction Potential	156.1				millivolts			07/16/24 12:15	1
Oxygen, Dissolved	0.76				mg/L			07/16/24 12:15	1
Specific Conductance	913				umhos/cm			07/16/24 12:15	1
Turbidity	7.82				NTU			07/16/24 12:15	1

Client Sample ID: HEN\_05!R

Date Collected: 07/16/24 11:20 Date Received: 07/17/24 09:40 Lab Sample ID: 500-253560-8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.65	В	0.050	0.013	mg/L		07/22/24 15:20	07/23/24 13:59	1
Calcium	84		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:00	1
Magnesium	33		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:00	1
Potassium	8.8		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:00	1
Sodium	83		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 13:59	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	81	В	5.0	0.58	mg/L			08/01/24 03:24	5
Sulfate (EPA 300.0)	73		5.0	1.0	mg/L			08/01/24 03:24	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	220	В	5.0	3.7	mg/L			07/30/24 18:07	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 18:07	1
Total Dissolved Solids (SM 2540C)	500		10	4.3	mg/L			07/22/24 21:03	1
Fluoride (SM 4500 F C)	0.14		0.10	0.056	mg/L			07/23/24 14:15	1
Method: EPA Field Sampling - F	ield Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	41.11				ft			07/16/24 11:20	1
Field pH	7.63				SU			07/16/24 11:20	1
Field Temperature	20.4				Degrees C			07/16/24 11:20	1
Oxidation Reduction Potential	158.5				millivolts			07/16/24 11:20	1
Oxygen, Dissolved	0.60				mg/L			07/16/24 11:20	1
Specific Conductance	917				umhos/cm			07/16/24 11:20	1
Turbidity	3.35				NTU			07/16/24 11:20	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_08

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Date Collected: 07/16/24 14:00 Date Received: 07/17/24 09:40

Lab Sample ID: 500-253560-9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.099	В	0.050	0.013	mg/L		07/22/24 15:20	07/25/24 11:01	1
Calcium	180		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:02	1
Magnesium	50		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:02	1
Potassium	7.7		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:02	1
Sodium	58		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:06	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	150	В	10	1.2	mg/L			08/01/24 03:55	10
Sulfate (EPA 300.0)	110		10	2.1	mg/L			08/01/24 03:55	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	480	В	5.0	3.7	mg/L			07/30/24 18:16	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 18:16	1
Total Dissolved Solids (SM 2540C)	870		10	4.3	mg/L			07/22/24 21:06	1
Fluoride (SM 4500 F C)	0.11		0.10	0.056	mg/L			07/23/24 14:30	1
Method: EPA Field Sampling - Fi	ield Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	53.62				ft			07/16/24 14:00	1
Field pH	6.65				SU			07/16/24 14:00	1
Field Temperature	18.1				Degrees C			07/16/24 14:00	1
Oxidation Reduction Potential	189.4				millivolts			07/16/24 14:00	1
Oxygen, Dissolved	2.21				mg/L			07/16/24 14:00	1
Specific Conductance	1597				umhos/cm			07/16/24 14:00	1
Turbidity	1.78				NTU			07/16/24 14:00	1

SDG: HEN\_257\_801

Project/Site: HEN-24Q3 Client Sample ID: HEN\_08&D

Date Collected: 07/16/24 15:46 Date Received: 07/17/24 09:40

Client: Vistra Energy Corp

Lab Sample ID: 500-253560-10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.10	В	0.050	0.013	mg/L		07/22/24 15:20	07/25/24 11:03	1
Calcium	190		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:05	1
Magnesium	57		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:05	1
Potassium	4.0		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:05	1
Sodium	160		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:08	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	300	В	10	1.2	mg/L			08/01/24 04:26	10
Sulfate (EPA 300.0)	170		10	2.1	mg/L			08/01/24 04:26	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	490	В	5.0	3.7	mg/L			07/30/24 18:26	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 18:26	1
Total Dissolved Solids (SM 2540C)	1300		10	4.3	mg/L			07/22/24 21:08	1
Fluoride (SM 4500 F C)	0.11		0.10	0.056	mg/L			07/23/24 14:34	1
Method: EPA Field Sampling - Fi	ield Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.09				ft			07/16/24 15:46	1
Field pH	6.69				SU			07/16/24 15:46	1
Field Temperature	15.4				Degrees C			07/16/24 15:46	1
Oxidation Reduction Potential	195.6				millivolts			07/16/24 15:46	1
Oxygen, Dissolved	0.28				mg/L			07/16/24 15:46	1
Specific Conductance	1824				umhos/cm			07/16/24 15:46	1
Turbidity	4.41				NTU			07/16/24 15:46	1

Client: Vistra Energy Corp Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Lab Sample ID: 500-253560-12 Date Collected: 07/16/24 15:30 **Matrix: Water** Date Received: 07/17/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.18	В	0.050	0.013	mg/L		07/22/24 15:20	07/25/24 11:05	1
Calcium	73		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:11	1
Magnesium 27			0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:11	1
Potassium	4.5		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:11	1
Sodium	43		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	70	В	5.0	0.58	mg/L			08/01/24 05:44	5
Sulfate (EPA 300.0) 59			5.0	1.0	mg/L			08/01/24 05:44	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B) 22		В	5.0	3.7	mg/L			07/30/24 18:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 18:46	1
Total Dissolved Solids (SM 2540C)	450		10	4.3	mg/L			07/22/24 21:14	1
Fluoride (SM 4500 F C)	0.27		0.10	0.056	mg/L			07/23/24 14:44	1
Method: EPA Field Sampling - Fi	ield Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.22				ft			07/16/24 15:30	1
Field pH	7.27				SU			07/16/24 15:30	1
Field Temperature	22.1				Degrees C			07/16/24 15:30	1
Oxidation Reduction Potential	192.9				millivolts			07/16/24 15:30	1
Oxygen, Dissolved	0.48				mg/L			07/16/24 15:30	1
Specific Conductance	823				umhos/cm			07/16/24 15:30	1
Turbidity	1.12				NTU			07/16/24 15:30	1

08/26/24

Client: Vistra Energy Corp Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Client Sample ID: HEN\_16\_FD

Lab Sample ID: 500-253560-13 Date Collected: 07/16/24 15:40 Date Received: 07/17/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.18	В	0.050	0.013	mg/L		07/22/24 15:20	07/25/24 11:07	1
Calcium	74		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:14	1
Magnesium	27		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:14	1
Potassium	4.6		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:14	1
Sodium	40		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:12	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	70	В	5.0	0.58	mg/L			08/01/24 06:00	5
Sulfate (EPA 300.0)	<b>58</b>		5.0	1.0	mg/L			08/01/24 06:00	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	220	В	5.0	3.7	mg/L			07/30/24 19:13	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 19:13	1
Total Dissolved Solids (SM 2540C)	430		10	4.3	mg/L			07/22/24 21:16	1
Fluoride (SM 4500 F C)	0.27		0.10	0.056	mg/L			07/23/24 14:59	1
Method: EPA Field Sampling - F	ield Sam	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	54.22				ft			07/16/24 15:40	1
Field pH	7.27				SU			07/16/24 15:40	1
Field Temperature	22.1				Degrees C			07/16/24 15:40	1
Oxidation Reduction Potential	192.9				millivolts			07/16/24 15:40	1
Oxygen, Dissolved	0.48				mg/L			07/16/24 15:40	1
Specific Conductance	823				umhos/cm			07/16/24 15:40	1
Turbidity	1.12				NTU			07/16/24 15:40	1

Client: Vistra Energy Corp Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Client Sample ID: HEN\_40#S

Date Received: 07/17/24 09:40

Lab Sample ID: 500-253560-16 Date Collected: 07/16/24 14:43

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.3	В	0.25	0.064	mg/L		07/22/24 15:20	07/25/24 11:14	5
Calcium	71		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:20	1
Magnesium	33		0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:20	1
Potassium	7.4		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:20	1
Sodium	47		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:19	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	74	В	10	1.2	mg/L			08/01/24 07:18	10
Sulfate (EPA 300.0)	120		10	2.1	mg/L			08/01/24 07:18	10
Bicarbonate Alkalinity as CaCO3 (SM 2320B)		В	5.0	3.7	mg/L			07/30/24 19:45	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			07/30/24 19:45	1
Total Dissolved Solids (SM 2540C)	550		10	4.3	mg/L			07/22/24 21:24	1
Fluoride (SM 4500 F C)	0.18		0.10	0.056	mg/L			07/23/24 15:13	1
Method: EPA Field Sampling - Fi	ield Samp	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	40.38				ft			07/16/24 14:43	1
Field pH	7.83				SU			07/16/24 14:43	1
Field Temperature	17.8				Degrees C			07/16/24 14:43	1
Oxidation Reduction Potential	118.1				millivolts			07/16/24 14:43	1
Oxygen, Dissolved	0.18				mg/L			07/16/24 14:43	1
Specific Conductance	714				umhos/cm			07/16/24 14:43	1
Turbidity	8.56				NTU			07/16/24 14:43	1

SDG: HEN\_257\_801

Client Sample ID: HEN\_48R

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Date Collected: 07/18/24 09:05 Date Received: 07/18/24 13:00

Lab Sample ID: 500-253560-20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2	В	0.25	0.064	mg/L		07/22/24 15:20	07/25/24 11:20	5
Calcium	83		0.20	0.044	mg/L		07/22/24 15:20	07/24/24 15:44	1
Magnesium			0.20	0.049	mg/L		07/22/24 15:20	07/24/24 15:44	1
Potassium	6.4		0.50	0.11	mg/L		07/22/24 15:20	07/24/24 15:44	1
Sodium	49		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 14:33	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	75		10	1.2	mg/L			08/01/24 11:28	10
Sulfate (EPA 300.0) 130			10	2.1	mg/L			08/01/24 11:28	10
Bicarbonate Alkalinity as CaCO3 190 (SM 2320B)		В	5.0	3.7	mg/L			07/30/24 20:12	1
Carbonate Alkalinity as CaCO3 (SM <5. 2320B)			5.0	3.7	mg/L			07/30/24 20:12	1
Total Dissolved Solids (SM 2540C)	540		10	4.3	mg/L			07/23/24 23:06	1
Fluoride (SM 4500 F C)	0.20		0.10	0.056	mg/L			07/23/24 15:26	1
Method: EPA Field Sampling - Fi	ield Samı	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	40.53				ft			07/18/24 09:05	1
Field pH	7.69				SU			07/18/24 09:05	1
Field Temperature 18.6					Degrees C			07/18/24 09:05	1
Oxidation Reduction Potential 109.1					millivolts			07/18/24 09:05	1
Oxygen, Dissolved	0.18				mg/L			07/18/24 09:05	1
Specific Conductance	910				umhos/cm			07/18/24 09:05	1
Turbidity	8.56				NTU			07/18/24 09:05	1

## APPENDIX A. CHEHIL SAHIPIE RESONTS RING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

mg/L

NTU

umhos/cm

John 1257500-253560-3 Client: Vistra Energy Corp Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Client Sample ID: HEN\_17 Lab Sample ID: 500-253560-24 Date Collected: 08/06/24 09:10

**Matrix: Water** 

08/06/24 09:10

08/06/24 09:10

08/06/24 09:10

Date	Conected.	00/00/24	09.10
Date	Received:	08/07/24	09:05

Oxygen, Dissolved

**Turbidity** 

**Specific Conductance** 

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

6.79

789

1.43

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.11	В	0.050	0.013	mg/L		08/08/24 09:16	08/12/24 14:21	1
Calcium	65		0.20	0.044	mg/L		08/08/24 09:16	08/09/24 18:13	1
Magnesium	26		0.20	0.049	mg/L		08/08/24 09:16	08/09/24 18:13	1
Potassium	4.3		0.50	0.11	mg/L		08/08/24 09:16	08/09/24 18:13	1
Sodium	47		0.20	0.077	mg/L		08/08/24 09:16	08/09/24 18:13	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	68	В	5.0	0.58	mg/L			08/08/24 14:15	5
Sulfate (EPA 300.0)	55		5.0	1.0	mg/L			08/08/24 14:15	5
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	200	В	5.0	3.7	mg/L			08/12/24 17:52	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<5.0		5.0	3.7	mg/L			08/12/24 17:52	1
Total Dissolved Solids (SM 2540C)	400		10	4.3	mg/L			08/07/24 23:03	1
Fluoride (SM 4500 F C)	0.27		0.10	0.056	mg/L			08/15/24 14:15	1
	ield Samı	oling							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Depth to Water (ft from MP)	56.12				ft			08/06/24 09:10	1
Field pH	7.24				SU			08/06/24 09:10	1
Field Temperature	23.0				Degrees C			08/06/24 09:10	1
Oxidation Reduction Potential	88.7				millivolts			08/06/24 09:10	1

08/26/24

Client: Vistra Energy Corp Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Client Sample ID: HEN\_YSG\_ILRIVER Lab Sample ID: 500-253560-49

Date Collected: 07/15/24 12:30 **Matrix: Water** Date Received: 07/16/24 13:05

Method: EPA Field Sampling -	Field Samp	ling								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Pre	pared	Analyzed	Dil Fac
Depth to Water (ft from MP)	5.25				ft				07/15/24 12:30	1

## APPENDIX A. DETINITIONS POTOS S'ATYORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

Jato 1257500-253560-3 SDG: HEN\_257\_801

### **Qualifiers**

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

M	۵ta	le
IVI	<del>t</del> la	13

Qualifier	Qualifier Description
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.

В Compound was found in the blank and sample.

F5 Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is <

the upper reporting limits for both.

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

### **General Chemistry**

C	ualifier	Qualifier Description
В		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.

## **Glossary**

Ciossaiy	
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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

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

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

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

**TNTC** Too Numerous To Count

## **Metals**

## **Prep Batch: 777840**

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN_07	Total Recoverable	Water	3005A	
500-253560-7	HEN_05&DR	Total Recoverable	Water	3005A	
500-253560-8	HEN_05!R	Total Recoverable	Water	3005A	
500-253560-9	HEN_08	Total Recoverable	Water	3005A	
500-253560-10	HEN_08&D	Total Recoverable	Water	3005A	
500-253560-12	HEN_16	Total Recoverable	Water	3005A	
500-253560-13	HEN_16_FD	Total Recoverable	Water	3005A	
500-253560-16	HEN_40#S	Total Recoverable	Water	3005A	
500-253560-20	HEN_48R	Total Recoverable	Water	3005A	
MB 500-777840/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-777840/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-253560-1 MS	HEN_07	Total Recoverable	Water	3005A	
500-253560-1 MSD	HEN_07	Total Recoverable	Water	3005A	
500-253560-1 DU	HEN_07	Total Recoverable	Water	3005A	

## **Analysis Batch: 778011**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-7	HEN_05&DR	Total Recoverable	Water	6020B	777840
500-253560-8	HEN_05!R	Total Recoverable	Water	6020B	777840
500-253560-9	HEN_08	Total Recoverable	Water	6020B	777840
500-253560-10	HEN_08&D	Total Recoverable	Water	6020B	777840
500-253560-12	HEN_16	Total Recoverable	Water	6020B	777840
500-253560-13	HEN_16_FD	Total Recoverable	Water	6020B	777840
500-253560-16	HEN_40#S	Total Recoverable	Water	6020B	777840
500-253560-20	HEN_48R	Total Recoverable	Water	6020B	777840
MB 500-777840/1-A	Method Blank	Total Recoverable	Water	6020B	777840
LCS 500-777840/2-A	Lab Control Sample	Total Recoverable	Water	6020B	777840
500-253560-1 MS	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-1 MSD	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-1 DU	HEN_07	Total Recoverable	Water	6020B	777840

### **Analysis Batch: 778290**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-7	HEN_05&DR	Total Recoverable	Water	6020B	777840
500-253560-8	HEN_05!R	Total Recoverable	Water	6020B	777840
500-253560-9	HEN_08	Total Recoverable	Water	6020B	777840
500-253560-10	HEN_08&D	Total Recoverable	Water	6020B	777840
500-253560-12	HEN_16	Total Recoverable	Water	6020B	777840
500-253560-13	HEN_16_FD	Total Recoverable	Water	6020B	777840
500-253560-16	HEN_40#S	Total Recoverable	Water	6020B	777840
500-253560-20	HEN_48R	Total Recoverable	Water	6020B	777840
MB 500-777840/1-A	Method Blank	Total Recoverable	Water	6020B	777840
LCS 500-777840/2-A	Lab Control Sample	Total Recoverable	Water	6020B	777840
500-253560-1 MS	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-1 MSD	HEN_07	Total Recoverable	Water	6020B	777840
500-253560-1 DU	HEN_07	Total Recoverable	Water	6020B	777840

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**Metals** 

**Analysis Batch: 778401** 

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-9	HEN_08	Total Recoverable	Water	6020B	777840
500-253560-10	HEN_08&D	Total Recoverable	Water	6020B	777840
500-253560-12	HEN_16	Total Recoverable	Water	6020B	777840
500-253560-13	HEN_16_FD	Total Recoverable	Water	6020B	777840
500-253560-16	HEN_40#S	Total Recoverable	Water	6020B	777840
500-253560-20	HEN_48R	Total Recoverable	Water	6020B	777840

**Prep Batch: 780445** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-24	HEN_17	Total Recoverable	Water	3005A	
MB 500-780445/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-780445/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 780867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-24	HEN_17	Total Recoverable	Water	6020B	780445
MB 500-780445/1-A	Method Blank	Total Recoverable	Water	6020B	780445
LCS 500-780445/2-A	Lab Control Sample	Total Recoverable	Water	6020B	780445

**Analysis Batch: 781097** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-24	HEN_17	Total Recoverable	Water	6020B	780445
MB 500-780445/1-A	Method Blank	Total Recoverable	Water	6020B	780445
LCS 500-780445/2-A	Lab Control Sample	Total Recoverable	Water	6020B	780445

## **General Chemistry**

**Analysis Batch: 777221** 

Lab Sample ID 500-253560-1	Client Sample ID HEN 07	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
MB 500-777221/1	Method Blank	Total/NA	Water	SM 2540C SM 2540C	
LCS 500-777221/2	Lab Control Sample	Total/NA	Water	SM 2540C	

**Analysis Batch: 777696** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN_07	Total/NA	Water	SM 2320B	
MB 500-777696/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-777696/4	Lab Control Sample	Total/NA	Water	SM 2320B	

**Analysis Batch: 777853** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-7	HEN_05&DR	Total/NA	Water	SM 2540C	
500-253560-8	HEN_05!R	Total/NA	Water	SM 2540C	
500-253560-9	HEN_08	Total/NA	Water	SM 2540C	
500-253560-10	HEN_08&D	Total/NA	Water	SM 2540C	
500-253560-12	HEN_16	Total/NA	Water	SM 2540C	
500-253560-13	HEN_16_FD	Total/NA	Water	SM 2540C	
500-253560-16	HEN_40#S	Total/NA	Water	SM 2540C	
MB 500-777853/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-777853/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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08/26/24

## **General Chemistry**

Project/Site: HEN-24Q3

Client: Vistra Energy Corp

## Analysis Batch: 778056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-20	HEN_48R	Total/NA	Water	SM 2540C	
MB 500-778056/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-778056/2	Lab Control Sample	Total/NA	Water	SM 2540C	

## **Analysis Batch: 778153**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-7	HEN_05&DR	Total/NA	Water	SM 4500 F C	-
500-253560-8	HEN_05!R	Total/NA	Water	SM 4500 F C	
500-253560-9	HEN_08	Total/NA	Water	SM 4500 F C	
500-253560-10	HEN_08&D	Total/NA	Water	SM 4500 F C	
500-253560-12	HEN_16	Total/NA	Water	SM 4500 F C	
500-253560-13	HEN_16_FD	Total/NA	Water	SM 4500 F C	
500-253560-16	HEN_40#S	Total/NA	Water	SM 4500 F C	
500-253560-20	HEN_48R	Total/NA	Water	SM 4500 F C	
MB 500-778153/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-778153/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-778153/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-778153/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

## **Analysis Batch: 779286**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-7	HEN_05&DR	Total/NA	Water	SM 2320B	
500-253560-8	HEN_05!R	Total/NA	Water	SM 2320B	
500-253560-9	HEN_08	Total/NA	Water	SM 2320B	
500-253560-10	HEN_08&D	Total/NA	Water	SM 2320B	
500-253560-12	HEN_16	Total/NA	Water	SM 2320B	
500-253560-13	HEN_16_FD	Total/NA	Water	SM 2320B	
500-253560-16	HEN_40#S	Total/NA	Water	SM 2320B	
500-253560-20	HEN_48R	Total/NA	Water	SM 2320B	
MB 500-779286/28	Method Blank	Total/NA	Water	SM 2320B	
MB 500-779286/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-779286/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 500-779286/4	Lab Control Sample	Total/NA	Water	SM 2320B	

### **Analysis Batch: 779304**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN_07	Total/NA	Water	300.0	<u> </u>
500-253560-7	HEN_05&DR	Total/NA	Water	300.0	
500-253560-8	HEN_05!R	Total/NA	Water	300.0	
500-253560-9	HEN_08	Total/NA	Water	300.0	
500-253560-10	HEN_08&D	Total/NA	Water	300.0	
500-253560-12	HEN_16	Total/NA	Water	300.0	
500-253560-13	HEN_16_FD	Total/NA	Water	300.0	
500-253560-16	HEN_40#S	Total/NA	Water	300.0	
500-253560-20	HEN_48R	Total/NA	Water	300.0	
MB 500-779304/3	Method Blank	Total/NA	Water	300.0	
MB 500-779304/33	Method Blank	Total/NA	Water	300.0	
MB 500-779304/65	Method Blank	Total/NA	Water	300.0	
LCS 500-779304/34	Lab Control Sample	Total/NA	Water	300.0	
LCS 500-779304/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 500-779304/66	Lab Control Sample	Total/NA	Water	300.0	

## **General Chemistry**

Client: Vistra Energy Corp Project/Site: HEN-24Q3

## Analysis Batch: 780360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-24	HEN_17	Total/NA	Water	SM 2540C	
MB 500-780360/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-780360/2	Lab Control Sample	Total/NA	Water	SM 2540C	

## Analysis Batch: 780474

Lab Sample ID 500-253560-24	Client Sample ID HEN_17	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
MB 500-780474/13	Method Blank	Total/NA	Water	300.0	
LCS 500-780474/14	Lab Control Sample	Total/NA	Water	300.0	

### **Analysis Batch: 780660**

<b>Lab Sample ID</b> 500-253560-1	Client Sample ID HEN_07	Prep Type Total/NA	Matrix Water	Method SM 4500 F C	Prep Batch
MB 500-780660/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-780660/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-253560-1 MS	HEN_07	Total/NA	Water	SM 4500 F C	
500-253560-1 MSD	HEN_07	Total/NA	Water	SM 4500 F C	

## **Analysis Batch: 781135**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-24	HEN_17	Total/NA	Water	SM 2320B	
MB 500-781135/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-781135/4	Lab Control Sample	Total/NA	Water	SM 2320B	

## **Analysis Batch: 781815**

Lab Sample ID 500-253560-24	Client Sample ID HEN_17	Prep Type Total/NA	Matrix Water	Method SM 4500 F C	Prep Batch
MB 500-781815/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-781815/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

## Field Service / Mobile Lab

### Analysis Batch: 781194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253560-1	HEN 07	Total/NA	Water	Field Sampling	Prep Batch
	<del>-</del>				
500-253560-7	HEN_05&DR	Total/NA	Water	Field Sampling	
500-253560-8	HEN_05!R	Total/NA	Water	Field Sampling	
500-253560-9	HEN_08	Total/NA	Water	Field Sampling	
500-253560-10	HEN_08&D	Total/NA	Water	Field Sampling	
500-253560-12	HEN_16	Total/NA	Water	Field Sampling	
500-253560-13	HEN_16_FD	Total/NA	Water	Field Sampling	
500-253560-16	HEN_40#S	Total/NA	Water	Field Sampling	
500-253560-20	HEN_48R	Total/NA	Water	Field Sampling	
500-253560-24	HEN_17	Total/NA	Water	Field Sampling	
500-253560-49	HEN_YSG_ILRIVER	Total/NA	Water	Field Sampling	

Jenen 1257500-253560-3 SDG: HEN\_257\_801

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Project/Site: HEN-24Q3 Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-777840/1-A

**Matrix: Water** 

**Analysis Batch: 778011** 

Client: Vistra Energy Corp

Client Sample ID: Method Blank

Client Sample ID: Method Blank

**Prep Type: Total Recoverable** 

**Prep Batch: 777840** 

**Prep Type: Total Recoverable Prep Batch: 777840** 

	14.15	1410							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0490	J	0.050	0.013	mg/L		07/22/24 15:20	07/23/24 13:27	1
Magnesium	<0.20		0.20	0.049	mg/L		07/22/24 15:20	07/23/24 13:27	1
Potassium	<0.50		0.50	0.11	mg/L		07/22/24 15:20	07/23/24 13:27	1
Sodium	<0.20		0.20	0.077	mg/L		07/22/24 15:20	07/23/24 13:27	1

Lab Sample ID: MB 500-777840/1-A

**Matrix: Water** 

**Analysis Batch: 778290** 

MB MB

MR MR

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.20 Calcium <0.20 0.044 mg/L 07/22/24 15:20 07/24/24 14:28

Lab Sample ID: LCS 500-777840/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable Analysis Batch: 778011 Prep Batch: 777840** 

LCS LCS %Rec Spike Added Result Qualifier Unit %Rec Limits Analyte 1.00 0.933 93 80 - 120 Boron mg/L Magnesium 10.0 9.11 mg/L 91 80 - 120 Potassium 10.0 8.77 mg/L 88 80 - 120 9.03 Sodium 10.0 mg/L 90 80 - 120

Lab Sample ID: LCS 500-777840/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable Analysis Batch: 778290 Prep Batch: 777840** 

LCS LCS %Rec Spike

Added Analyte Result Qualifier Limits Unit D %Rec Calcium 10.0 9.47 mg/L 95 80 - 120

Lab Sample ID: 500-253560-1 MS Client Sample ID: HEN\_07 **Matrix: Water Prep Type: Total Recoverable Analysis Batch: 778011 Prep Batch: 777840** 

Sample Sample Spike MS MS %Rec %Rec Analyte Result Qualifier Added Result Qualifier Unit Limits Boron 0.093 1.00 0.929 84 75 - 125 mg/L Sodium 77 10.0 76.8 4 mg/L -5 75 - 125

Lab Sample ID: 500-253560-1 MS Client Sample ID: HEN\_07 **Matrix: Water Prep Type: Total Recoverable** 

**Analysis Batch: 778290** 

**Prep Batch: 777840** Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Limits **Analyte** Unit D %Rec Calcium 170 10.0 165 4 mg/L -57 75 - 125 Magnesium 63 10.0 66.9 4 mg/L 36 75 - 125 3.8 75 - 125 Potassium 10.0 13.0 mg/L 92

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Jenen 1257500-253560-3 SDG: HEN 257 801

Client Sample ID: HEN\_07

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

Lab Sample ID: 500-253560-1 MSD **Matrix: Water** 

**Prep Type: Total Recoverable Analysis Batch: 778011 Prep Batch: 777840** Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Analyte 0.093 B Boron 1.00 1.00 mg/L 91 75 - 125 20 Sodium 77 10.0 81.1 4 mg/L 38 75 - 125 20

Lab Sample ID: 500-253560-1 MSD Client Sample ID: HEN\_07 **Prep Type: Total Recoverable Matrix: Water Prep Batch: 777840** 

**Analysis Batch: 778290** 

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit 75 - 125 Calcium 170 10.0 173 4 mg/L 22 5 20 63 10.0 70.8 4 75 75 - 125 20 Magnesium mg/L 6 Potassium 3.8 10.0 13.8 mg/L 100 75 - 125 6 20

Lab Sample ID: 500-253560-1 DU Client Sample ID: HEN\_07 **Matrix: Water Prep Type: Total Recoverable Analysis Batch: 778011 Prep Batch: 777840** DU DU **RPD** 

Sample Sample Result Qualifier Result Qualifier Unit RPD Limit Analyte D 0.093 B 0.0717 F5 26 20 Boron mg/L Sodium 77 76.1 mg/L 2 20

Lab Sample ID: 500-253560-1 DU Client Sample ID: HEN\_07 **Matrix: Water Prep Type: Total Recoverable** 

**Analysis Batch: 778290** 

Prep Batch: 777840 Sample Sample DU DU **RPD** Result Qualifier Result Qualifier RPD Limit Analyte Unit D Calcium 170 170 0.3 20 mg/L 63 62.8 0.7 20 Magnesium mg/L 3.8 3.78 mg/L 20 Potassium

Lab Sample ID: MB 500-780445/1-A Client Sample ID: Method Blank **Matrix: Water Prep Type: Total Recoverable** 

**Analysis Batch: 780867** 

**Analysis Batch: 781097** 

MB MB **MDL** Unit D Analyte Result Qualifier RL Prepared Analyzed Dil Fac 0.20 Calcium <0.20 0.044 mg/L 08/08/24 09:16 08/09/24 18:08 Magnesium <0.20 0.20 0.049 mg/L 08/08/24 09:16 08/09/24 18:08 Potassium <0.50 0.50 0.11 mg/L 08/08/24 09:16 08/09/24 18:08 Sodium < 0.20 0.20 0.077 mg/L 08/08/24 09:16 08/09/24 18:08

Lab Sample ID: MB 500-780445/1-A Client Sample ID: Method Blank **Prep Type: Total Recoverable Matrix: Water** 

**Prep Batch: 780445** 

MB MB Analyte Result Qualifier RI **MDL** Unit D Prepared Dil Fac Analyzed 0.0226 0.050 0.013 mg/L 08/08/24 09:16 08/12/24 14:16 Boron J

**Eurofins Chicago** 

**Prep Batch: 780445** 

Jan 1257500+253560-3 SDG: HEN\_257\_801

Client: Vistra Energy Corp Project/Site: HEN-24Q3

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

Lab Sample ID: LCS 500-780445/2-A

**Matrix: Water** 

Analysis Batch: 780867

Client Sample ID: Lab Control Sample

**Prep Type: Total Recoverable Prep Batch: 780445** 

Analysis Baton: 100001						1 Top Baton, 100440
	Spike	LCS	LCS			%Rec
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits
Calcium	10.0	8.96		mg/L	90	80 - 120
Magnesium	10.0	10.5		mg/L	105	80 - 120
Potassium	10.0	10.2		mg/L	102	80 - 120
Sodium	10.0	10.4		mg/L	104	80 - 120

Lab Sample ID: LCS 500-780445/2-A

**Matrix: Water** 

**Analysis Batch: 781097** 

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

**Prep Batch: 780445** 

%Rec Spike LCS LCS %Rec Analyte Added Result Qualifier Unit Limits Boron 1.00 1.07 mg/L 107 80 - 120

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779304/3

**Matrix: Water** 

Analysis Batch: 779304

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

MB MB RL **MDL** Unit **Analyte** Result Qualifier D Prepared Analyzed Dil Fac 1.0 07/31/24 16:42 Chloride 0.168 J 0.12 mg/L 1.0 07/31/24 16:42 Sulfate <1.0 0.21 mg/L

Lab Sample ID: MB 500-779304/33

**Matrix: Water** 

**Analysis Batch: 779304** 

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

MB MB Result Qualifier RL **MDL** Unit Dil Fac Analyte Prepared Analyzed Chloride 0.163 J 1.0 0.12 mg/L 08/01/24 00:32 08/01/24 00:32 Sulfate <1.0 1.0 0.21 mg/L

Lab Sample ID: MB 500-779304/65

Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 779304** 

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 1.0 0.12 mg/L <1.0 08/01/24 08:52 Sulfate <1.0 1.0 0.21 mg/L 08/01/24 08:52

Lab Sample ID: LCS 500-779304/34

**Matrix: Water** 

Analysis Batch: 779304

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

Spike LCS LCS %Rec Added **Analyte** Result Qualifier Unit D %Rec Limits Chloride 20.0 20.5 mg/L 103 90 - 110 20.0 Sulfate 21.4 mg/L 107 90 - 110

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**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Type: Total/NA

QCUS amplie WRES MASTORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

Client: Vistra Energy Corp Jan 1257500+253560-3 Project/Site: HEN-24Q3 SDG: HEN\_257\_801

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779304/4

**Matrix: Water** 

Analysis Batch: 779304

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

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 20.0 20.4 mg/L 102 90 - 110 Sulfate 20.0 21.4 mg/L 107 90 - 110

Lab Sample ID: LCS 500-779304/66

**Matrix: Water** 

Prep Type: Total/NA Analysis Batch: 779304 Spike LCS LCS %Rec

Analyte Added Result Qualifier Unit D %Rec Limits Chloride 20.0 20.9 mg/L 104 90 - 110 Sulfate 20.0 21.5 107 mg/L 90 - 110

Lab Sample ID: MB 500-780474/13

**Matrix: Water** 

**Analysis Batch: 780474** 

MB MB RL MDL Unit Analyte Result Qualifier Dil Fac Prepared Analyzed

Chloride 0.172 J 1.0 0.12 mg/L 08/08/24 13:44 Sulfate 1.0 0.21 mg/L 08/08/24 13:44 <10

Lab Sample ID: LCS 500-780474/14

**Matrix: Water** 

**Analysis Batch: 780474** 

	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	20.0	20.5		mg/L		103	90 - 110		_
Sulfate	20.0	21.6		mg/L		108	90 - 110		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-777696/28 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 777696** 

мв мв

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<5.0	5.0	3.7 mg/L		07/19/24 20:43	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	3.7 mg/L		07/19/24 20:43	1

Lab Sample ID: LCS 500-777696/4 **Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Matrix: Water** 

**Analysis Batch: 777696** 

,	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Alkalinity	100	105		mg/L		105	95 - 121

Lab Sample ID: MB 500-779286/28 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 779286** 

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	6.15		5.0	3.7	mg/L			07/30/24 16:38	1

**Eurofins Chicago** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

JAN 12575 00-253560-3

Client: Vistra Energy Corp Project/Site: HEN-24Q3

SDG: HEN\_257\_801

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## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 500-779286/28 **Client Sample ID: Method Blank Prep Type: Total/NA** 

**Matrix: Water** 

Analysis Batch: 779286

MB MB

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3	<5.0	5.0	3.7 mg/L	<del></del>	07/30/24 16:38	1

Lab Sample ID: MB 500-779286/3 Client Sample ID: Method Blank **Prep Type: Total/NA** 

**Matrix: Water** 

**Analysis Batch: 779286** 

MB MB

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	5.15	5.0	3.7	mg/L			07/30/24 10:17	1
Carbonate Alkalinity as CaCO3	<5.0	5.0	3.7	mg/L			07/30/24 10:17	1

Lab Sample ID: LCS 500-779286/29

**Matrix: Water** 

**Analysis Batch: 779286** 

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Alkalinity		100	104		mg/L	_	104	95 - 121	

Lab Sample ID: LCS 500-779286/4 **Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Matrix: Water** 

Analysis Batch: 779286

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Alkalinity	100	109		mg/L		109	95 - 121	

Lab Sample ID: MB 500-781135/3 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 781135

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	5.15		5.0	3.7	mg/L			08/12/24 16:56	1
Carbonate Alkalinity as CaCO3	<5.0		5.0	3.7	mg/L			08/12/24 16:56	1

Lab Sample ID: LCS 500-781135/4 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 781135** 

	Spik	e LCS	LCS			%Rec	
Analyte	Adde	d Result	Qualifier	Unit E	%Rec	Limits	
Alkalinity		0 102		mg/L	102	95 - 121	

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

Lab Sample ID: MB 500-777221/1 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

Analysis Batch: 777221

Alialysis Dalcii. 111221									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	4.3	mg/L			07/18/24 00:21	1

D

%Rec

Prepared

%Rec

Prepared

94

97

Client Sample ID: Lab Control Sample

%Rec

Limits

80 - 120

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

%Rec

Limits

80 - 120

Client Sample ID: Method Blank

Analyzed

07/23/24 22:38

Analyzed

07/22/24 20:43

QCUS AND LEVER UNSTORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL Jan 1257500+253560-3

Unit

mg/L

Unit

mg/L

Client: Vistra Energy Corp Project/Site: HEN-24Q3

Spike

Added

250

Spike

Added

250

RL

10

RL

10

RL

10

LCS LCS

242

Result Qualifier

**MDL** Unit

LCS LCS

234

Result Qualifier

4.3 mg/L

SDG: HEN 257 801

Dil Fac

Dil Fac

Dil Fac

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

10

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

MB MB

MB MB Result Qualifier

<10

<10

Result Qualifier

Lab Sample ID: LCS 500-777221/2 **Matrix: Water** 

**Analysis Batch: 777221** 

Analyte **Total Dissolved Solids** 

Lab Sample ID: MB 500-777853/1 **Matrix: Water** 

Analysis Batch: 777853

**Total Dissolved Solids** Lab Sample ID: LCS 500-777853/2

Analyte

**Matrix: Water Analysis Batch: 777853** 

Analyte

Total Dissolved Solids Lab Sample ID: MB 500-778056/1

**Matrix: Water** 

**Analysis Batch: 778056** 

MB MB Analyte Result Qualifier Total Dissolved Solids <10

Lab Sample ID: LCS 500-778056/2

**Matrix: Water** Analysis Batch: 778056

Analyte Total Dissolved Solids

Lab Sample ID: MB 500-780360/1

**Matrix: Water Analysis Batch: 780360** 

Analyte

Lab Sample ID: LCS 500-780360/2

Total Dissolved Solids

**Matrix: Water Analysis Batch: 780360** 

Analyte

Total Dissolved Solids

Spike

Added

250

250

Spike

Added

Result Qualifier 240

LCS LCS

**MDL** Unit

LCS LCS

246

Result Qualifier

4.3 mg/L

MDL Unit

4.3 mg/L

Unit

mg/L

%Rec 96

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

%Rec

Limits

80 - 120

**Client Sample ID: Lab Control Sample** 

Prepared

Analyzed 08/07/24 22:27

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

%Rec D Limits Unit %Rec mg/L 98 80 - 120

Jan 1257500+253560-3 SDG: HEN 257 801

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: HEN 07

Client Sample ID: HEN\_07

Client Sample ID: Method Blank

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-778153/3

**Matrix: Water** 

**Analysis Batch: 778153** 

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 0.10 07/23/24 12:09 Fluoride < 0.10 0.056 mg/L

Lab Sample ID: MB 500-778153/31

**Matrix: Water** 

**Analysis Batch: 778153** 

MB MB

Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Analyte D 0.10 07/23/24 14:20 Fluoride < 0.10 0.056 mg/L

Lab Sample ID: LCS 500-778153/32

**Matrix: Water** 

**Analysis Batch: 778153** 

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

Lab Sample ID: LCS 500-778153/4

**Matrix: Water** 

**Analysis Batch: 778153** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits 10.0 9.52 Fluoride mg/L 95 90 - 119

Lab Sample ID: MB 500-780660/3

**Matrix: Water** 

Analysis Batch: 780660

MR MR

Analyte RL **MDL** Unit Result Qualifier Prepared Analyzed Dil Fac Fluoride <0.10 0.10 0.056 mg/L 08/08/24 14:13

Lab Sample ID: LCS 500-780660/4

**Matrix: Water** 

**Analysis Batch: 780660** 

Spike LCS LCS %Rec Added %Rec Analyte Result Qualifier Unit D Limits 10.0 Fluoride 9.39 mg/L 94 90 - 119

Lab Sample ID: 500-253560-1 MS

**Matrix: Water** 

**Analysis Batch: 780660** 

Sample Sample Spike MS MS %Rec Result Qualifier Added Analyte Result Qualifier D Limits Unit %Rec Fluoride 5.00 0.12 5.10 mg/L 100 75 - 125

Lab Sample ID: 500-253560-1 MSD

**Matrix: Water** 

**Analysis Batch: 780660** 

Spike MSD MSD %Rec **RPD** Sample Sample Result Qualifier **RPD** Added Limits Analyte Result Qualifier Unit D %Rec Limit Fluoride 0.12 5.00 5.11 mg/L 100 75 - 125 20

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#### APPENDIX A. QUOUS AMPHOWRES MASTORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT, LANDFILL

Client: Vistra Energy Corp Jak 1257580-253560-3 Project/Site: HEN-24Q3 SDG: HEN\_257\_801

RL

0.10

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-781815/3

**Matrix: Water** 

Analysis Batch: 781815

MB MB

Analyte Result Qualifier

Fluoride <0.10

Lab Sample ID: LCS 500-781815/4 **Matrix: Water** 

Analysis Batch: 781815

Analyte Fluoride

Spike Added

10.0

LCS LCS 9.52

Result Qualifier Unit

**MDL** Unit

0.056 mg/L

mg/L

D

D %Rec 95

Prepared

Limits 90 - 119

%Rec

**Client Sample ID: Method Blank** 

Analyzed

08/15/24 12:36

**Prep Type: Total/NA** 

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Dil Fac

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Jane N 1257500+253560-3 SDG: HEN\_257\_801

Client Sample ID: HEN 07

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

Date Collected: 07/15/24 15:20 Date Received: 07/16/24 13:05

Lab Sample ID: 500-253560-1

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 13:32
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 1
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 14:33
Total/NA	Analysis	300.0		5	779304	NMB	EET CHI	07/31/24 21:24
Total/NA	Analysis	SM 2320B		1	777696	SO	EET CHI	07/19/24 19:51
Total/NA	Analysis	SM 2540C		1	777221	CLB	EET CHI	07/18/24 00:54
Total/NA	Analysis	SM 4500 F C		1	780660	SO	EET CHI	08/08/24 14:33
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/15/24 15:20

Client Sample ID: HEN\_05&DR

Date Collected: 07/16/24 12:15 Date Received: 07/17/24 09:40

Lab Sample ID: 500-253560-7

Lab Sample ID: 500-253560-8

**Matrix: Water** 

**Matrix: Water** 

Batch Batch Dilution Batch **Prepared** Method or Analyzed **Prep Type** Type Run **Factor Number Analyst** Lab 07/22/24 15:20 - 07/22/24 21:20 1 Total Recoverable Prep 3005A 777840 S1Z EET CHI Total Recoverable Analysis 6020B 778011 RN **EET CHI** 07/23/24 13:56 1 Total Recoverable Prep 3005A 777840 S1Z **EET CHI** 07/22/24 15:20 - 07/22/24 21:20 1 Total Recoverable 6020B 778290 RN **EET CHI** 07/24/24 14:58 Analysis 1 Total/NA Analysis 300.0 5 779304 NMB **EET CHI** 08/01/24 02:52 779286 LEG Total/NA Analysis SM 2320B 1 **EET CHI** 07/30/24 17:58 Total/NA Analysis SM 2540C 1 777853 CLB EET CHI 07/22/24 21:01 EET CHI Total/NA Analysis SM 4500 F C 1 778153 SO 07/23/24 14:11 Total/NA Analysis 781194 DN **EET CHI** 07/16/24 12:15 Field Sampling 1

Client Sample ID: HEN 05!R Date Collected: 07/16/24 11:20

Date Received: 07/17/24 09:40

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 13:59
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:00
Total/NA	Analysis	300.0		5	779304	NMB	EET CHI	08/01/24 03:24
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 18:07
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:03
Total/NA	Analysis	SM 4500 F C		1	778153	so	EET CHI	07/23/24 14:15
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 11:20

**Eurofins Chicago** 

Jan 1257500-253560-3 SDG: HEN\_257\_801

Client Sample ID: HEN\_08

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

Date Collected: 07/16/24 14:00 Date Received: 07/17/24 09:40

Lab Sample ID: 500-253560-9

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:06
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 1
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:02
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 1
Total Recoverable	Analysis	6020B		1	778401	RN	EET CHI	07/25/24 11:01
Total/NA	Analysis	300.0		10	779304	NMB	EET CHI	08/01/24 03:55
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 18:16
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:06
Total/NA	Analysis	SM 4500 F C		1	778153	SO	EET CHI	07/23/24 14:30
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 14:00

Lab Sample ID: 500-253560-10 Client Sample ID: HEN\_08&D **Matrix: Water** 

Date Collected: 07/16/24 15:46

Date Received: 07/17/24 09:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:08
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:05
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778401	RN	EET CHI	07/25/24 11:03
Total/NA	Analysis	300.0		10	779304	NMB	EET CHI	08/01/24 04:26
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 18:26
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:08
Total/NA	Analysis	SM 4500 F C		1	778153	so	EET CHI	07/23/24 14:34
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 15:46

Client Sample ID: HEN\_16 Lab Sample ID: 500-253560-12 Date Collected: 07/16/24 15:30 **Matrix: Water** 

Date Received: 07/17/24 09:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:10
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:11
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778401	RN	EET CHI	07/25/24 11:05
Total/NA	Analysis	300.0		5	779304	NMB	EET CHI	08/01/24 05:44
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 18:46
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:14

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Jak 1257580-253560-3

SDG: HEN\_257\_801

Client Sample ID: HEN\_16

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

Date Collected: 07/16/24 15:30 Date Received: 07/17/24 09:40

Lab Sample ID: 500-253560-12

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 4500 F C		1	778153	SO	EET CHI	07/23/24 14:44
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 15:30

Lab Sample ID: 500-253560-13 Client Sample ID: HEN\_16\_FD

Date Collected: 07/16/24 15:40 **Matrix: Water** 

Date Received: 07/17/24 09:40

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:12
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:14
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778401	RN	EET CHI	07/25/24 11:07
Total/NA	Analysis	300.0		5	779304	NMB	EET CHI	08/01/24 06:00
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 19:13
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:16
Total/NA	Analysis	SM 4500 F C		1	778153	so	EET CHI	07/23/24 14:59
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 15:40

Client Sample ID: HFN 40#S

<b>Client Sam</b>	ple ID: HE	N_40#S			Lab Sample ID: 500-253560-1				
Date Collecte	ed: 07/16/24	14:43	Matrix:	Water					
Date Receive	ed: 07/17/24 (	09:40							
	Batch	Batch		Dilution	Batch	Prepared			

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:19
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:20
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		5	778401	RN	EET CHI	07/25/24 11:14
Total/NA	Analysis	300.0		10	779304	NMB	EET CHI	08/01/24 07:18
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 19:45
Total/NA	Analysis	SM 2540C		1	777853	CLB	EET CHI	07/22/24 21:24
Total/NA	Analysis	SM 4500 F C		1	778153	so	EET CHI	07/23/24 15:13
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/16/24 14:43

Client Sample ID: HEN 48R

Da

Da

ate Collected: 07/18/24 09:05	Matrix: Water
ate Received: 07/18/24 13:00	

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A		- <u> </u>	777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778011	RN	EET CHI	07/23/24 14:33

**Eurofins Chicago** 

Lab Sample ID: 500-253560-20

Page 38 of 89

Jan 1257500-253560-3 SDG: HEN\_257\_801

Client Sample ID: HEN 48R

Client: Vistra Energy Corp

Project/Site: HEN-24Q3

Date Collected: 07/18/24 09:05 Date Received: 07/18/24 13:00

Lab Sample ID: 500-253560-20

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		1	778290	RN	EET CHI	07/24/24 15:44
Total Recoverable	Prep	3005A			777840	S1Z	EET CHI	07/22/24 15:20 - 07/22/24 21:20 <sup>1</sup>
Total Recoverable	Analysis	6020B		5	778401	RN	EET CHI	07/25/24 11:20
Total/NA	Analysis	300.0		10	779304	NMB	EET CHI	08/01/24 11:28
Total/NA	Analysis	SM 2320B		1	779286	LEG	EET CHI	07/30/24 20:12
Total/NA	Analysis	SM 2540C		1	778056	CLB	EET CHI	07/23/24 23:06
Total/NA	Analysis	SM 4500 F C		1	778153	SO	EET CHI	07/23/24 15:26
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	07/18/24 09:05

Client Sample ID: HEN\_17 Lab Sample ID: 500-253560-24

Date Collected: 08/06/24 09:10 **Matrix: Water** 

Date Received: 08/07/24 09:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total Recoverable	Prep	3005A			780445	BDE	EET CHI	08/08/24 09:16 - 08/08/24 15:16
Total Recoverable	Analysis	6020B		1	780867	RN	EET CHI	08/09/24 18:13
Total Recoverable	Prep	3005A			780445	BDE	EET CHI	08/08/24 09:16 - 08/08/24 15:16
Total Recoverable	Analysis	6020B		1	781097	RN	EET CHI	08/12/24 14:21
Total/NA	Analysis	300.0		5	780474	LEG	EET CHI	08/08/24 14:15
Total/NA	Analysis	SM 2320B		1	781135	so	EET CHI	08/12/24 17:52
Total/NA	Analysis	SM 2540C		1	780360	CLB	EET CHI	08/07/24 23:03
Total/NA	Analysis	SM 4500 F C		1	781815	so	EET CHI	08/15/24 14:15
Total/NA	Analysis	Field Sampling		1	781194	DN	EET CHI	08/06/24 09:10

Client Sample ID: HEN\_YSG\_ILRIVER

Lab Sample ID: 500-253560-49 Date Collected: 07/15/24 12:30 **Matrix: Water** 

Date Received: 07/16/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Field Sampling			781194	DN	EET CHI	07/15/24 12:30

<sup>&</sup>lt;sup>1</sup> 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

APPENDIX A.

Accreditation/Certification Summap Corrective action report Henniepin Power Plant, Landfill Jobn 125 5801-253560-3

SDG: HEN\_257\_801 Client: Vistra Energy Corp Project/Site: HEN-24Q3

### **Laboratory: Eurofins Chicago**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progr	am	Identification Number	Expiration Date
llinois	NELA	P	IL00035	05-31-25
The following analytes	are included in this repo	rt, but the laboratory is r	not certified by the governing authori	ty. This list may include analytes
for which the agency of	loes not offer certification	1.		
Analysis Method	Prep Method	Matrix	Analyte	
Field Sampling		Water	Depth to Water (ft from M	P)
Field Sampling		Water	Field pH	
Field Sampling		Water	Field Temperature	
Field Sampling		Water	Oxidation Reduction Pote	ential
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 C	

HENNEPIN POWER PLANT, LANDFILL

## **CHAIN-OF-CUSTODY / Analytical Request Document**

Section C

Section A

Section B

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

	Invoice Information:					Page	1 of 3
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gvistracorp.com	Company Name \	Vistra Corp	69003		REGULAT	ORY AG	ENCY
	Address see	Section A		NPDES	GROUND WATE	ER	DRINKING WATER
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	Manager Profile #:		500-253560 COC	, STATE	IL.		
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CHAIN-OF-CUSTODY / Analytical Request Document	HENNEPIN POWER PLANT, LANDFILL
The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately	900-00000

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Address	13498 E 800th St	Сору То	Sam	Davie	s samantha.davies@	Dvistracor	com		Compa	ny Nan	ne	Vistr	a Cor	þ										REG	ULA.	TOR	Y AC	GENCY		
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### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately Section A Section B Section C 3 Required Client Information. Required Project Information. Invoice Information Report To: Brian Voelker Attention. Company Vistra Corp-Hennepin Brian Voelker Address 13498 E 800th St Copy To: Sam Davies samantha davies@vistracorp.com Company Name Vistra Corp **REGULATORY AGENCY** Hennepin, IL 61327 Jason Stuckey & Michael Olle Address see Section A **NPDES GROUND WATER** DRINKING WATER Quole Brian.Voelker@VistraCorp.com michael.olle@vistracorp.com UST RCRA OTHER Reference Phone: (217) 753-8911 Jason.Stuckey@vistracorp.com Project Site Location Manager IL Project Number: 50023030 10 day Requested Due Date/TAT STATE Requested Analysis Filtered (Y/N) Section D Valid Matrix Codes C=COMP) Required Client Information MATRIX CODE COLLECTED Preservatives DRINKING WATER SAMPLE TEMP AT COLLECTION WATER WASTE WATER ww (see valid o (G=GRAB Residual Chlorine (Y/N) PRODUCT SOIL/SOLID HEN-845-802-805 EN-WPCP-West OF CONTAINERS HEN-WPCP-East SAMPLE ID WIPE AIR HEN-000-RAD (A-Z, 0-9 / , ) Sample IDs MUST BE UNIQUE MATRIX CODE HEN-257-801 4EN-257-802 4EN-257-803 **JEN-257-804** HEN-845-803 HEN-845-804 4EN-811-801 OTHER SAMPLE TYPE TISSUE HEN-000 HEM Project No./ Lab I.D DATE TIME HEN-45#8 SHORT HOLD - NO2 1 2 HEN-46 HEN 47 3 HEN-48R 4 5 **HEN 49** MS/MSD HEN-50-6 7 4 HEN 51 HEN-52 8 9 HEN 54 10 HEN 54 FD HEN-55 11 DTW Only 12 HEN YSG JURIVER DTW Only HEN\_XSG01 DTW Only 13 14 \_\_FB SHORT-HOLD - NO2 15 -T04 BTEX Only TB2 16 **BTEX** Only ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION ACCEPTED BY / AFFILIATION DATE TIME DATE **SAMPLE CONDITIONS** HEN-24Q3 Rev 1 :05

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER

SIGNATURE of SAMPLER.

Lewizz.

**DATE Signed** 

(MM/DD/YY)

Received on Ice (Y/N)

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Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

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Page 45 of 89 08/26/24

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately Section A Section B Section C 3 3 of Required Project Information Regulred Client Information: Invoice Information: Report To: Brian Voelker Attention Brian Voelker Company Vistra Corp-Hennepin Address Copy To: Sam Davies samantha davies@vistracorp.com Vistra Corp 13498 E 800th St **REGULATORY AGENCY** Jason Stuckey & Michael Olle Address Hennepin, IL 61327 see Section A **NPDES GROUND WATER** DRINKING WATER Email To Purchase Order No. michael,olle@vistracorp.com Quole Brian.Voelker@VistraCorp.com UST RCRA OTHER Reference Phone (217) 753-8911 Jason.Stuckey@vistracorp.com Project Site Location Manager IL. Project Number: 50023030 Requested Due Date/TAT 10 day STATE Requested Analysis Filtered (Y/N) Section D Valid Matrix Codes C=COMP) Required Client Information MATRIX CODE COLLECTED Preservatives DRINKING WATER DW WATER WASTE WATER WT (G=GRAB (see valid SOIL/SOLID SL OL WP AR OT HEN-845-802-805 OIL HEN-WPCP-West Chlorine CONTAINERS WIPE SAMPLE ID HEN-000-RAD HEN-845-803 HEN-845-804 (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE MATRIX CODE HEN-257-801 HEN-257-803 HEN-257-804 HEN-811-801 OTHER SAMPLE TYPE HEN-257-HEN-000 E Ř Project No./ Lab I.D. DATE 0842 7-16-24 В SHORT HOLD - NO2 HEN\_45#S HEN 46 HEN-47 HEN-48R 4 5 HEN-49 MS/MSD 6 HEN 50 7 HEN 51 8 HEN 52 9 HEN\_54 10 HEN 54 FD DTW Only 11 HEN 55 12 DTW Only HEN\_YSG\_ILRIVER DTW Only 13 HEN XSG01 07-16-24 SHORT HOLD - NO2 14 FB-BTEX Only TB1 15 TB2 **BTEX Only** 16 RELINQUISHED BY AFFILIATION ADDITIONAL COMMENTS DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS **HEN-24Q3 Rev 1** 

CHAIN-OF-CUSTODY / Analytical Request Document

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SIGNATURE of SAMPLER

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# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed encurredly

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Section Required	A Client Information.	Section B Required Pro	oject Info	rmation:	,		Section Invoice	on C Inform	nation:			•			•								ſ	Pa	ge	3	of	3
Company	Vistra Corp-Hennepln	Report To: E	3rian V	oelker			Allenti	on.	Bria	n Voe	lker						1						•					
Address	13498 E 800th St	Сору То: 8	Sam Da	ies samantha,davies	@vistracorp.com		Compa	any Nar	me. ,	Vistra	Corp						Т				F	REGI	JLAT	ORY	AGI	ENCY	,	
	Hennepin, IL 61327	J	Jason S	uckey & Michael Olle			Addres	ss	see	Section	on A	-					Т	NPD	ES		GRO	UND	WAT	ER		DRINKIN	IG WATER	
Email To:	Brian.Voelker@VistraCorp.com	Purchase Or	der No.	michael.olle@vist	racorp.com		Quole Referer										1	UST			RCR	A			OTI	HER		
Phone	(217) 753-8911 Fax.	Project Name	e <u>Ja</u>	son.Stuckey@vistra	corp.com		Project Manage							,			T	Site	Loca	ation					Т			
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HENNEPIN POWER PLANT, LANDFILL 500 - JE 525-560 The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately Section C Page 1 of 3

Required Clies	nt Information.	Required Project Information	Invoice Information.	
Company.	Vistra Corp-Hennepin	Report To: Brian Voelker	Allention. Brian Voelker	
Address	13498 E 800th St	Copy To: Sam Davies samantha davies@vistracorp.com	Company Name Vistra Corp	
	Hennepin, IL 61327	Jason Stuckey & Michael Olle	Address see Section A	
Email To.	Brian.Voelker@VistraCo	rp.com Purchase Order No. michael.olle@vistracorp.com	Quole Reference	
Phone (21	7) 753-8911 Fax.	Projeci Name <u>Jason.Stuckey@vistracorp.com</u>	Project Manager	50
Requested	Due Date/TAT	10 day Project Number: 50023030	Profile #:	
				T-

Section B

Section A

REGULATORY AGENCY **GROUND WATER** DRINKING WATER **NPDES** UST **RCRA** OTHER 500-253560 COC Site Location IL STATE

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08/26/24

HENNEPIN POWER PLANT, LANDFILL The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Section Requirements		Section B Required Project	Information.			ction (	C ormation.										•		Γ	Page	e 2	of	3
Compa	any: Vistra Corp-Hennepin F	Report To: Brian	Voelker		Att	ention	Bria	n Vo	elker					7					-				
Addres	13498 E 800th St	Copy To. Sam I	Davies samantha,da	ries@vistracorp.com	Co	mpany	Name	Vistra	a Corp									REGL	JLAT	ORY /	AGENCY		
	Hennepin, IL 61327	Jasor	n Sluckey & Michael C	Olle	Ad	ldress	see	Sect	ion A					<b>†</b>	NPDES		GRO	UND	WATE	£R	DRIN	KING WATE	:R
Email '	To <u>Brian.Voelker@VistraCorp.com</u>	Purchase Order N	lo. <u>michael.olle@</u>	/istracorp.com		ole ference								1	UST		RCF	RA			OTHER		
Phone	(217) 753-8911 Fax:	Project Name	Jason.Stuckey@vis	tracorp.com	Pro	ject								<del> </del>	Site Lo	cation	J				T	-	
Re	quested Due Date/TAT 10 day	Project Number	50023030			ofile #:								1		TATE	1		IL.				
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SAMPLER NAME AND SIGNATURE DATE Signed (MM/DD/YY) PRINT Name of SAMPLER 8-7-24 SIGNATURE of SAMPLER

> Page 51 of 89 08/26/24

Temp in °C

Received on Ice (Y/N)

Samples Intact (Y/N)

HENNEPIN POWER BLANT LANDFILL (

### **CHAIN-OF-CUSTODY / Analytical Request Document**

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Section A Required Client Information Required Project Information: Invoice Information

Company: Visita Core Hoppenin Report To, Relea Vegitor Report To R

Required Cit	ent information	Required Project Information:	Invoice Information		''-	•
Company.	Vistra Corp-Hennepin	Report To. Brian Voelker	Attention: Brian Voelker			
Address	13498 E 800th St	Copy To. Sam Davies samantha.davies@vistracorp.com	Company Name Vistra Corp		REGULATORY A	AGENCY
	Hennepin, IL 61327	Jason Sluckey & Michael Olle	Address see Section A	NPDES	GROUND WATER	DRINKING WATER
Email To	Brian.Voelker@VistraCorp.c	Purchase Order No. <u>michael.olle@vistracorp.com</u>	Quole Reference	UST	RCRA	OTHER
Phone (21	17) 753-8911 Fax	Project Name <u>Jason.Stuckey@vistracorp.com</u>	Project Manager	Site Location	'N	
Requeste	d Due Date/TAT 10 o	Project Number: 50023030	Profile #:	STATE	: IL	
				Paguastad Applysis Filtor	od (V/Ai)	

4	#	Section D  Required Client Information  Required Client Information  WATER WASTE WASTE WASTE WASTE WASTE WASTE WASTE WASTE WATER WASTE WATER WASTE WATER WASTE WATER WASTE WATER WASTE WATER WASTE WATER OIL  RIPE  SAMPLE ID  (A-Z, 0-91,-)  Sample ID9 MUST BE UNIQUE TISSUE	CODE R DW WT	e valid codes to left)	AB C=COMP)	COLLI	ECTED	],			Pres	200/0	tivoo		AI N															
<u> </u>	*	WATER WASTE WATER PRODUCT SOLUSOLID OIL WIPE AIR (A-Z, 0-9 / ,-) OTHER	WT WW P SL OL					7				OIVA	IIVUS																	
_ E	E	Sample in a MOS I BE DNIGUE 11997E	AR OT TS	MATRIX CODE (see	SAMPLE TYPE (G≖GRAB	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	HNO <sub>3</sub>	HCI	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol Other	↓Analysis Test↓	HEN-257-801	HEN-257-802	HEN-257-803	HEN-257-804 HEN-811-801	HEN-845-802-805	HEN-845-803	HEN-845-804	HEN-WPCP-East	HEN-WPCP-West	HEN-000-RAD	HEN-000	Residual Chlorine (Y/N)	Proje	ct No./ La	b I.D.
	1	~ HEN_45#6						_	<u> </u>						$\vdash$	-	×			X	WANT DESCRIPTION	400000000	X		×	В		SHOP	RT HOLD -	NO2
3 <i>3</i> /3	2	★ HEN_46				8-6-24	0955	L	L						] [			X			Х				Х	G				
3Ψ:	3	→ HEN_47				8-6-24	1120	_	<u> </u>	Ш	Ш							Х			Х				X	G	Ш			
	4	- HEN_48R		1					<u> </u>				-		-	X							***************************************		Cartage (Section )	-				
	5	¥ HEN_49				8-6-24	1420	$\perp$		Ш					1 1				x			Х		Х	Х	Н	Ш		MS/MSD	
36	6	★ HEN_50		L		8-6-24	1535	L			Ш				1 1				× L			Х		Х	X	Н				
با ا	7	HEN-61		_	_			_							_			energy and	X	*************	***********	X_		_X_	Х	Ш	_	dominio		
361	8	¥ HEN_52				8-6-24	1205		<u> </u>		$\perp$			$\sqcup \bot$	] [			x L			Х				Х	G				
38 1	9	★ HEN_54				8-6-24	1040						$oldsymbol{\perp}$		] [		_	X			Х				Х	G				
9{ <u> </u> _1	10	#HEN_54_FD				8-6-24	1045				$\perp \perp$		_		] [			X			Х				Х	G				
	11	HEN_56			_				-				-		-	-		×		_	X	-	5778-0 <sub>040</sub> 0-			J	-		DTW Only	
_1	12	HEN_YSG_ILRIVER						-	-		-			anne division	-	X	X	X .	x ×	X	X	X	X	-X-	02222	-	-		DTW Only	
m 1	13	HEN_X3G01		-	-							COLUMN STATE	-			-		X	teritoria		X	dattiina	*********	معضم	-	-	2 15 15 15 15 15	L	DTW Only	
£0 🗔	14	HEN FB				08-06-24	-00:00			-		-	-			-	-		<u> </u>			X_	***************************************	_X_	X	-#		مطور سندست	·	
1	15	HEN_TB1				dbn 0822	24						_		+						-		<del>-X</del> -	erelanatelistor	NU-REAL PROPERTY.	A	*** 02000/60m		BTEX Only	1
<u></u>	16	T. HEN_TB2		上				-	-	-		moration engan			_				***	and the section	rimagenton			- Water State of the State of t	en de	A		AND MANUFARMAN	BTEX Only	/
		ADDITIONAL COMMENTS	[	) REL	INQUI	ISHEDBY)/ AFAILIATIO				IME				CCEP		Y / #F	FILIAT	ION			DATE			TIME				SAMPLE (	ONDITIONS	
****		HEN-24Q3 Rev 1	1		M	-Julan	الح 8-7	-24	6	900	<u> </u>	A	Y)	m	_	KC	K	D		8	7/2	W	0	90	5					
																				<u>l'</u>										
							R NAME AND SIGN		ŧΕ	,																	ပ္	5 (r	r Ž	sa (X
							PRINT Name of SAM SIGNATURE of SAM		$\mathcal{L}$	<u>د د</u>	>( v	. 14	~ I	316	مر	DA	C Z	gned	<u> </u>	3-						-	Temp in "C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Page 52 of 89 08/26/24

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12

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# **Login Sample Receipt Checklist**

HEN-257-801

Client: Vistra Energy Corp

Job Number: 500-253560-3

SDG Number: HEN\_257\_801

Login Number: 253560 List Source: Eurofins Chicago

List Number: 1

Creator: Scott, Sherri L

Creator: Scott, Snerri L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	4.0,-0.2,0.9,3.1,0.9,0.8,1.6,5.7,11.8,12.7,11.8,9.1,11.3,5.7,1.7,5.7,5.9,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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").	False	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Chicago** 

Date: Start Discrete		PROJECT INFORMATION	7.11 <b>4</b> /2024 Time & & S	Time:	CIVENIT TABLE	L (	Well Development Well Volume Approach Sampling Other (Specify):Low Flow フュルディなの ろとら	QUALITY INDICATOR PARAMETERS (continued)	Temp.   pH   SEC or Dissolved   Tu   (°C)   (SU)   Cond.   Oxygen   Tu   (Halfort)   (Ha	+-3% +-10%	14 7 56 2 17 11 2 0	700 700	1 7.04 939 7.04 1.	1 200 7 200					ABBREVIATIONS	Cond Actual Conductivity ORP - Oxidation Reduction Potential SEC - Specific Electrical FT BTOC - Feet Bellow Top of Casing Conductance SU - Standard Units in a vol Architecture.
	1 Time (millary) F F C S C C C C C C C C C C C C C C C C		Start Date:		Ш		Well	WATER QUALITY	Depth to Water (Feet)	L, ( 00)	70 ,11	44,97		44.97					NOTES (continued)	

Site: Hennepin				PROJ	PROJECT INFORMATION	MATION					
Project Number: 2024,00	54	Task #:	Client: Vist	Vistra		F					
	:		י י י		•	1 me: 0220					
Field Personnel: 6 Assell to	See l'es	Finish Date:	07/10/154	Time:	Time: 1080						
WELL INFORMATION	,						<b>EVENT TYPE</b>	/PE			
Well ID: HencosR Casing ID:	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ampling	Low-Flow	Low-Flow / Low Stress Sampling Other (specify):Low Flow	1	YSI SERIAL NO	
			WATER Q	UALITY INDI	CATOR PA	WATER QUALITY INDICATOR PARAMETERS (continued)	(pant		`	977100	
Sampling Minutes Stage Elapsed	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	Hd (s)	SEC or Cond. (µs/cm)	Dissolved Oxygen	Turbidity (NTU) +/- 10%	-	Visual Clarity/Odor
pre 0	0925	7500	34.41	1		100 1/4		2	ĺ	0/ -/:	1
purge 5	0927	0	34.90	1	13.3	18.4°5"	19 0.320	4.80	2 8 8	1 HI -	Clord
	0932	0.5	34.90	1	18.2	7,19	0.78V		12.03	N N	7
	0937	-	3 H. Oro	(	18.7	7,20	0787	0,10	91.6	0 : 69	, ,
20	0942	7	34.000	9	6.3	7.21	1,210	0.24	06	1 - C	8
25	0947	ا ئ	34.20	1	6.8	721	1940	0.20	27	77.6	-
30	09 52	2	34.00	(	18.2	7.21	2620	02.0	7.00	8/.0	4
(r. not) 35	5500										4
40											
45											
20											
55											
09											
			NOTES (continued)					ABBREVIATIONS	ATIONS		
Sample ID, date, & time:	ime:		Sandled	@0953		NZ/21/10 40	7.	Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Measurad	1	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units Proper Legislature Co. Pannas Calcius. C Dannas Calcius	SEC - Specific Electrica
Samo	Sample ID : Hen-038	-03R	DWOlight	11 marks (20) 09(53)	00453	on other			1		

Time: 1045   Time: 1045   EVENT TYPE						PROJ	PROJECT INFORMATION	MATION					
Figure 10   Project Number: 2024,0054   Task #: Start Date: 11   Project Number: 2024,0054   Task #: Start Date: 11   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 12   Project Number: 14   Project Number: 15   Project Number:	Site: Hc	ennepin			Client:	Vistra		\					
Finish Date:   Correct	Project Number	r: 2024.005	4	Task #:	Start Da		74	Time: 1545					
Well Development	Field Personnel	-	Me	Finish Date:		Time:	0711						
Well ID: CS.T.         Well Development         Well Development         Low-Flow / Low Stress S.           Casing ID: 7         Casing ID: 7         Amatematical parts and the continued of the continued parts and the continued parts and the continued parts and the continued parts are continued parts.         Image: Continued parts and the continued parts are continued parts.         Image: Continued parts and the continued parts.         Image: Continued parts.         <	WELL INFOR	MATION							EVENTTY	PE	1		
Sampling   Minutes   Time   Volume   Depth to Water   Drawdown   Temp.   Sec or   Dissolved   Stage   Elapsed   Time   Volume   Depth to Water   Drawdown   Temp.   Cond.	Well ID: CS Casing ID: 7	١ - ١	inches			Well Devel	lopment ne Approach Sa	mpling	Low-Flow /	Low Stress S. y):Low Plow	7 4	Ing YSI SERIAL NO	
Stage         Elapsed Lighter (millary)         Permoved (resu) (resu)         Drawdown (resu) (resu) (resu)         Drawdown (resu)					WATER	QUALITY IND	ICATOR PAR	AMETERS (continu	ued) Lie	17	NF72.054	2054FF	
Stage         Elapsed Light         (Feet) (Feet)         (Feet) (Feet)         (Feet) (Feet) (Feet)         (Feet) (Feet) (Feet) (Feet) (Feet) (Feet)         Cond. Oxygen (Feet) (Feet	_	Minutes	Тіте	Volume	Depth to Water	Drawdown	Temp.	Hd	SEC or	solved	Turbidity	ORP	Visual
pre       0       1045       41.11       20.4       7.64       418       1.19         purge       5       10550       411       20.4       7.64       418       1.19         15       1055       411       20.5       7.63       418       0.14         25       1105       41.11       20.3       7.63       416       0.60         30       115       40       1.63       416       0.60         40       1.20       416       20.4       7.63       417       0.60         55       55       60       60       60       60       60       60       60	_	Elapsed	(military)	Removed (gallons)	(Feet)	(Feet)	(°C) +/- 10%	(SU) +/- 0.01	Cond. (µs/cm) +/- 3%	Oxygen (mg/L) +/- 10%	(NTU) +/- 10%	(mV) +/- 10%	Clarity/Odor
purge       5       10 SC       4111       20.4       7,64       418       1,19         10       10 SS       4111       20.5       1.63       418       0.74         25       11 0S       41.11       20.3       7,63       416       0.67         30       11 0S       41.15       1.03       7,63       416       0.60         40       40       41.15       20.4       7,63       417       0.60         50       45       60       60       60       60       60       60	pre	0	1045		17.1	1						1	Mock
10 1055 4111 20.5 7.163 918 0.74  15 1100 41.11 20.3 7.163 916 0.67  25 11 0 20 41.11 20.3 7.163 916 0.60  40 11 20 41.15 20.4 7.163 917 0.60  50 50 60 60 60 60 60	purge	5	0501		3		20.4		918	$\mathbf{I} =$	270	1600	
15   11   10   10   11   10   10   10		10	5501		11/14		20.5	7.63	816	0.14	7,76	(60,7	
20 1105 41.11 20.3 7.163 9.16 0.61 30 11105 (41.15) 20.3 7.63 9.15 0.160 30 11105 (41.15) 20.4 7.163 9.16 0.160 40 40 7.100 (41.15) 20.4 7.163 9.17 0.160 50 50 60 60		15	1100				20.3	7.63	215	190	7:01	1593	
1) (0 1) (5 1) (5 (4), 15) 20,3 7,63 9,60 (1) 20 (1) 20 (1) 20 (4), 15) 20,4 7,63 9,17 0,60	*	20	1105		41.11		20.3	7,63	916	0,61	98.5	159.2	
11 15 (41.15) 20.3 7.6.3 916 (1) 20 (41.15) 20.4 7.6.3 917		25	0/17				20.3	7.63	915	0,60	4.79	158.6	
(120 4115 20.4 7.63 9.17	Ī	30	1115		(41:15)		2013	7,63	916	0:61	3,90	1588	1
45 45 50 60		35	1120		売	2	20.4	7,603	617	0,60	3,35	158.51	7
		40											
		45											
		50											
		55											
		09											
NOTES (continued) ABBREVIATIONS					NOTES (continued)	(Ģ				ABBREVIA	TIONS		
Sample ID, date, & time:	Sample ID, d	late, & ti	me:							Cond Actual Con. FT BTOC - Feet Bel	1.0	URP - Oxidation-Reduction Polential SEC - Specific Electrical Conductance SU - Standard Units	SEC - Specific Electrica
Paneral dybrachina in the Management in the Mana		Ι,	10 A CT		7	1	117			nm - Not Measured		Iemp - Iemperature °C - Degrees Celcius	

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				PROJE	PROJECT INFORMATION	MATION					
Hennepin	Site: Hennepin Project Number: 2024 0054	Tool, 44	Client: Vis	22		6					
,	+000:+	IdSK #	Start Date:	7/16/2024		Time:   T C					
7		Finish Date:	SAme	Time:		5121					
WELL INFORMAT	N.						EVENTTYP	100	f		
1	(inches)			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ampling	Low-Flow / Other (Speci	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	ampline	Mpline YSI SERIAL NO	
			WATER Q	UALITY INDI	CATOR PAR	QUALITY INDICATOR PARAMETERS (continued) LICE	ued) Local	5		DE 2202017 PC	
Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C) +/- 10%	Hd (ns) +0'0-/+	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU) +/- 10%	ORP (mv) +/- 10%	Visual Clarity/Odor
0	いナニ		11.17				%6 -/+	+/- 10%			.00
2	1150				76.1	7.43	414	234	3.36	159.4	7.82
9	1155		41.11		20.0	7.41	2.0	. 4	6.60	159.3	
12	1200				19.9	フ・ナ・	9,3	\$60	622	15.8°.51	-
8	1205		十		19.9	7,41	913	.78	6.65	157.8	_
25	1210				19.9	7.41	2,0	.77	7 49	06.70	I.
30	1215		41:11		9.9	14.	0	376	7.97	- 20	>
35	1220										
40											
45											
20											
22											I
9											
1			NOTES (continued)					ABBREVIATIONS	ATIONS		
اتما	Sample ID, date, & time:							Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing		ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units	SEC - Specific Electrical
	1-119-24	Time	Time 1215		CH	J6420		na - Not Applicable nm - Not Measured		C - Degrees Celcius	
			0.								

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

Непперіп

Minutes Elapsed

Sampling Stage

Well ID: 07 Casing ID: 7 'C

0 ည 10 15 20 25 8 35 8 45 20 22 8

pre

					PROJE	PROJECT INFORMATION	MATION					
Site:	Hennepin			Client: Vis	낊		7-					
Project Nun	Project Number: 2024.0054	154	Task #:	Start Date:	2: 7/ <b>16/</b> 2024		Time: /320					
Field Personnel:	4	orne	Finish Date:	Samo	Time:		1400					
WELL INF	WELL INFORMATION	7					001	EVENT TYPE	36			
Well ID: Casing ID: 7 K	8 in 12 8	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ımpling	Low-Flow / Low Stress Other (Specify):Low Flow		1	YSI SERIAL NO	
		)		WATER	UALITY INDI	CATOR PAR	WATER QUALITY INDICATOR PARAMETERS (continued) 116 c S	ued) Me Cov		14C 180 31C	1275 120 500 500	
Sampling	Minutes	Time	Volume	Depth to Water	Drawdown	Temp	돕	SEC or	SS	Turbidity	ORP	Visual
agge	Elapsed	(rimitaly)	Kemoved (gallons)	(1961)	(Feet)	(°C) +/- 10%	(SU) +/- 0.01	Cond. (µs/cm) +/- 3%	Oxygen (mg/L) +/- 10%	(NTU) +/- 10%	(mV) +/- 10%	Clarity/Odor
pre	0	1330		53.62								Jan 10
bnrge	5	1335				15.0	(0.65	1608	3.77	1.49	188.8	
	10	1240		53.61		1.7.1	6,67	1605	2,71	1.35	6.88	
	15	1345				17.8	10.06	1191	7.31	1,30	189.6	
¥	20	1350,		19.63		18.2	12,65	1602	12.6	1.37	189.6	
P:	25	1355			1	00	5900)	1597	7.22	170	100	
age	30	1400	/	53. loi		00	Loiles	1631	2.21	72	7 08	7
5.5	35				1					000	1.60	
9 0	40											
89	45											
	20											
	55											
	09											
				NOTES (continued)	_				ABBREVIATIONS	TIONS		
Sample II	Sample ID, date, & time:	time:		-	\				Cond - Adual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Measured	1	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units Temp - Impressualure "C - Degrees Celcius" "C - Degrees Celcius	al SEC - Specific Electrical
						(	ニチン			ı		

					PRO.	PROJECT INFORMATION	MATION					
Site:	Hennepin			Client:	Vistra							
roject Nu.	Project Number: 2024.0054	)54	Task #:	Start Date	ate: 7 / \$6/2024	74	Time: 15/0					
ield Perso	Field Personnel: 6. /	ARJAN UND	Finish Date	Finish Date: の7/16/2027	Time	Time: 1558						
WELL IN	WELL INFORMATION	3						<b>EVENT TYPE</b>	YPE			
Vell ID: 53 Sasing ID:	Well ID: 符記への アロ Casing ID:	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ampling	Low-Flow Other (Spec	Low-Flow / Low Stress Sampling Other (specity):Low Flow	1	YSI SERIAL NO	
				WATER Q	QUALITY INC	ICATOR PA	UALITY INDICATOR PARAMETERS (continued)	inued)			0111	
Sampling Stage	Minutes	Time (military)	Volume	Depth to Water	Drawdown		Hd	SECor	Dissolved	Turbidity	ORP	Visual
S S			(gallons)			10 X 0 X	10 /	(µs/cm)	0-2 (mg/L)	(010) +/- 10%	- 1- 10 - 1- 10 - 1- 10 - 10 - 10 - 10	Clarity/Odor
pre	0	1515	1	54.09	1	1			1	1		
purge	5	16 20	0.5	54.05	1	15.8	0,96	1,862	3.10	4.62	190.0	Closest
7	10	1525	0,0		1	15.4	6.03	1.830	0,37	4.97	777	(100
>	15	(530	j	54.09		18.5	60.63	1.838	84.0	4,67	197. 8	-3
7	20	1535	5.1	54.03	1	15.4	6.69	1,835	27.0	4.64	197,1	->
N.	25	021	1.5	54,00	)	15,3	6.64	1.826	810	4.56	1961	7
7	30	ーでえる	2.5	54.03		13.4	6.63	1.874	_	491	195.6	A->
9 Filos	35											
	40											
	45											
	20											
	55											
	09											
				NOTES (continued)	(Di				ABBREVIATIONS	VIIONS		
ample	Sample ID, date, & time:		H	EN_088D	Bon	wer .	286 HEN-08&	088D	Cond Actual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Measured	ductivity low Top of Casing	ОКР - Охизанол-Reduction Potential SEC - Specific Electrical Conductance SU - Slandard Units Temperature - C - Degrees Celcus.	al SEC - Specific Electrica
		Lalored		10 17 C	, , , ,							

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				PROJECT INFORMATION	ATION					
	Task #:	Client: Start Dat	Vistra 3		Time: 00 / V	١.				
Field Personnel:	Finish Date	SAM		2700	1					
						EVENT TYPE	PE	r		
inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	pniing	Low-Flow / Low Stress Other (Specify).Low Flow	Low-Flow / Low Stress Sampling Other (Specify): Low Flow		YSI SERIAL NO 246 / 00 320	
		WATER	QUALITY IND	ICATOR PAR	QUALITY INDICATOR PARAMETERS (continued)	nued)	12DF	12020	2DEZZOZOSKE HON	HOCKINS
Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°°)	pH (su) +- 0.01	SEC or Cond. (µs/cm) +7-3%	Dissolved Oxygen (mg/L) +/- 10%	Turbidity (NTU) +/- 10%	0. ~%	Visual Clarity/Odor
0915		50.67							1	
4754				20.02	7.14	390	21.7	26.0	1767	
5280		50,65		26.2	7:12	698	1.17	212	176.9	
0630				20.3	7.12	843	0.99	0,75	174.3	
0935		202		20.4	7.11	895	080	0.36	4:211	
0450				20.3	7.11	7.68	46.0	193	171.7	
5760		150.00		20.3	7.11	468	6,93	10.0	120	
		,	1							
		NOTES (continued)	(P				ABBREVIATIONS	ATIONS		
Sample ID, date, & time:	- · · · · · · · · · · · · · · · · · · ·	1-	Sign	2,12			Cond - Adual Conductivity FT BTOC - Feel Below Top of Casing na - Not Applicable nm - Not Messured	1 1	ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units Temperature 'C - Degrees Calcius	EC - Specific Electros

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						PROJECT INFORMATION	MATION					
Olic.	Hennepin			Client:	Vistra							
Project Num	Project Number: 2024.0054	54	Task #:	Start D	ite: 7/[S/2024		Time: 1500					
Field Persor	Inel: 1.186	Field Personnel: A. Bellett 6. Aum Finish Date.	Finish Date:	42/51/2	Time:	Time: 1600						
WELL INF	WELL INFORMATION		)					EVENT TYPE	PE	1.0000		
Well ID: HEN Casing ID:	EN- 17	2 inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ampling	Low-Flow / Other (Spec	Low-Flow / Low Stress Sampling Other (specify): Low Flow	sampling 24A	ling YSI SERIAL NO	
				WATER	QUALITY INDI	CATOR PAR	R QUALITY INDICATOR PARAMETERS (continued)	inued)				
Sampling	Minutes	Time	Volume	Depth to Water	Drawdown	Temp.	Hd	SEC or	Dissolved	Turbidity	ORP	Visual
Stage	Elapsed	(military)	Removed (gallons)	(Feet)	(Feet)	(°C)	(sn)	Cond. (µs/cm) +/- 3%	Oxygen (mg/L) +/- 10%	(NTU) +/- 10%	(mv)	Clarity/Odor
pre	0	1505		51.4								
purge	5	(5 10	0.5 >	51.39	10.0/	18.4	9 60	011	5.47	5.27	41.4	6 1000
ナ	10	1515	0.5	51.38	(0.0)	コンプ	7.34	(677	29.2	70,00	29.6	Clark
->	15	1520	/	51.28	0	11.3	7,33	676	2 85	5.23	188 d 18年	(1000
-	20	1525	k.5	21.7	20.0	17.3	7.72	676	2.87	4.89	1	Cloar
*	25	1530	2.5	21.2	0	061	75.6	1269	2.84	457	010	1
->	30	K35	20	11/18	0	13.0	72.6	678		407	5 90	2
- <b>&gt;</b>	35	1540	9.4	7.17	0	18.0	7,32	87.9	2	202	108.5	
	40											
89	45											
	20											
	55											
	09											
				NOTES (continued)	d)				ABBREVIATIONS	ATIONS		
Sox Molez	Sample ID, date, & time:	S	7/15/24		*A+ 15	25, vote,	AAF 1525, water level below punp.	dund n	Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Messurad	ductivity elow Top of Casing	ОКР - Охидатол-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units Temp - Imprestative °C Dennes Calcins °C Dennes Calcins	SEC - Specific Electric

Cito.				PROJE	PROJECT INFORMATION	MATION					
olle. Hennepin			Client: Vistra	tra							
Project Number: 2024.0054	.0054	Task #:	Start	1/15/2024		Time: 1600					
Field Personnel: 6. Assauling	Asseller	Finish Date:	12/51/50	Time:	Time: 1640						
WELL INFORMATION	NO						<b>EVENT TYPE</b>	PE			
Well ID: Han - 13 Casing ID:	.3 inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	mpling	Low-Flow / Other (Speci	Low-Flow / Low Stress Sampling Other (specify):Low Flow	gujidai	YSI SERIAL NO	
			WATER OI	JALITY INDI	CATOR PAF	WATER QUALITY INDICATOR PARAMETERS (continued)	(pen				
Sampling Minutes	Time	Volume	Depth to Water	Drawdown	Temp.	五	SEC or	Dissolved	Turbidity	ORP	Visual
		Removed (gallons)	(Feet)	(Feet)	(°C) } O	(SU) 7-7-0:01	Cond. (µs/cm) +/- 3%	Oxygen (mg/L) +/-10%	(NTU) +/- 10%	(mV)	Clarity/Odor
pre 0	1600		51.36	10'0	18-19	かなれた	300 TOO	Total	क्रमें क	AN STAET	cheese
purge 5	110 12	_	Sep 51.37	9.01	200	7.34	807	1,51	2018	179.13	Cherr
10	1617		51,38	(0,0	861	₹.r	695	2.9(1	16.4	139,6	->
15	1622	7	51,38	0	17,71	9,35	685	2.44	1.19	138.9	->
<b>t</b> 20	1027				17.71	7,35	68 N	1.34	423	0.981	->
25 <b>1</b> 25	1633	3	51,75		176	7,35	180	2,37	4.00	139.1	4
ege											
£ 6:											
9 01											
45											
50											
55											
09											
			NOTES (continued)					ABBREVIATIONS	TIONS		
Sample ID, date, & time:		@ 1635	12/51/LO					Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Massured	uctivity ow Top of Casing	ORP - Oxdation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units Terry - Emperature - Temperature - Superior Calcius - C. Dannese Calcius	EC - Specific Electrical
1	The How 12	~									

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100						PROJECT INFORMATION	TION					
Project Nun	Project Number: 2024,0054	)54	Task #:	Client: Vistra Start Date:	7 / 1/6/2024		Time: 1255					
Field Personnel:	- 1	LOGRE	Finish Date:	Scene	Time:		-					
WELL INF	WELL INFORMATION	7		1			W	EVENT TYPE	JE.	1		
Well ID:	3:10	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling		Low-Flow / Low Stress Other (specify):Low Flow	Low-Flow / Low Stress Sampling Other (specify):Low Flow	Buildma	YSI SERIAL NO	
		)		WATER OL	JALITY INDI	CATOR PARA	WATER QUALITY INDICATOR PARAMETERS (continued)		Ti mount	277	275 000 25 P	l
Sampling	Minutes Elapsed	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (su) +/- 0.01	SEC or Cond. (µs/cm) +/- 3%	Se le	Turbidity (NTU) +/- 10%	ORP (mV) +/- 10%	Visual Clarity/Odor
pre	0	1455		5471								Chac
purge	5	1.500				L.12	7.75	8,8	7.06	1.45	2.0.4	
	10	1505		54.22		21.9	רזר	77.0	890	1.30	209 5	-
	15	0/5/				27,2	1.2.1	27.0	\$53	2.3	2055	
¥	20	5157		27.45		5.17	1.27	873	150	40	7 20	
P	25	1520				22.0	7,27	27.30		7	V	
age	30	1525		27,12		22,0	7.27	\$23	87.	1.13	93.5	1
: 64	35	1530				22.1	727	823	207	17	1970	>
<del>1</del> o	40											
89	45											
	20	X										
	22											
	09											
				NOTES (continued)					ABBREVIATIONS	TIONS		
Sample II	Sample ID, date, & time:	time:							Cond Actual Conductivity FT BTOC Feet Below Top of Casing		ORP - Oxidation-Reduction Polential SEC - Specific Electrical Conductance SU - Standard Units	SEC - Specific Electrica
( )	0	٦	7-16-24	7-7	v	Jame!	See See		na - Not Applicable nm - Not Measured		Temp - Temperature °C - Degrees Celcius	
							1530					
							•					
			1	0	Jupe At	++	1540					
					<b>►</b> γ		ı					

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					2	TASSECT INFORMATION	NOISE					
Site:	Hennepin			Client:	Vistra		1					
Project Nun	Project Number: 005 4	•	lask #:	Start Da	Start Date: 😿 / 💪 /2024	4	Time 0045					
Field Perso	Field Personnel: Corke	STRE F.	Finis	Finish Date: Shu	2	Time:	0160					
WELL INF	WELL INFORMATION	(						<b>EVENT TYPE</b>	m			
Well ID: Casing ID:		Z (Inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	guildme	Low-Flow / Low Specify):Low Flow	Low Stress S Flow	Low-Flow / Low Stress Sampling Other (Specity): Low Flow (	YSI SERIAL NOでAMではこと Heron Serial NO: ひょうこうこく	यमान द्वार
				WATER	QUALITY IN	DICATOR P	QUALITY INDICATOR PARAMETERS (continued)	(penu				
Sampling Stage	Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C) +/- 0.1	PH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
Pre	0	0856		5/21/2		21.9	7.23	.789	68.9	900	156	Mool
Purge	2	2855		56.12		22.5	7.24	1789	10	67.43	78.7	-
	10	0800		5612	6	22.9	7.24	. 789	1	61.49	80.3	
	15	2060		56.12		23.0	7.24	682.	6.82	7.	24.7	
****	20	0910		56.12		23.0	7.24	189	6.19	1.43	1 88	>
Final	25	0915	2.9AL									
	30											
	35											
	40											
	45											
	50											
	55											HE
	09											NN
				NOTES (contin	(panu				ABBREVIATIONS			ĒPI
Sample ID: Sampled @	17 :0 B) B) E	Sample ID: 17 Sampled @ 091000 8 16 1-24	74						Cond Actual Con FT BTOC Feet Be Not Applicable nm - Not Measured	Cond Actual Conductivity FT BTOC Feet Below Top of Casing na - Not Applicable nm - Not Measured	ORP - Oxidation-Reduction Potential SEC - 7 Specific Electrical Conductance SU - Standard III Units - Temperature - C - Decrees Celcius	ton Potential SEC - 4
												F

					PROJE	PROJECT INFORMATION	MATION						
6.5	Hennepin			Client: Vis	stra								
ect Nur	ject Number: 2024.0054	054	Task #:	Start Date	: 7/56/2024	7+	Time: 1240						
d Perso	d Personnel: 6.	Asiahus	Finish Date	Finish Date: 07/10/21	Time:	Time: 173 7							
IL IN	LL INFORMATION	z				3		<b>EVENT TYPE</b>	'PE				
II ID:	TIEW 180	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	sampling .	Low-Flow / Other (Speci	Low-Flow / Low Stress Sampling Other (Specity): Low Flow	Sampling	YSI SERIAL NO	2	
			2	WATER Q	UALITY INDI	ICATOR PA	UALITY INDICATOR PARAMETERS (continued)	(panu			i		
mpling Stage	Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	Hd (us) (us)	SEC or Cond. (µs/cm)	Dissolved Oxygen	Turbidity (NTU) +/- 10%	ORP (mV) (mV)	Visual Clarity/Odor	
	0	1941		40,45				14	)	1	2		SA
ge	2	1245	Î	40,46	1	18.1	7.29	0,784	3.23	49	(623	(1005	
7	10	1250	1	46.50	1	8,8/	0	0.786	2.00	55.0	5,291	6	
4.	15	1255	1.5	40.85	,	18,4	7,18	0,187	0.57	2.00	100,3	P	
-	50	1300	2	40,57	1	19.3	7017	2820	540	8.94	1601, U	र्ड	
4	52	1305	12	40.60	1	13.4	27.18	1840	0.64	00,00	162.5	3	
4	30	1310	2.5		1	18.4	7,17	6733	0.69	8.92	160.7	-2	
7	35	5151	2		)	1x S	4.17	0.785	0.66	3/88	159.7	, -2	
nai	40												
	45												
	20												
	55												
	09												
				NOTES (continued)					ABBREVIATIONS	ATIONS			
nple II	nple ID, date, & time:	5	Sample ID; He	Hen_ 1880					Cond - Actual Controrivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Massured	iductivity elow Top of Casing	ORP - Oxidation-Reaudion Potential SEC - Specific Electrical Conductance SU - Standard Units Temp - Temperature 'C - Degrees Celicius 'C - Degrees Celicius	al SEC - Specific Electrical	HEN
	3	varioled at	at (9/01/										NE

Hemenin   Hemenin   Hemenin   Hemenin   Hemenin   Personnel: 2024.0054   Task #:   Personnel: 2024.0054   Tinish Date:   Personnel: 2024.005   Time   Volume   Personnel: 202   100   Time   Volume   Personnel: 202   100   Time   Personnel: 202   Time   Pers													
Time:	Site:	Hennepin		1	Client:	20							
Note	roject Num	ber: 2024.00	54	Task #:	Start Date			Time: 1144					
Image: Second   Image: Secon	eld Persor	nel: 65000	e Assallen	Finish Date:	- 1	1	1231						
Well Development   Continued	FLL INF	DRMATION							EVENT TY	'PE			
Minutes   Time   Volume   Depth to Water   Disabled   Time   Ti	ell ID:	281-N3	inches			Well Develor	pment Approach Sa	ampling	Low-Flow / Other (Spec	Low Stress Sairy):Low Flow	1 6	YSI SERIAL NO	
Figure   Minutes   Time   Wolume   Tenno   T					WATER Q	JALITY INDIC	CATOR PAF	RAMETERS (contin	(pani			111111111111111111111111111111111111111	
0   1/14/5	Stage Stage	Minutes Elapsed	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	1	Hd (SU) (SU) (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen	Turbidity (NTU) +/- 10%	ORP (mV) 1/- /0	Visual Clarity/Odor
5   145   10   15   174   173   174   175   174   175   17	Φ	0	hhill	-	40.39	1	1	1	1	1	1		1
50 0.5   19.0   1.36   0.823   0.74   1.65	ırge	2	1145	C		1	19.3		6,903		7.67		01000
155   1 40.41	*	10	1150	0.5		j	18.0	7.36	0.823	41.0	7.63	148.	3
100 1,5	-21	15	155		10,41	1		7.37	0,811	0.32	533	148,1	->
1.05	->	20	1200	1.5		Ì		7.37	0.810	0.24	215	148.2	->
NOTES (continued)  Samplad @ 1206  This is the telebon to old sing Fit Bro Feet Below to old sing Fit Bro Feet B	7	25	1205	CA			179	7.37	0,311	0.21	7.50	147.2	->
NOTES (continued)  Samplad © 1200  The set Beauting Fit Brook - Bett Beauting Fit Brook - Beautin	9000	30	1234								6		>
NOTES (continued)  Samplad (a) 1200  The set Beauting Fit Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Feet Bittor - Fe		35											
NOTES (continued) Samplad (200)		40											
NOTES (continued)  Samplad a 1206  This is the Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below to of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Below To of Casing Fit Broot - Beet Beet Broot - Beet Bro		45											
NOTES (continued)  Samplad (a) 1200		20											
NOTES (continued)  ABBREVIATIONS  Cond. Actual Consuming FI STO Feet Below Top of Casing FI STO Leet Below Top of C		55											
NOTES (continued)  San place (a) 1206		90											
Samplad ( ) 200					NOTES (continued)					ABBREVI/	VIIONS		
	mple ID	, date, & t	ime:	0	Samplad	0210	<0			Cond - Actual Conc FT BTOC - Feet Bel na - Not Applicable nm - Not Measured	fuctivity ow Top of Casing	ORP - Oxidation-Reduction Potential Condudance SU - Standard Units Temp - Temperature "C - Degrees Celcius	SEC - Specific Electrica

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

Track   Trac	Ollent: Start Date:						
Finish Date:   \$\langle \lambda \rangle \lambda \rangle \lambda \rangle \ran		Time: /24©					
Well Development	Finish Date: 8/6/24	ie: 1340					
Well Development   Development   Con-Flow-Low Stress Sampling Other YSI SERIAL NO.4/1211173   Well Volume Approach Sampling   Cheen   Vision   Condition   Condi		E	VENT TYP	Е			
VATER QUALITY INDICATOR PARAMETERS (continued)         Value         Value         Vision         Vision         Vision         Vision         Vision         Visual		ach Sampling	Low-Flow-L	Low Stress S Flow	ampling Other	YSI SERIAL NO: Heron Serial N	4/223119X
Volume   Depth to Water   Drawdown   Temp.   DH   SEC or   Dissolved   Turbidity   ORP   Visual	WATER QUALITY INDICATOR	OR PARAMETERS (continu	(pan				
1.55 6.22	Volume Depth to Water Drawdown Removed (Feet) (Feet)		SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
0.55 6.72	1 9			1	1	1	AN
0.5 6.34 — 14.3 1672 0.913 2.93 31.41) -126.0 \( \triangle \triang	6.22 //6.	7.46	7960	2	26.64	-94.3	1,
1 6.25	6.34 14.	1 673 00 7		2.93	14/8	126.	
2 6.21 — 14.0 7.42 0,964 3.77 21.59 7/39.5 N 1.  2.5 6.20 — 13.9 7.42 0,964 3.77 21.59 7/39.5 N 1.  H. 0.25 — — 13.9 7.42 0,964 3.77 21.59 7/39.5 N 1.  NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Imm. Not the saured Contains - Specific Retrieval Conductances 21.5 starting and the saured of Castering 18.5 starting		246	6960	3.77	L.	136.	4
2.5 6.20 — 13.9 7,42 0,964 3.77 21.59 759.5 N 1.  14 6.25 — — — — — — — — — — — — — — — — — — —	M - 12.9 .	7.42	0,470	5.86	21.89	1~	1
1	6.20	242	6,96,0	3.77	3		1
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Cond Adual Conductivity FIGTOR - Eer Below 10p of Casing na - Specific Electrical Conductance SU - Siands on the Applicable of Tempor - Eer Below 10p of Casing na - Specific Electrical Conductance SU - Siands on the Applicable of Temporature of Conductance Su - Stands of Casing na - Adual Conductance Su - Siands of Casing na - Adual Conductance Su - Adu	H		)	/	1	1	1
NOTES (continued)  ABBREVIATIONS  FIRETOR - Actual Conductivity  FORM - Actual Conductivity  FORM - Actual Conductivity  FORM - Actual Conductivity  FORM - Actual Conductivity  FORM - Condition-Reduction Potential SEC FORM - Specific Electrical Conductance St.) - Shands  In m Not Measured  **C - Degrees Celcus**  **C - Degrees Celcus**  **ABBREVIATIONS  FORM - Actual Conductivity  FORM - Condition-Reduction Potential SEC FORM - Specific Electrical Conductance St.) - Shands  **C - Degrees Celcus**  **ABBREVIATIONS  **C - Degrees Celcus**  **C - Degrees Celcus**  **ABBREVIATIONS  **ABBREVIATIONS  **C - Degrees Celcus**  **ABBREVIATIONS  **C - Degrees Celcus**  **ABBREVIATIONS							R M
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductority  To Brito Feet Below Top of Casing na - Specific Electrical Conductance SU - Stands  Not Applicable  In n. Not Measured  'C. Degrees Celdus  You Begrees Celdus							1ON
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductavity TISTICG - Feet Below Top of Casting na - Specific Electrical Conductance SU - Standa (Units - Temperature and - Temperature and - C- Degrees Celcus - C- Degrees -							ITO
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FIGTOC - Each Below Top of Casing na - Specific Electrical Conductance SU - Stands  Not Measured  Tenno - Tempor-Temperature  Tenno - Tempor-Temperature  C. Degrees Celcus							PRIN
NOTES (continued)  ABBREVIATIONS  CondActual Conductavity  TondActual Conductavity  Not Applicable  In in - Imperature  TondActual Conductavity  In in - Imperature  TondActual Conductavity  TondActual							IG A
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductor(N)  Cond Actual Conductor(N)  Cond Actual Conductor(N)  Cond Actual Conductor(N)  INC Feet Below Top of Casing na - Specific Electrical Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Stu - Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Studies Standar Conductance Standar Condu							IND
Cond Actual Conductivity ORP - Oxidation-Reduction Potential SEC PT BTOC - Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan Not Applicable Inn - Not Measured Temperature - C - Degrees Celous	NOTES (continued)			ABBREVI,	ATIONS		CO IEPI
	1			Cond Actual Con FT BTOC - Feet Be Not Applicable nm - Not Measured	ductivity low Top of Casing na -	ORP - Oxidation-Reductific Specific Electrical Conduction Units Temp - Temperature 'C - Degrees Celcius	RRECTIVE Stance SU - Standard Stance SU - Standard Stance SU - Standard Stance SU - Standard Stance SU - Standard Stance SU - Standard Sta

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(0)	1

Number   Control   Contr	Think   Park #   Start Date   \$1/2014   Time   \$1/5024	Number: Insonnel: 6. Asc. INFORMATION  22 L  D: D: D: T	Task #:		Client	Vistra							
Finish Date   State	Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 10   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 2   Fig. 3   Fig	C. As.   Information   C. As.   Information   C. As.			Start Date	00	4	5					
EVENT TYPE   Covalination   EVENT TYPE   Covalination   EVENT TYPE   Covalination   EVENT TYPE   Covalination	Problem   Prob	ng Minutes  B Elapsed  0 1  5 7  10 6		Finish Date.	- 1		7/ :ewi_ —	S,					
Minutes   1	Inches   1	ng Minutes  Elapsed  0 1  5 7  10 15							<b>EVENT TYF</b>	) E			
Minutes   Time   Wolume   Depth to Water   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.   PH   SEC or   Drawdown   Temp.	Minutes   Time   Volume   Depth to Water Drawdown   Tech	ng Minutes Elapsed 0 1 5 7				Well Develor Well Volume	pment Approach Sa	mpling	Low-Elew (Specify):Low	Low Stress \$	ampling Other	YSI SERIAL NO Heron Serial N	122513X
Figure   Wolume   Depth to Water   Drawdown   Temp.   PH   SEC or   Dissolved   Turbidity   CRP   Visual   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cond.   Congress   Cong.   Congress   Cong.   Con	Second   Turne   Colume   Company   Condition   Con	Belapsed 0 1 5 7 7 10 10 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15			WATER G		DICATOR P.	ARAMETERS (cor	ntinued)				
0	10   1515   1506   1507   18.04   16.6   17.64   10.875   14.30   10.77   15.1   10.16   10.5   15.4   10.5   10.2   10.5   10	0 5 10 <i>f</i>			oth to Water (Feet)	Drawdown (Feet)	Temp. (°C) +/- 0.1	pH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
5   753 © 0.5   18.6   18.6   7.6   0.875   4.30   0.77   75.1   Clear   15.4   7.5   0.871   3.18   7.5   0.871   1	5	5 10 6		2	85.	1	1	1	)				1
10 535 0.5 18.71 - 15.4 7.51 0.871 3.18 1.26 6.7.1 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	10 535 0.5 18.71 - 15.4 7.51 0.871 3.78 7.76 67.7 1		0,3		10%	1	0.0	7.66	0.875	4.30	1 1	1.31	Clear
15   54\(1)   19, 69   -   15,9   7.53   0.869   3.16   1.09   56.4   \(\tilde{\colored}\), \(\tilde{\colored}	15 /542		0 0		17.	1	15.9	7.52	118'0	3.18	1.36	63.1	1
20 1545 2 18.67 - 15.9 7.53 0.869 3.16 1.07 55.4 × +  30 35 40 40  45 50	25 1557 2 18.67 - 15.9 10.869 3.16 1.7 55.4 v 7 30 31 315 40 415 50 60 NOTES (continued)  ABBREVIATIONS  NATABLEABER (Sometimed)  ABBREVIATIONS  NATABLEABER (Sometimed)  N			18	69	1	5.		0,869		1.09	56.7	1,7
25 /552   18.58	25   552   18.58	20	2	18	67	1	15.9	7.53	0.869	3.16	1.17	١,	4
30 35 40 40 45 50 50 60 NOTES (continued)  NOTES (continued)  ABBREVIATIONS  For Adrial Conduction 8 Live Statement Conductions 8 Li	35 40 45 45 50 50 50 50 50 60 60 60 60 60 60 60 60 60 60 60 60 60	25 /55		1 7	24	1	1			/		1	1
35 40 40	35   40   45   45   45   45   45   45   4	30							119				
40 40 40 45 45 45 45 45 45 45 45 45 45 45 45 45	40 45 50 50 60 NOTES (continued)  NOTES (continued)  ABBREVIATIONS  On 18 100 - Feet blew Top of Casing raw Only Assured On 18 100 - Feet blew Top of Casing raw On 18	35											
45   Solution   Solut	Solution   Solution	40											
S5   S6   S6   S6   S6   S6   S6   S6	SS   ABBREVIATIONS   NOTES (continued)	45											
ABBREVIATIONS   NOTES (continued)   ABBREVIATIONS   Specific Electrical Conductance SU - Standard Conductance SU - Stand	ABBREVIATIONS   NOTES (continued)	20											
ABBREVIATIONS   NOTES (continued)	NOTES (continued)   ABBREVIATIONS	55											HE
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductory  PT BTOC Feet Below Top of Casing na- Specific Electrical Conductance SU - Standard  Not Applicable let in this - Temperature Anni-Not Measured Temperatu	NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FI BTOC Feet Below Top of Casing na. Specific Electrical Conductance SU - Standard  Not Applicable Inn. Not Measured  Cond Actual Conductivity FI BTOC Feet Below Top of Casing na. Specific Electrical Conductance SU - Standard  Only  Not Applicable Inn. Not Measured  Cond Actual Conductivity Institute  Cond Actual Conductivity Institute I	09											NN
Ond . Acual Conductivity ORP - Oxidation-Reduction Potential SEC - Cond Acual Conductivity ORP - Oxidation-Reduction Potential SEC - Cond Acual Conductivity ORP - Oxidation-Reduction Potential SEC - Conduction Cond	on §§ 16 1 2 0 2 N  Order - Actual Conductivity  Order - Oxidation-Reduction Potential SEC - I and Part of Cashing and Specific Electrical Conductance SU - Standard Conductan			N	TES (continu	(pa				ABBREVI			ĔPII
PLAN	PLANT, LAN HEN-2	-22	12021							Cong Actual Con FT BTOC - Feet Be Not Applicable nm - Not Measured		ORP - Oxidation-Reduct Specific Electrical Condi Units Temp - Temperature °C - Degrees Celcius	ton Potential SEC - Natance SU - Standard
	NT, LANHEN-2												PLAN

Number:   Task #:   Client: Start Date: 3   O   7 \( \triangle \	Project Numbe Field Personn					PR	TACSECT INFORMATION	KIMALION					
C	Field Personn	Hennepin er:		Task #:	Client: Start I		24	Time: / 444					
EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   Continues   EVENT TYPE   EVENT	WELL INFO	el:	.		3/6	421	Time:	N					
Figure   Cow-FlowEnding States Sampling Other Parameter   Cow-FlowEnding States Sampling Other Parameter   Cow-FlowEnding Parameter   Company		RMATION							<b>EVENT TYP</b>	ñ			
WATER QUALITY INDICATOR PARAMETERS (continued)           Volume (emoved gallons)         Water Drawdown Temp. (*SU)         pH (continued)         SEC or Dissolved (Turbidity ORP Visual Continued)         Turbidity (mtV) (mtV) (mtV) (mtV) (mtV) (mtV)         Visual Continued)           ○○	Vell ID: 22 Casing ID:	ا	'M Inches			Well Develo	pment e Approach Sa	mpling	Low-Flew (Specify):Low	Low Stress S.	ampling Other	YSI SERIAL NO: Heron Serial N	X81222110:0
Volume   Depth to Water   Drawdown   Temp.   Cond. Oxygen   (NTU)   (mV)   Clarif (mV)   Clarif (mV)   Cond. Oxygen   (NTU)   (mV)   Clarif (mV)   Clari					WATER	R QUALITY IN	DICATOR P.	ARAMETERS (cont	finued)				
20.8	Stage Stage	Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)			pH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
0.35 26.36	re Fre	0	1443	1	20.0					1			
0.5 19.77 — 16.5 7.21 0.947 1.57 3.44 -56.3 によい 1.57 3.44 -56.3 によい 1.5 19.39 — 16.5 7.21 0.9950 1.01 3.710 구73.5	Purge	5	1450		26.36	}	0.11		a935	1		\ \	
1.5 19.37 — 16.5 7.21 0.950 1.07 3.56 -84.2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10	1455	0.5	16,77	1		7.21	0.947	10	इ,यव	-56.3	
1.5 19.34		15	1500	†	CN.61	1			0,950	107	376	797.5	c
2 / 何.35	****	20	1505	1.5		)			0,950	1.07	3,56	2-48-	1
NOTES (continued)  NOTES (continued)  NOTES (continued)  ABBREVIATIONS  For Contactivity For Continued Survey For Continued Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For Survey For For For Survey For For Survey For For Survey For For For Survey For For For Survey For For For Survey For For For Survey For For For For Survey For For For Survey For For For For Survey For For For For For Survey For For For For For For Survey For For For For For For For For For For	<b>→</b>	25	1510	7	19.35	)	16.5	7.	1960	0,97	47.5	١ ،	0
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  FIGURE: Feet Below Top of Casing na Specific Electrical Conductance SU - Stan In- Not Measured Figure: Fi	Find)	30	1522		19.40								
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductivity FIF BTOC - Feet Below Top of Casing na- Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductance SU - Stan Not Measured Conductivity Special Conductivity Not Measured Conductivity Special Conductivity Special Conductivity Not Measured Conductivity Special Conductivity Not Measured Conductivity Special		35											
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conduction Py FI BTOC - Feet Below Top of Casing na Specific Electrical Conductance SU - Stan Nat Applicable In In In In In In In In In In In In In I		40											
NOTES (continued)  ABBREVIATIONS  Fond - Actual Conductority FI BTOC - Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan nm - Not Measured From - Temperature - Temperature - Temperature - Conductority - Temperature - T		45											
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductivity TF 18TOC - Feet Below Top of Casing na- NA Applicable Nm - Not Measured Temp - Temperature Temp - Temp - Temperature Temp - Temperature Temp - Temp - Temperature Temp - Temp - Temperature Temp - Te		20											
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductivity TF 18TOC - Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan National Co		55											HE
NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan Not Applicable		09											NN
Cond - Actual Conductivity  TH BTOC - Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Stan NA Applicable  In Instruction of Casing na - Specific Electrical Conductance SU - Specific Electrica					NOTES (conti	inued)				ABBREVIA	VIIONS		EPI
	Sample ID: Sampled @	15150	.D 3/6/2	2						Cond - Actual Cond FT BTOC - Feet Bel Not Applicable nm - Not Measured	ductivity Iow Top of Casing na	ORP - Oxidation-Reducti Specific Electrical Condu Units Temp - Temperature °C - Degrees Celcius	on Potential SEC - Ctance SU - Standard STANDORD

Site:	Hennepin			Client: Vistra	ra							
Project Nun	Project Number: 2024.0054	054	Task #:		7 / 1 3/2024		Time: 0840					
Field Perso.	nnel:	Field Personnel: (5. Assolve)	Finish Date:	42/81/10	Time:	Time: 0955						
WELL INF	WELL INFORMATION	Z						<b>EVENT TYPE</b>	ш			
Well ID: Heh-Z Casing ID:	22-43	inches			Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	ampling	Low-Flow / Low Stress Sampling Other (specify):Low Flow	w Stress Sar Low Flow		YSI SERIAL NO	
				WATER QL	IALITY INDI	CATOR PA	WATER QUALITY INDICATOR PARAMETERS (continued)	(penu		2	4122318X	
Sampling Stage	Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp.	Hd (US)	SEC or Cond. (µs/cm)	Dissolved Coxygen	Turbidity (NTU) +/- 10%	ORP (mV)	Visual Clarity/Odor
pre	0	0841	J	1631	)	J		1 2			780	1
burge	2	0845	0.0	16.64	1	13.6	7.31	1.077	174	NSO	-52.8	Clous
>	10	0880	0,5	16.72	1	13.5	7.47	1,076	2.25 6	3,42	-97.3	3
4	15	OXSS	)	16.30	ì	125	7.45	1,072	2.2.1	6.39	-100.3	وچ
4	20	0000	7	16.85	1	12.5	2.70	1.009	5.18 /	2.60	7 66-	7
A	25	10905	C.	16.79		12.5	7,49	1.068	0/10	19.91	-950	7
- <del>J</del>	30	0/40	7	1672	ı	13.6	7,50		0.16	9.60	2116-	>
Y	35	5160	4.5	16.77	Y	13.6	751	1.067	1,15/1	6.58	-87.0	12
7	40	0920	(O	16.30	1	13.6	7.81	1.067	0.14	841	85,8	7
-) 89	45	0925	5.5	18.91	1	13,6	7,81	1.066	1/1/1	18.54	668-	7
->	20	0880	0	16.63	١	13.6	7.51	1.00%	11/1	13.8	1.80.4	-
-)	55	0935	7	16,72	J	13.6	157		0,13	8,00	-78.6	×
7	09	0440	17.5	16.8M		13.4	1.51	1:000	0.15	18.0)	7.8.1	->
				NOTES (continued)				9	<b>ABBREVIATIONS</b>	SNOL		
Sample II	Sample ID, date, & time:		1 1	: Hen 23				O L E E	Cond - Actual Conductivity FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Measured	1	ORP - Oxidation-Reduction Patential SEC - Specific Electrical Conductance SU - Standard Units Temp - Temperature "C - Degrees Celcius" "C - Degrees Celcius	SEC - Specific Electrical
		00.00/		はたのりつう	]	10/0/1		L				

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

-0

IFORMATION  27  21  21  21  21  Winutes Time Volun	Start Date:	Þ		1					
ORMATION  27  21  21  2 (* Inches)  Minutes   Time   Volun			4	Time: )0   8					
27 2 Inches Minutes Time	Finish Date: 8/4/2021	127	Time: 1055	55					
21 2th Inches Minutes Time					<b>EVENT TYPE</b>	m			
Minutes Time		Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	guildm	Low-Flow / Low S (Specify):Low Flow	Low Stress S Flow	Low-Flow / Low Stress Sampling Other (Specify):Low Flow	YSI SERIAL NO: <i>仏化2318</i> % Heron Serial NO: <i>仏ぱ</i> プシ&×	: 4/223182 10:446738x
Minutes Time	WATER QI		DICATOR PA	JALITY INDICATOR PARAMETERS (continued)	tinued)				
Elapsed (military) F	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C) +/- 0.1	pH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
Pre 0 1020 0	917	1							
Purge 5 1025 0.5>	4.43		18.9	21.5	0.950	0,43	10.15	2.	Clear
		1	7.21	7.11	0,450	0.23	7.89	16.7	4 5
(15   10 <sup>3</sup> )	4.43		12.8	7.11	0,450	0/10	5.75	-11.3	13
	hin the to	1	L. 21	7.5	0.949	0.11	6,57	-147	77 2
Glad 25 1050 3.5	4.54	1			\		1	}	1
30									
35									
40									
45									
20									
55									HE
09									NN
	NOTES (continue	nued)				ABBREVIATIONS	ATIONS		EPI
Sample ID: $-27$ Sampled @ $1045$ on $9/6/201^{4}$						Cond - Actual Cond FT BTOC - Feet Be Not Applicable nm - Not Measured	Cona - Actual Conductivity FT BTOC - Feet Below Top of Casing na +- Not Applicable nm - Not Measured	ORP - Oxdation-Reduction Patential SEC - Specific Electrical Conductance SU - Sland Units Termo - Temperature "C - Degrees Celcus	MECTIVE Porential SEC - National Standard SEC - National Standard SEC - National Section Standard SEC - National Section Section Section Section Section Section Section Section Section Section Section Section Section Sec
									PI

Cilent   Vision   Vision   Start   Time: (04.30	Foreign   Time   Conditions   Time   Conditions   Time   Colditions   Time   Colditions   Conditions   Colditions   Cold	Hennepin nber: Cormation  CZ  SZ  State  Minutes  Elapsed											
Finish Date;	Finish Date:	nnel: 6. A cormation corma			Client:	Н							
Finish Date:	Note   Depth to Water   Discontinued   Discontinu	ORMATION  CARATION	Task #:	Start Date	00	4:	Time: 0930						
Well Development   Lor=Graft   Law Sizes Sampling Other   YSI SERIAL NO: 4/1723    Well Development   Lor=Graft   Law Sizes Sampling Other   YSI SERIAL NO: 4/1723    Well Volume Approach Sampling   Lor=Graft	Well Development   Configuration   Configura	SZ 284	34116	Finis Finis	- 1		Time: //	//5					
Well Development   Noting De	Well Development   Low-Town Low Sines Sampling Other VSI SERIAL NO: L1[L27]   Heron Serial No: L1[L27]   Heron Serial No: L1[L27]   Heron Serial No: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[L27]   Heron Serial NO: L1[	Minutes Elapsed							<b>EVENT TYF</b>	ž			
WATER QUALITY INDICATOR PARAMETERS (continued)   WATER QUALITY INDICATOR PARAMETERS (continued)   WATER QUALITY INDICATOR PARAMETERS (continued)   Cond.	WATER QUALITY INDICATOR PARAMETERS (continued)   Water Quality Indicator Parameters (continued)   Water Orandom Temp   PH   SEC or Dissolved Turbidity   ORP   Vigural Condition of the Condit	Minutes Elapsed	ches			Well Develo Well Volume	pment Rpproach Sa	gnildme	Lowatiow (Specify):Low	Low Strass S	ampling Other	YSI SERIAL NO Heron Serial N	0:4112318X
SEC or   Dissolved   Turbidity   ORP   Visus	Second   Condition   Temple   Condition   Temple   Condition   C	Minutes Elapsed			WATER C	<b>UALITY IN</b>	DICATOR P	ARAMETERS (cor	tinued)				
5.50	5.50 5.45 5.45 5.45 5.45 7.06 0.818 5.45 7.06 0.818 0.817 0.62 2.15 0.814 0.817 0.62 2.15 0.814 0.817 0.62 2.15 0.814 0.818 0.817 0.62 1.1810 0.618 0.819		Time nilitary)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		PH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's		Visual Clarity
5.50 — 17.7 7.00 0.878 2.40 1.42 74.1 0.85.5 1.45.5 1.44.1 0.818 2.40 1.45.5 1.44.1 0.85.45 1.44.1 0.85.45 1.45.5 1.44.1 0.85.45 1.45.5	5.50	0	30	)	5.48								
5.45	5.45	2	35	0.5>	5,50	1	13.3	7.11	18	076			١.
5.4マ	5.47		27.	7	5.45	)	1 .	7.00	0,819	2.40	2	.   `	62
5.65	5.65	Ĩ	15		5.48	>		7.05	1 -	08.0		١,	l.
5.45   7.4   7.06   0.817   0.62   2.25   0.8.4   1.0	S. 45   7. 4   7.06   0.817   0.62   2.25   0.8.4   1.4   1.06	20	90		5.68	}		7.03	0.410	570	4.3%	٠I -	
NOTES (continued)  ABBREVIATIONS  Cond Acutal Conductivity FT BTOG - Feet Elebrical Conduction Potential SEC Not Applicable Imm - Not Measured C Degrees Celcius C Degrees Celcius	NOTES (continued)  ABBREVIATIONS  For The Top Containing and The Entried Conductance SU - Start Management of Caster Relative Top of Cast	/ 25	5	S	5.45		,	7.06	10.817	0.67	275	68.7	
NOTES (continued)  ABBREVIATIONS  THOUGH - Actual Conductivity FT BTOC - Feat Below Top of Casing na- Not Applicable Tim - Not Measured *C - Degrees Celdus *C - Degrees Celdus	NOTES (continued)  ABBREVIATIONS For End Conductivity For End Conductivi	30	%	3	5.35								
NOTES (continued)  ABBREVIATIONS  FI BTOC - Feat Below Top of Casing na - Specific Electrical Conductance SU - Stanton - Not Measured  Temp - Temperature  *C - Degrees Cedius*	NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FT BTOG Feet Below Top of Casting na Potential SEC FT BTOG Feet Below Top of Casting na Potential SEC FT BTOG Actual Conductivity	35											,
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FT BTOC Feet Below Top of Casingna- Units Temperature Temp - Temperature Temp - Temperature Temp -	NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FT BTOC Feet Below Top of Casing na. Specific Electrical Conductances SU - Stand Managed From the Conductance SU - Stand Managed From - Inches Calculus  ANA Applicable From - Mark Managed From - Inches Calculus  Co. Degrees Calculus  ABBREVIATIONS  Specific Electrical Conductance SU - Stand Managed From - Inches Calculus  ANA Applicable From - Co. Degrees Calculus  Co. Degrees Calculus  ANA Managed From - Inches Man	40											
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FI BTOC Feat Below Top of Casing na- Not Applicable Imp Not Measured - C - Degrees Cedus - C - Degrees Cedus	NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FT BTOC. Feet Below Top of Casing na. Not Applicable from - Temperature Temp Tempe	45											
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FT BTOC - Feet Below Top of Casing na. Specific Electrical Conduction Potential SEC FT BTOC - Feet Below Top of Casing na. Specific Electrical Conduction Sol	NOTES (continued)  ABBREVIATIONS  Cond Actual Conduction by Institute St. Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Cond Actual Conduction Potential SEC Fr 1970 Conduction Potential SEC Fr 1970 Conduction Potential SEC Fr 1970 Conduction Potential SEC Fr 1970 From Potential SEC Fr 1970 From Potential SEC Fr 1970 From Potential SEC Fr 1970 From Potential SEC From Potent	20											
NOTES (continued)  ABBREVIATIONS  Cond Actual Conduction Potential SEC  THIS TO C Feet Below Top of Casing na Specific Electrical Conductance SU - Stan  Not Applicable Tim - Not Measured Temperature C - Degrees Cedus	NOTES (continued)  ABBREVIATIONS  Cond Actual Conduction Potential SEC   For the Blow Top of Casing na.   Specific Eleutrical Conductance SU Start   Not Applicable   Temperature	55											HE
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FI BTOC Feet Below Top of Casing ne - Specific Electrical Conductance SU - Standard	NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FI BTOC Feet Bellow Top of Casing na- Not Applicable Inn Not Measured  C Degrees Celcus  C Degrees Celcus  No. Applicable  C Degrees Celcus  C Degrees Celcus  No. Applicable  C Degrees Celcus  C Degrees Celcus  No. Applicable  C Degrees Celcus  C Degrees Celcus	09											ENN
Cond Actual Conductivity ORP - Oxidation-Reduction Potential SEC FT BTOC Feet Below Top of Casing na - Specific Electrical Conductance SU - Slan Not Applicable Inn - Not Measured Temp - Temperature "C - Degrees Celcius	Cond Actual Conductivity  TH BTC - Test Below Top of Casing na- Specific Electrical Conductance SU - Sian NA Applicable Imn - Not Measured  "C - Degrees Celcius "C - Degrees Celcius "C - Degrees Celcius "A Not Measured "C - Degrees Celcius "C - Degrees Celcius "A Not Measured "A Not Measured "C - Degrees Celcius "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured "A Not Measured				NOTES (continu	(pa				ABBREVIA	VIONS		IEPI
R P	HEN-257-	ample ID: $-32$ ampled @ $/060$ on $\delta$	1612	024						Cond - Actual Conc FT BTOC - Feet Bel Not Applicable nm - Not Measured	Suctivity Iow Top of Casing na	ORP - Oxidation-Reductive Specific Electrical Condunity Units Temp - Temperature °C - Degrees Celcius	on Potential SEC. A Stander SU - Stander SU - Stander SU - Stander SU - Stander SU - Stander SU - STANDER SU
	HEN-257-												RP

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

APPENDIX A.

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Purge

Pre

F. S.

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Purge

Pre

Well ID: 3 Casing ID:

Sampling Stage

ANT, LANDFILL	
HEN-257-801	

Time   Hearing   Minutes   Hask #:   Calent   Diame   Hask #:   Calent   Diame   Hask #:   Calent   Diame   Hask #:   Calent   Diame   Hask #:   Linish Date:   Calent   Diame   Lask #:   Linish Date:													
Start Date:   7/10/2024   Time-Hydy CA   Time-Hydy CA   Finish Date:   7/10/2024   Time-Hydy CA   Time-Hydy C	Site: H	ennepin			Client: Vis	E							
Finish Date: 07/10/2020  Time: 1452   1420	Project Number	r: 2024.01	054	Task #:	Start Date			Time: 1440 61	ď				
FORMATION   FUND   FU	ield Personnel	3	Assallary	Finish Date	1202/01/LOE	Time:	2941	0241					
Minutes   Time   Volume   Depth to Water   Cond.   C	WELL INFOR	MATIO	Z						EVENT T	YPE			
Minutes   Time   Volume   Depth to Water   Drawdown   Temp.   Ph   SEC or Dissolved   Ceet	Well ID: Hand Casing ID:	1 405	inches			Well Develo Well Volume	pment Approach Si	ampling	Low-Flow Other (Spe	/ Low Stress Soiry): Low Flow	ampling	YSI SERIAL NO 24A/0/22S	
Minutes   Time   Volume   Depth to Water   Drawdown   Temp.   PH   SEC or Dissolved   Stage   Elapsed   (milian)   Removed   (Feet)   (F					WATER	<b>UALITY INDI</b>	CATOR PA	RAMETERS (conti	nued)				
10 1425		Minutes	Time (military)	Volume Removed (gallons)		Drawdown (Feet)	Temp.	0	SEC or Cond. (µs/cm) +/- 3%	Dissolved Oxygen 7, 2 (mg/L) +/- 10%	Turbidity (NTU) +/- 10%	ORP (mv)	Visual Clarity/Odor
5 1425 40.38 — 17.8 7.84 0.723 0.90 10 1470 40.38 — 17.8 7.84 0.719 0.20 15 1440 7.85 0.718 0.20 25 1440 40.38 10.38 10.87 0.718 0.20 30 1440 40.38 10.38 10.81 0.714 0.18 45 15 16 16 16 16 16 16 16 16 16 16 16 16 16	ore	0	1421		40.38	(	1	)	1	1	1	\ \\	
10 1470 40.38 - 178 7.84 0.119 0.10 15 143S 40.38 - 17.8 7.83 0.115 0.20 20 144C 10.38 10.20 30 10.38 10.38 10.38 10.38 40 10.38 10.38 10.38 10.38 41 10.38 10.38 10.38 10.38 42 10.38 10.38 10.38 10.38 10.38 45 10.38	ourge	2	1425		40,38	1	17.8	7.84	0,72		25.21	92,3	61206
15 1435	->	10	L				178	7.84	0.718	0.20	692	5.011	7
25 144C 10.38 7.83 0.714. D.18 30 40 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	-1	15	(435			)	19.7		511.0	0.20	9.03	115.2	8
25 HTTE MASS HO.38 30 40 45 50 55	9	20	0441				17.8	W.	NILO	0	2,50	118.1	8
35 40 45 50 55	Day's	25	SHIP COLLA	2	40.38								
	000	30											
	76	35											
	Of Of	40											
	80	45											
25		50											
		55											
09		90											
NOTES (continued) ABBREVIATIONS					NOTES (continued					ABBREVI	ATIONS		
Sample ID, date, & time: Son plant ID then HO術S TONG エロ・House Conductively Top of Casing Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute in the Management Institute Insti	Sample ID, o	Jate, &		JE ZJO	>: Hen-40#5					Cond - Actual Cor FT BTOC - Feel Bo na - Not Applicable	nductivity elow Top of Casing	ORP - Oxdation-Reduction Potential SEC - Specific Electrical Conductance SL - Standard Units Temperature C - Degrees Celdus:	SEC - Specific Electro

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

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Single   Person mole   20   Color					PROJ	PROJECT INFORMATION	MALION					
Columber   Columber	Site: Hennepin				istra		4					
Fig. 18   Personnet   Standing   Finish Date: 07/16/2024   Time: 04077   EVENT TYPE	Project Number: 2024.0	054	Task #:	Start [			Time: 080 >					
FELL INFORMATION	Field Personnel:	Assallen	Finish Date:	1001/01/00	I	70907						
Well Development   Down-Flow   Low-Flow	WELL INFORMATIO	Z						EVENT TY	PE			
Single   Minutes   Time   Volume   Depth to Water   Drawdown   Feest   Cond.	Well ID: Hen 15.				Well Develo Well Volume	pment PApproach S	ampling	Low-Flow / Other (Speci	Low Stress S fy):Low Flow	sampling	YSI SERIAL NO	
Single   Elapsed   Time   Volume   Depth to Water   Drawdown   Temp.   Elapsed   Time   Time   Single   Elapsed   Time				WATER	<b>UALITY INDI</b>	CATOR PA	RAMETERS (cont	inued)				
10   0807   20.26		Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	Hd (su)	SEC or Cond. (µs/cm) +/- 3%	Dissolved Oxygen (mg/L) +/- 10%	Turbidity (NTU) +/- 10%	ORP (mV) 77-10%	Visual Clarity/Odor
urge 5 0810 0 20.24 — W   97 7 10 0.911 1.73 37.54  1 10 0815 0 20.25 — 19.6 7.07 0.416 0.45 32.18  1 2 082		L080	-	1 4	1	1		(		1	l	1
1 10 0815 0. 20.25 - 19.6 7.08 0.416 0.45 32.18  1 20 0825 1 20.23 - 19.6 7.07 0.911 0.18 16.01  2 20.21 - 19.6 7.07 0.911 0.18 16.01  2 20.22 - 19.6 7.07 0.911 0.17 12.34  2 30 0835 3 20.23 - 19.6 7.07 0.911 0.17 12.34  2 30 0835 3 20.23 - 19.7 7.07 0.911 0.17 12.34  2 30 0835 3 20.23 - 19.7 7.07 0.911 0.17 12.34  2 35 0840 44 20.23 - 19.4 7.07 0.911 0.17 12.10  2 50		0810	0	1 .	1 CA		Ι.	1160	1.73	37,54	13.9	Clear
4 15 0820 1 20.23 — 19.6 7.07 0.913 0.21 22.48		5180	9	20.75	)	19.6	7.08	0.416	0.45	32.18	57.7	X
よ       20       O82 = 5       1       20 € 22       1		0820	,	2	١	19.60	1.07	0.413	120	22.48		7
ψ         25         O830         2         Φ0.2         -         IQ.6         7.07         0.412         0.17         IZ.34           ψ         30         O835         3         20.23         -         IQ.7         7.07         0.412         0.18         IZ.16           ψ         35         O840         4         20.23         IQ.7         7.07         0.412         0.18         IZ.16           chack         45         20.23         IQ.7         7.07         0.41         0.17         IZ.16           50         50         Co.22         Co.22         Co.22         Co.21	20	082 5	,	20.22	١	19.6	7.07	116.0	0.13	10.01		7
1 30 0835 3 20.23 19.7 7.07 0.912 0.18 12.10	۲-	0830	7		,	19.6	7.07	0,910	6,17	12,34	0.06	7
(2 hat) 35 0840 44 20.23 14.7 7.07 0.41 0.17 12.12 12.12 14.9 38 42 5 20.2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	**	0835	8	20.23		19.7	7.07	0.912	0.18	12.16	94.5	٠,
10   10   10   10   10   10   10   10	3e →	0,840	7	20.23		19.7	7.07	0.911	-		0°00	Ż
55	الملاء	27 80	N	4		)	)	1	)	1	{	)
50												
NOTES (continued) Sampled (a) OB42 on O7/16/24 Sampled (a) OB42 on O7/16/24  This was Applicable from the form of the same of the control Massured or												
NOTES (continued) Sampled (a) OSHZ on O7/16/24  Sampled (b) OSHZ on O7/16/24  Fig. 102. Fig. 102. Fig. 103	55											
Sampled (a) 0842 on 07/16/24  Sampled (a) 0842 on 07/16/24  The sample of the sample o	09											
Sampled (a) 0842 on 07/16/24 FIBITO-Teal Below Top of Casing Inn - Not Measured Inn - Not Measured Inn - Not Measured				NOTES (continue	e e				ABBREVI	ATIONS		
	Sample ID, date, &		1	50	1/16/24				Cond - Actual Cor FT BTOC - Feel B na - Not Applicable	nductivity elow Top of Casing e d	ORP - Oxidation-Reduction Potentia Conductance SU - Standard Units Temp - Temperature °C - Degrees Celcius	SEC - Specific Electrica
1930 10 10 10 10 10 10 10 10 10 10 10 10 10	Sar	ON ID! HOS	727									

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

Page 78 of 89 08/26/24

APPENDIX A.

Page 79 of 89

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Purge Pre

					PROJE	PROJECT INFORMATION	MATION					
Site:	Hennepin			Client: Vis	/istra							
roject Nur	Project Number: 2024.0054	154	Task #:	Start Da	7 1 8 2024		Time: 6830	3G				
Field Personnel:	$\neg$	-olen	Finish Date:	James	Time;							
FLL INF	WELL INFORMATION	7						EVENTTYPE	7			
well ID: -18 Casing ID: 2 4	7 8 8 K	(inches	Blade	<u></u>	Well Development Well Volume Appro	Well Development Well Volume Approach Sampling	mpling	Low-Flow / Other (speci	Low-Flow / Low Stress Sampling Other (specify):Low Flow	Sampling 24	24 - 160 326	
			7	WATER QI	JALITY INDIC	SATOR PAR	QUALITY INDICATOR PARAMETERS (continued)	1971	100	22 3CZ	2DF 2202054FF	
Sampling Stage	Minutes Elapsed	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C) +/- 10%	<b>pH</b> (su) -/+	SEC or Cond. (µs/cm) +7-3%	olved /gen g/L)	Turbidity (NTU) +/- 10%	ORP (mV) +/- 10%	Visual Clarity/Odor
pre	0	6835		40.53								- Plands
purge	2	0848		40.53		100.00	7.70	603	08.	209.17	127.5	
	10	0850		46.53		18,6	7.10	808	07'	55.79	121.7	1
L	15	0855		40.53		000	7.68	909	610	27.14	115.2	Clos v
X	20	00000		46.53		18.6	7,69	910	61.	13.19	116.3	. 1
10	25	0905	2.601	(46.53)		9.8/	7,609	3/2	20.	8.50	109.1	
	30	0160				,						
	35											
	40											
	45											
	20											
	55											
	09											
				NOTES (continued)					ABBREVIATIONS	ATIONS		
ample II	Sample ID, date, & time	\mathred{\tau}	01011	7	7.00	6	2) 00	7	Cond Aptual Con FT BTOC - Feel Be na - Not Applicable nm - Not Measured	Cond Artual Conductivity, FT BTOC - Feet Below Top of Casing na - Not Applicable nm - Not Measured	DRP - Dudation-Reduction Potential SEC - Specific Electrical Conductance SU-Standard Units Temps - Temperature - C - Degrees Cerbius	citial SEC • Specific Electrical Is
			!									

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NSM	-
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Figure   Hemistory   The Proposition   The Pro	ite: Hemepin Project Number: ield Personnel: 6. M 15 20 10					2	LACOT INTORMATION					
Number   1945   Time   Time	*roject Number: Field Personnel: 6. Missin  WELL INFORMATION			Client	Vistra							
Note   Decision   Co. Astrance   C	ield Personnel: 6. M. LFAIN	_	ask #:	Start Dat		4	Time: 1345					
FUENT TYPE	WELL INFORMATION	Sal	Finisl	08/00	20	_ Time: //-	145					
	26.							EVENT TYE	35			
Maintes   Time   Volume   Depth to Water   Dissolved   Turbidity   ORP   Visual   Elepsed   Turbidity   Claim   Clai	N.	hes			Well Develor Well Volume	pment Approach Sa	ampling	Low-Filow) (Specify):Low	/ Low Stress S v Flow	sampling Other	YSI SERIAL NO Heron Serial N	141227/8X 0:4116738X
Minutes   Time   Volume   Depth to Water   Deviction   Tene)   Time				WATER	<b>JUALITY IN</b>	DICATOR P	ARAMETERS (con	tinued)				
13   140   1.35   1	Minutes Elapsed	Time ılitary)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		pH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's	ORP (mV) +/- 10mV	Visual Clarity
15   1555   0.55   22.42	0	50	1	22.71		1						
0.5 21.74	5	h	0.5>	ı '	1	1 :	1	12	100	13		IND.
15   21.71   7.02   0.937   0.35   1.07   0.40   0.00		20	0.5	1	)	١.	,	8660		58,		1
1.5 21.72	7	2		21.71	1	15.0	7.07	0,937	5	B. B. B.	63.3	13
ABBREVIATIONS   NOTES (continued)   NOTES (c	70	0	1.5	<u> </u>	1			2939	0.20	2.97	1.00	2
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Order Arman Convocativity Fig. 10.2. Feet for the form of the	14	5	2.5	١,	)			0939	0.13	IM	1 1	1
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  FIGUR: - First Bow Top of casing na - Specific Electrical Conductions BL-State  The Land M.S.,	30	10	[	17.12	1		1	1	1	1	1	ſ
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  For Actual Conductivity	35											
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Cond. Article Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Contuctivity)  From Contuctivity (Cond. Article Con	40											
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  ORP - Oxidation-Reduction Potential SEC   1202 M   1700 - 1500   150	45											
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Cond - Actual Conductavity Specific Electrical Conductance SU - Stan Into - Temperature Into	20											
NOTES (continued)  NOTES (continued)  ABBREVIATIONS  Cond. Actual Conductation Potential SEC For I BTOC. Feet Blow Top of Casing na. Specific Electrical Conductance SU- Stan Into Applicable Temperature Temperat	55											HE
NOTES (continued)  ABBREVIATIONS  CondActual Conductivity  First Co Feet Below Top of Casing na - Specific Electrical Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Tentral Conductance SU - Stan Not Applicable Tentral Conductance SU - Stan Tentral Conductance SU -	09											NN
Cond Actual Conductivity  Cond Actual Conductivity  FT 5100 - Fee Below Top of Casing na- Specific Electrical Conductions SU-Stan  I G   Zozu  I C - Legrees Calcius  C - Degrees Calcius  H  H  H  C - C - C - C - C - C - C - C - C - C				NOTES (continu	ned)				ABBREVI	ATIONS		€PI
O 27/	ample ID: ***********************************	6 2		19 M 50					Cond - Actual Con FT BTOC - Feet Be Not Applicable nm - Not Measured	iductivity blow Top of Casing na –	ORP - Oxidation-Reduch Specific Electrical Condu Units Temp - Temperature °C - Degrees Celcius	on Potential SEC. V
0 1						2						PLANT, I HEN
)						777	$\sim$					_AND N-257

Well Well well timed)	Site:					DR	PROJECT INFORMATION	KMALION					
INFORMATION  INFO	Project Numb	91	1	ask #:	Client: Start Da		24		0				
Formation   Form	Field Personn		orne 1	Linist Linist	Date:	3 NA	- 7	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\					
Mail Development   Cow-Flow   Low-Flow	WELL INFO	RMATION							<b>EVENT TYP</b>	m			
MATER QUALITY INDICATOR PARAMETERS (continued)	Well ID: Casing ID:	2	unches			Well Develo Well Volume	pment Rpproach Sa	mpling	Low-Flow / (Specify):Low	Low Stress Sa Flow	ampling Other	YSI SERIAL NO Heron Serial N	24A19225
ng Minutes Time Volume Depth to Water Drawdown Temp. PH SEC or Dissolved Turbidity Cond. Oxygen (NTU) (gallons) Removed (Feet) (Feet) (Feet) (C) (SU) Cond. Oxygen (NTU) (10% or INTU)					WATER	QUALITY IN	DICATOR P.	ARAMETERS (con	tinued)				
0     5   1   1   1   1   1   1   1   1		Minutes	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		pH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's		Visual Clarity
15   15   15   16   17   16   17   17   17   17   17	Pre	0	1510		18.37	1							4
10   1520   19.37   16.4   7.36   1.76   1.42   1.43   1.42   1.43	Purge	2	1515		18.37		76.6	7.30	1.168			130.7	Moon
1525 18.37 1.36 1.13 1.42 1530 18.37 (6.3 7.37 1.76 1.09 1.37 15.57 16.4 7.37 1.176 1.00 1.35 15.57 16.4 7.37 1.176 1.00 1.35 NOTES (continued) Son 8/6 /24	1	10	1520		18.31		٠٠٠	7.36	921.1	123		438.4	
1530 19.37 1.76 1.09 1.37 1.37 1.37 1.37 1.35 1.00 1.35 1.57 1.55 1.00 1.35 1.57 1.55 1.00 1.35 1.55 1.55 1.55 1.55 1.55 1.55 1.55		15	15251		18.37		16,3	7.36	1.178	1.13		1.36.4	
1,5 35 16,4 7,37 1-115 1.00 1.35  1,6,4 7,37 1-115 1.00 1.35  1,6,4 7,37 1-115 1.00 1.35  1,6,4 7,37 1-115 1.00 1.35  1,6,4 7,37 1-115 1.00 1.35  1,6,4 7,37 1-115 1.00 1.35	***	20	1530		- 3		16,3	7.37	1.176	_	1	136.5	
NOTES (continued)   ABBREVIATIONS   Continued   Cont		25	1538		18.37		16,4	7,37	_	001	5	136.6	
NOTES (continued)   ABBREVIATIONS   ABBREVIATIONS   Son & 1/2 +   Eleber VIO of Casing name of the continued of the continu		30											
NOTES (continued)   ABBREVIATIONS		35											
NOTES (continued)   ABBREVIATIONS   Constitution		40							34				
NOTES (continued)   ABBREVIATIONS   Cond Actual Conductivity   FI BTOC Feet Below Top of Casing na Not Applicable mn - Not Measured		45											
NOTES (continued)   ABBREVIATIONS   Continued   Cont		50											
NOTES (continued)   ABBREVIATIONS   CondActual Conductivity   FI BTOCFeet Below Top of Casing na Not Applicable mn -Not Massured		55											HE
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FI BTOC Feet Below Top of Casing na- Not Applicable mn - Not Measured		09											NN
Son 8 /6 /24					NOTES (contin	ned)				ABBREVI			EPI
	Sample ID: Sampled @	535	n 8/6 /2.	<u> </u>						Cond - Actual Cond FT BTOC - Feet Bel Not Applicable nm - Not Measured		ORP - Oxidation-Reduct Specific Electrical Condu Units Temp - Temperature °C - Degrees Celcius	on Potential SEC - Crance SU - Standard

Note   Continued						PROJ	PROJECT INFORMATION	MATION					
Sunt Date: 10006   Sunt Date: 107/15/24   Time:   OCIVIDATION   Sunt Date: 107/15/24   Time:   OCIVIDATION   Sunt Date: 10006	Site:	Hennepin				stra							
Finish Date:	Project Nur	nber: 2024.00	54	Task #:	Start Dat			Time: 1006					
VELL INFORMATION         Well Development         EVENT TYPE           Sampling ID: Al-AM Single Balling Sampling Sampling Sampling Sampling Inches Inc	Field Perso	nnel: O	Assollar)	Finish Date:	07/18/24	Time:							
NATER QUALITY INDICATOR PARAMETERS   Continued	WELL INF	ORMATION	,						EVENT TY	PE			
Sampling   Minutes   Time   Wolume   Second	Well ID: 上 Casing ID:	4	inches			Well Develo Well Volume	pment PApproach Sa	ımpling	Low-Flow / Other (Speci	Low Stress Si fy):Low Flow		YSI SERIAL NO	
Minutes   Time   Volume   Depth to Water   Drawdown   Temp.   PH   SEC or Dissolved   Turbidity   Cond. Oxygen   NiU)   (rest)					WATER	UALITY INDI	CATOR PAF	RAMETERS (cont	(penui			1	
Stage         Labbased Lineary         (Feet) (Feet) (Feet)         (Feet) (F	Sampling	_	Тіте	Volume	Depth to Water	Drawdown	Temp.	Hd	SEC or	Dissolved	Turbidity	ORP	Visual
10   10   10   10   10   10   10   10	Stage	_	(mintary)	Removed (gallons)	(Feet)	(Feet)	(°C) +/- 10%	(SU) +/- 0 01	Cond. (µs/cm) +/-3%	Oxygen (mg/L) +/- 10%	(NTU) +/- 10%	(mV) +/- 10%	Clarity/Odor
wige 5 100ら 5.3 17.97 - 13.4 5.3 5 0.50 21.57 22.37	ore	0	1001	1	8	1	1	1	)	7	1		(
10 1010 1 18.05	ourge	5	1000	5.0		,	4	3	848,0		22,37		1001)
15 1015 15 18.18 - 13.4 つ 38 0.956 0.36 19.75 30 12.20	7	10	1010	-	18.05	(		7.37	0,455	0:20	25.12	Ι.	K
20 1020 2 20.04	7	15	1015	18	18.18	)	- 4	7 20 D	0.956				7
10   10   10   10   10   10   10   10	3	20	1020	12			1.0	(1)	0,956	0.32			7
30   30   40   45   45   50   60   NOTES (continued)   ABBREVIATIONS   ABBRE		25	0.1										
35   40   45   50   50   60   NOTES (continued)   ABBREVIATIONS   FI BTOC - Feet Below Top of Casing   First Continued		30											
40 40 45 55 55 60 NOTES (continued) ABBREVIATIONS FI BTOC - Feet Below Top of Casing inn - Not Washington Canal Top of Casing inn - Not Washington Canal Top of Casing inn - Not Washington Canal Top of Casing inn - Not Washington Canal Casing inn - Not Washington Casing inn - Not		35											
45   50   50		40											
50   S5   S6   NOTES (continued)   ABBREVIATIONS   S1   S2   S2   S2   S2   S2   S2   S		45											
NOTES (continued)  ABBREVIATIONS  FIGURE 18 BOND FOR Casing FIRST Concurrently FIRST Concurrent FIRST Concurrently FIRST Concur		20											
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TO THE WAY INCOME.	ample I	D, date, & t		7 -	,		11011			Cond - Actual Cone FT BTOC - Feet Be na - Not Applicable	ductivity slow Top of Casing	ORP - Oxidation-Reduction Potentii Conductance SU - Standard Units Temp - Temperature "C Doctor Calcius	al SEC - Specific Electrica

Columber   Columber	idio.	Hannenin				PRO	PROJECT INFORMATION	RMATION					
Note   1   1   1   1   1   1   1   1   1	Project Num	thor.	75	Took #.	Client	- 1							
Form   Left	rioject ivur	noer.	1	lask #:	Start Da		4	Time: C1+2					
Note   Note	Field Perso	nnel:	erne	Finis	7	NO	Time:	1205					
Minutes   Time   Volume   Depth to Water   Drawdown   Temp.   Ph. 0.1   Ph. 0.1   Ph. 0.2   Ph	WELL INF	ORMATIC	NC						EVENT TYP	ш			
Maile   Minutes   Time   Wolume   Depth to Water Qualiformy   Temp.   Parameters (continued)	Well ID: Casing ID:	70	_			Well Develor Well Volume	pment Approach Sa	mpling	Low-Flow / (Specify):Low	Low Stress S Flow	ampling Other	YSI SERIAL NO.	2521014425 S221014425 X
Minutes   Time   Wolume   Drawdown   Temp.   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   PH   SEC or   Dissolved   Turbidity   Turbidity   PH   SEC or   Dissolved   Turbidity					WATER	QUALITY IN	DICATOR P	ARAMETERS (conti	inued)				
0   1145   54,01	Sampling Stage	Minutes		Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)		PH (SU) +/- 0.1	SEC or Cond. (µs/cm) 3%	Dissolved Oxygen (mg/L) 10% or +/- 0.2	Turbidity (NTU) 10% or <10 NTU's		Visual Clarity
5   11   50   54   01   14   7   71   3   15   4   16   3   5   1   16   1   16   1   16   1   16   1   1	Pre	0	1145		54,01							1	AN
S4.61 19.9 7.05 1.37 1.15 1.39 1.27.0 [27.0]  S4.05 2.0 7.04 332 1.00 1.29 1.27.2 [1.27.2]  S4.05 2.00 7.04 332 1.00 1.29 1.2.0 [1.26.9]  NOTES (continued)  NOTES (continued)  ABBREVIATIONS  For Accustomeration Structure of Configure Specific Electrical Conduction Structure S	Purge	5	1150		54.01		٠.	213	ms.	2.16	3.54	123.7	MOON CHAN
S4.05   26.0   7.04   .832   1.00   1.29   1.20   1.29   1.20   1.29   1.20   1.29   1.20		10	1155		10.45		19.9	7.05	.932	1,18	3.39	127.0	LG
CA   S4.65   20.0   7.04   932   170   1		15	1200		54.05		20.02	7.04	, 832	4:00		1272	RO
NOTES (continued)  ABBREVIATIONS  For Harden Conductivity For Harden Conductivity For Harden For Casing in an Abbridge For Release Inc. Not Measured  The Continued Co	* * * * * *	20	1205	2601	- 9		20.0	7.04	932	.78	0	6'971	3
NOTES (continued)  ABBREVIATIONS  FIGURE - Feet Below 100 of Casing na Not Applicable mn - Not Measured		25	-										<b>→</b>
NOTES (continued)  ABBREVIATIONS  For all Conductivity of Casing na Not Measured  Im - Not Measured		30											TE
NOTES (continued)  ABBREVIATIONS  FOR 1-Actual Conductivity FOR 1700- Feet Below Top of Casing na Not Applicable for Not Measured		35											R N
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity FIFTOC Feet Below 10p of Casing na Not Applicable mn - Not Measured		40						In					ON
NOTES (continued)  ABBREVIATIONS  Cond Actual Conductivity If BTOC Feet Below Top of Casing na Not Applicable Im - Not Measured		45											IITO
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PL	Sample II Sampled	\$25 \$728	19/8/10	\$2						Cond Actual Con. FT BTOC - Feet Be. Not Applicable nm - Not Measured	ductivity kow Top of Casing na+	ORP - Oxidation-Reduct Specific Electrical Condu Units Temp - Temperature °C - Degrees Celcius	on Potential SEC - Ctance SU - Standage Ctance SU - Standage Stand
													AC PL

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

HEN-257-801

**SAR-3: Episodic Depth to Groundwater Measurements** 

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Plant:

HEN

Event: HEN-24Q3 Rev 0

Well	Unique ID	Date	Time	Measured				5
				DTW	Comments	Dedicated Pump?	Dedicated Tubina?	
<sub>02</sub> L	HEN_02							
04R L	HEN_04R							
05R L	HEN_05!R							
OSDR L	HEN_05&DR							
06	HEN_06	7/15/24	1210	22.72	33.19:DTP	4	4	AK
<sub>10</sub> L	HEN_10							
11 L	HEN_11							
15 L	HEN_15							
19SR L	HEN_19#SR							
19D L	HEN_19&D							
25	HEN_25	7/15/24	0918	15.80	DTP: 18.15	Y	7	A
26	HEN_26	7/15/24	0920	15.94	DTP: 27.4	4	7	AN
30	HEN_30	7/15/24	0923	4.5	DT P: 21.3	4	1	AP
31	HEN_31	7/15/24	0930	12.43	toTP: 10,25	4	4	AX
33	HEN_33	7115/24	1100	3.72	DTP:38,21	4	4	AF
36	HEN_36	7/15/24	0985	15.3	DTB: 28.9	N	N	AF
405 L	HEN_40#S							
45S	HEN_45#S	7/15/24	1215	11.36	DTP:38.53	4	Y	AK
48R	HEN_48R							
XPW01	HEN_XPW01_pore	7/15/24		11.12	DTB: 19.77	N	N	AF
XPW02	HEN_XPW02_pore	7/15/24	1200	15.33	DTB: 21.75	N	N	AE
XPW03	HEN_XPW03_pore	7115/24	1130	4-41	DTB: 22.01	N	N	AR
SG02	HEN_YSG_ILRIVER	see	SI	AR 4	5003			

4 has transducer

Page 1 of Page 86 of 89

HENNEPIN POWER PLANT, LANDFILL

HEN-257-801

**SAR-3: Episodic Depth to Groundwater Measurements** 

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Plant:

HEN

Event: HEN-24Q3 Rev 0

Well	Unique ID	Date	Time	Measured				5
				DTW	Comments	Dedicated Pump?	Dedicated Tubing?	
02	HEN_02	7-15-24	1055	45.02		4	Y	4
04R	HEN_04R	7-15-24	1155	45.37		Ÿ	Ý	L.F.
05R	HEN_05!R	7.15.24	1240	41.27		4	4	L.F.
05DR	HEN_05&DR	7-15-24	1250	41.23		Y	Y	UF
06	HEN_06							1
10	HEN_10	7.15.24	0930	50.78		Yes	Yes	C.F.
11	HEN_11	,	U Total	51.03		no	No	
15	HEN_15			49.65		Yes	Yes	LF
19SR	HEN_19#SR			37.59		-	No	
19D	HEN_19&D	71524		4011		Yes	423	LF
25	HEN_25							
26	HEN_26							
30	HEN_30							
31	HEN_31				Dir.			
33	HEN_33							
36	HEN_36							
40S	HEN_40#S	7-15-24	1225	40.55		Y	4	LF
45S	HEN_45#S							
48R	HEN_48R	7-15-24	1230	40.80		W	n	LF
XPW01	HEN_XPW01_pore				)			
XPW02	HEN_XPW02_pore							
XPW03	HEN_XPW03_pore							
SG02	HEN_YSG_ILRIVER			55.62				

3

4

6

0

10

12

14

HENNEPIN POWER PLANT, LANDFILL

U: 05/02/24 JRK

HEN-257-801

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Plant:

HEN

Event: HEN-24Q3 Rev 0

Well	Unique ID	Date	Time	Measured			ransducer Data			1			100	1
				DTW	Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-l oaded?	Batt (H/M/L)	Comments	Dedicated Pump?	Dedicated		4
03R	HEN_03R				21615140									6
07	HEN_07	7-15-2	11425	67.77	21615139	Ve5	450.633	74	4	DTP722	V	V	4	
08	HEN_08	7-15-24		53.75	21615138	Yes	4476805	Ý	Н	DT 0570		Y	1.6	7
08D	HEN_08&D	7-15-24	1013	54.24	21921673	Yes	447,18%	1	H	DE-3 5121	V	×	LF	DTP84288
12	HEN_12				21615520	1	1.13.107	1			-	-	<u> </u>	o a Guett
13	HEN_13				21615515									9
16	HEN_16	7-15-24	11.05	54.42	21615534	Yes	447.1305	X	H	DTP 60.78	4	4	LF	10
17	HEN_17	7-15-24		56.61	21615500	Yes	150,8103	1	H	DTP61.98		¥	4	
185	HEN_18#S	7-15-24		40.60	21615482	yes	447.1034	4	14	DTP 42.99	V	V	F	11
18D	HEN_18&D	7-15-24		40,77	21615609	Yes	146.480		++	DTP 7229	5	V	LF	. 15
21R	HEN_21R				21615613	1		-1		5.1 1401	,	7		
22	HEN_22				21615497									13
22D	HEN_22&D				21564134									14
23	HEN_23				21615600									
27	HEN_27				21615576									15
32	HEN_32				21615487									
34	HEN_34				21615509									1
35	HEN_35				21615510									
46	HEN_46				21615491									
47	HEN_47				21615505									
49	HEN_49				21629307									
50	HEN_50				21615489									
51	HEN_51				21615608									
52	HEN_52	7-15:24	0940	60.98	21615145	Yes	447.1953	7	H	DTO 600	V	7	LE	60.98
54	HEN_54				21615143			-					2.0	18
55	HEN_55				21615612									
KSG01	HEN_XSG01				21768087									
SG03	HEN_YSG03				21768088								- 7	

Notes:

Notes:
Batt = battery
bmp = below measuring point
ft = feet
H = high
L = low
M = medium
R = replaced

R601-H2n

HENNEPIN POWER PLANT, LANDFILL HEN-257-801

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

HEN-24Q3 Rev 0

Well	Unique ID	Date Time	Time	Time Measured	On-site Transducer Data							Si	
				DTW	Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-l oaded?	Batt (H/M/L)	Comments	Dedicated	Dedicated	Initials 1
03R 🍆	HEN_03R	7/15/24	1305	35.04	21615140	1	447.19	4	H	DTP: 47.08	Y	4	AB
07	HEN_07				21615139			1			1		1
08	HEN_08				21615138								
OBD L	HEN_08&D				21921673								
12	HEN_12	7/15/24	1135	51.41	21615520	Y	447.29	1	4	DTP:52.32	1	V	AR
13	HEN_13	7/15/24		51-34	21615515	V	444.07	V	#	DTP: 620	1	9	AB
16 L	HEN_16		11.10		21615534			-		DIT . W		+	110
17 L	HEN_17				21615500								
18S L	HEN_18#S				21615482								
18D L	HEN_18&D				21615609								
21R	HEN_21R	7415/2A	1010	5.81	21615613	1	446,529	V	H	DTP: 45.U3	Y	V	AR
22	HEN_22	7/15/24		18.39	21615497	V	444.34	4	#	DTP: 27.4	1	V	ANE
22D	HEN_22&D	415124		19.11	21564134	V	444.53	V	H	DTP:53.LZ	4	V	AB
23	HEN_23	7/15/14	1025	14.82	21615600	V	446.77	7	H	DTP:35-2	V	7	
27	HEN_27	7/15/24	0935	4-12	21615576	1	446.66	y	M	DTP: 30.41	1	ú	多图
32	HEN_32	7115124		5.01	21615487	4	446.69	7		DYP: 13.34	4	V	AB
34	HEN_34	7/15/24		V.U7	21615509	NO T		ice		DTP: 30.21	V	Ÿ	AB
35	HEN_35	7/18/24	-	8.25	21615510	4	44643	7	H	DTP:14.01	-	1	B
46	HEN_46	7/15/24)		51.42	21615491	Y	446.83	1	4	DTP:55.00	_	1	98
47	HEN_47	7/15/24		55.87	21615505	V	147.10	4	H	DTP:58.76	7	4	AB
49	HEN_49	7115124		21.5	21629307	Ÿ	446.89	7		DTP:38.63	V	V	AB
50	HEN_50	7/15/24		18.11	21615489	Y	446.07	V	H	DTP: 25.2	1	V	AB
51	HEN_51		1020	18.29	21615608	М	446.57	1	H	DTP:5845	1	V	AB
52 L	HEN_52				21615145					Dil colls	-		1
54	HEN_54	7/15/24	1147	53.32	21615143	Y	447.14	4	H	DTP: 69.14	4	4	AB.
55	HEN_55	7/15/24	1145	50.91	21615612	7	447.90	Y	#	MP:94.06	4	V	AB
KSG01	HEN_XSG01	7/15/24		10.14	21768087	Y	483.47	Y	H		N	N	AB
5G03	HEN_YSG03	7/15/21	1230	5.25	21768088	V	8.835	Y	M		N	N	AB

Batt = battery

bmp = below measuring point

ft = feet

H = high

L = low

M = mediumR = replaced

(record serial NO.)

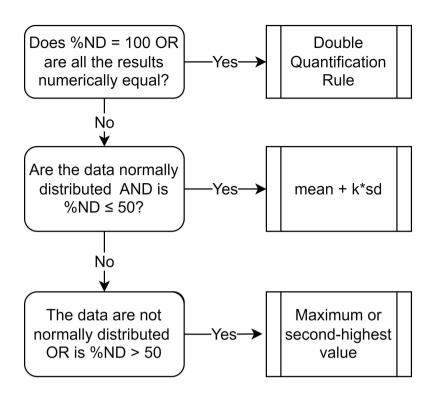
ragoi HEN\_RAGOI 7/15/24 data downloaded @1300 Serialno:

U: 05/02/24 JRK

-52492 or 21428484

# APPENDIX B STATISTICAL METHODOLOGY FOR DETERMINATION OF BACKGROUND VALUES

# Notes %ND = Percent non-detected samples sd = standard deviation k = kappa for site-wide false positive rate (SWFPR) SWFPR = 0.1



When data are not normally distributed or %ND > 50, the maximum value is used if the background sample size is < 60. Where the background sample size is  $\geq$  60, the achievable per-constituent false positive rates for the maximum and second-highest background values will be compared, and the background value with the achievable per-constituent false positive rate that is closest to, but does not exceed, the target per-constituent false positive rate of 0.015% is used.



# APPENDIX C ALTERNATIVE SOURCE DEMONSTRATIONS

Prepared for

**Dynegy Midwest Generation, LLC** 

Date

May 14, 2024

Project No.

1940106781-008

40 C.F.R. § 257.94(e)(2):
ALTERNATIVE SOURCE
DEMONSTRATION
LANDFILL
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS
CCR UNIT 801

#### **CERTIFICATIONS**

I, Eric J. Tlachac, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Eric J. Tlachac

Qualified Professional Engineer

062-063091

Illinois

Ramboll Americas Engineering Solutions, Inc.

Date: May 14, 2024



I, Brian G. Hennings, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Brian G. Hennings

Professional Geologist

196-001482 Illinois

Ramboll Americas Engineering Solutions, Inc.

Date: May 14, 2024



https://ramboll.com

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2.2	Groundwater Monitoring	4
2.3	Site History	4
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	Wells are not Increasing Over Time	9
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	Fill in AP2	10
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#### **TABLES (IN TEXT)**

Table A Construction Events Affecting AP2 and AP4

Table B Mann-Kendall Trend Analyses of Total Boron and pH Concentrations in Compliance

Monitoring Wells

#### FIGURES (IN TEXT)

Figure A Box-Whisker Plot Showing Distribution of Total Boron Concentrations in Compliance

Monitoring Wells and Landfill Leachate

#### **FIGURES (ATTACHED)**

Figure 1 Monitoring Well Location Map

Figure 2 Potentiometric Surface Map – August 21, 2023

#### **APPENDICES**

Appendix A Selected Groundwater Elevation Contour Maps

Appendix B Bottom Ash Leachate Data

#### **ACRONYMS AND ABBREVIATIONS**

35 I.A.C. Title 35 of the Illinois Administrative Code 40 C.F.R. Title 40 of the Code of Federal Regulations

AP2 Ash Pond No. 2 AP4 Ash Pond No. 4

ASD Alternative Source Demonstration

CCR coal combustion residuals
CCR Rule 40 C.F.R. § 257 Subpart D

CEC Civil & Environmental Consultants, Inc.

cm/s centimeters per second

D13 Detection Monitoring Round 13
EPRI Electric Power Research Institute

HCR Hydrogeologic Site Characterization Report

HDPE high-density polyethylene

Hennepin East includes Landfill, AP2, AP4, and East Ash Pond

HPP Hennepin Power Plant

IEPA Illinois Environmental Protection Agency

LOE(s) line(s) of evidence mg/L milligrams per liter

NAVD88 North American Vertical Datum of 1988

No. Number

NPDES National Pollutant Discharge Elimination System

NRT Natural Resource Technology, Inc.
OBG O'Brien & Gere Engineers, Inc.

OWAP Old West Ash Pond oz/sy ounce per square yard

Ramboll Ramboll Americas Engineering Solutions, Inc.

SSI statistically significant increase

#### 1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.94(e)(2) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of statistically significant increases (SSI) over background for groundwater constituents listed in Appendix III of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSI(s) (Alternative Source Demonstration [ASD]), or that the SSI(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

This ASD has been prepared on behalf of Dynegy Midwest Generation, LLC, by Ramboll Americas Engineering Solutions, Inc. (Ramboll), to provide pertinent information pursuant to 40 C.F.R. § 257.94(e)(2) for the Hennepin Power Plant (HPP) Landfill, located near Hennepin, Illinois.

The most recent Detection Monitoring sampling event (Detection Monitoring Round 13 [D13]) samples were collected on August 23, 24, and 28, 2023 and analytical data were received on November 16, 2023. In accordance with 40 C.F.R. § 257.93(h)(2), statistical analysis of the data to identify SSIs of 40 C.F.R. § 257 Subpart D (CCR Rule) Appendix III parameters over background concentrations was completed by February 14, 2024. The statistical determination identified the following SSIs at compliance monitoring wells:

- Boron at wells 05R, 05DR, 40S, and 48
- pH at wells 05R, 40S, and 48

Pursuant to 40 C.F.R. § 257.94(e)(2), the lines of evidence (LOEs) described in **Section 3** demonstrate that sources other than the Landfill were the cause of the SSIs listed above. This ASD was completed by May 14, 2024, within 90 days of determination of the SSIs, as required by 40 C.F.R. § 257.94(e)(2).

#### 2. BACKGROUND

#### 2.1 Site Location and Description

The HPP is located in the northwest quarter of Section 26, Township 33 North, Range 2 West, Putnam County, Illinois and approximately 3 miles north-northeast of the Village of Hennepin. The Landfill is located east of the HPP, situated less than 200 feet from the south bank of the Illinois River and approximately one mile east of the Big Bend, where the river shifts course from predominantly west to predominantly south.

The Landfill is one of four CCR units regulated under the CCR Rule at the HPP. Three CCR units (the Landfill, Ash Pond Number (No.) 2 [AP2], and the East Ash Pond) and one unit not regulated by the CCR Rule (Ash Pond No. 4 [AP4]) are located adjacent to each other and east of the HPP and are collectively known as Hennepin East. The fourth CCR unit (Old West Ash Pond [OWAP]), is located west of the HPP. Areas surrounding the Landfill include industrial properties to the east and south, agricultural land to the southwest, and the HPP to the west. The CCR units at Hennepin East and surrounding properties are shown on **Figure 1**.

#### 2.2 Groundwater Monitoring

The Landfill groundwater monitoring system for compliance with the CCR Rule consists of five background monitoring wells (07, 08, 08D, 16, and 17) and four compliance monitoring wells (05R, 05DR, 40S, and 48). A map showing the groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. **Figure 1** also includes monitoring wells for other CCR units located upgradient of the Landfill (12 and 13) which are not part of the Landfill monitoring system but are used to support the LOEs discussed in **Section 3**.

Groundwater samples are collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (Ramboll, 2023). Statistical evaluation of analytical data is performed in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022).

#### 2.3 Site History

The HPP has two coal-fired generating units constructed in 1953 and 1959 with a total capacity of 210 Megawatts. Operations were ceased in November 2019. The history of CCR management at Hennepin East is summarized below.

**AP2/AP4:** AP2 was used to store and dispose fly ash, bottom ash, and other non-CCR waste streams, including coal pile runoff. The pond originally encompassed the area that currently includes the existing AP2, the Landfill, and the Leachate Pond (not a CCR unit). AP2 has been inactive since 1996 and currently encompasses approximately 18 acres. AP2 is unlined with a lowermost, but variable, bottom elevation of 451 feet<sup>1</sup>. AP4 (located south of AP2) is an unlined, closed impoundment (capped or otherwise maintained) not subject to CCR Rule requirements.

A Modified Closure Work Plan was submitted to Illinois Environmental Protection Agency (IEPA) in 2010 proposing closure of AP2 by capping with future Landfill phases as they were constructed (Kelron Environmental and Natural Resource Technology, Inc. [NRT], 2010). The Modified

<sup>&</sup>lt;sup>1</sup> All elevations in this report are referenced to the North American Vertical Datum of 1988 (NAVD88) unless otherwise noted.

Closure Work Plan was approved by IEPA in a letter dated March 3, 2010. The Landfill is Phase I of the Modified Closure Work Plan. The formerly proposed Landfill Phases II, III, and IV will no longer be constructed upon AP2. Therefore, a Closure and Post Closure Care Plan for AP2 was submitted for IEPA approval in February 2018 (Civil & Environmental Consultants, Inc. [CEC], 2018). A Closure Plan Addendum, which incorporates AP4, was submitted in October 2018 (O'Brien & Gere Engineers, Inc. [OBG] and CEC, 2018). IEPA approved the Closure and Post Closure Care Plan for Hennepin AP2/AP4 on February 26, 2020, following correspondence in 2019 (OBG, part of Ramboll, 2019) to address IEPA comments. Closure construction began on May 21, 2020, and was completed on November 17, 2020. The final cover system on AP2/AP4 consists of a 24-inch compacted soil barrier with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  centimeters per second (cm/s) overlain by a 6-inch thick vegetative cover layer. The cover system was extended eastward to overlap with the western end of the Landfill geomembrane liner and southward to the side slope of the East Ash Pond. The approximate dates of construction affecting AP2 and AP4 are summarized in **Table A** below (AECOM, 2016).

Table A. Construction Events Affecting AP2 and AP4

Date	Event
1958	Construction of AP2.
1978	Embankment raise of AP2.
1985	Embankment raise of AP2 to elevation 484 feet.
1989	Embankment raise of AP2 to elevation 494 feet.
1996	AP2 was removed from service and completely dewatered.
2009 to 2010	Eastern portion of AP2 was removed to facilitate construction of the Leachate Pond.
2010/2011	Landfill Phase I cell was constructed in 2010 over placed CCR in AP2 adjacent to the Leachate Pond. In February 2011, 7,500 cubic yards of bottom ash was placed into the Phase I cell as a post-construction freeze-protection measure to protect the leachate collection system and geomembrane liner. No other material (fly ash or bottom ash) has been placed in the Landfill since.
2014	North Embankment tree removal, grading, and vegetation re-establishment adjacent to AP2.
2020	AP2 and AP4 closed in place in accordance with IEPA-approved closure plan.

**Landfill:** The Landfill Phase I cell, covering approximately 4.5 acres, was constructed in 2010 over existing, dewatered CCR in AP2 as part of the Modified Closure Work Plan for AP2. The Phase I cell was constructed with a composite liner (geomembrane over compacted clay) and leachate collection system above the liner that transfers collected precipitation and leachate to the Leachate Pond. Ash fill underlying the Landfill is known to be present to a minimum elevation of 454 feet.

In February 2011, 7,500 cubic yards of bottom ash was placed into the Landfill as a post-construction freeze protection measure to protect the leachate collection system and geomembrane liner. No other material has been placed in the Landfill since.

**East Ash Pond:** The East Ash Pond was used to store and dispose bottom ash, fly ash, and other non-CCR waste, and to clarify process water prior to discharge in accordance with the plant's National Pollutant Discharge Elimination System (NPDES) permit. The pond was constructed in two phases. The first phase occurred in 1995 when the initial embankment was constructed to a

total height of 32 feet with a lowermost, but variable, bottom elevation of the pond at 458 feet. The original pond bottom was lined with a 4-foot thick layer of compacted clay with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/s, underlain by a 1-foot thick sand layer (AECOM, 2016). The pond depth behind the original embankment was 15 feet with 5 feet of freeboard. The embankment was raised 12 feet in 2003 to a total impoundment depth of 30 feet with 2 feet of freeboard. The liner system of the embankment raise consisted of (from top to bottom) a 45-mil reinforced polypropylene geomembrane, a 1-foot thick clay layer, and an 8 ounce per square yard (oz/sy) polypropylene geotextile fabric. This pond was used for the treatment of bottom ash transport water, miscellaneous low volume wastewater streams, and storage of unsold fly ash until plant operations ceased in November 2019.

**Polishing Pond:** The Polishing Pond (located east of the East Ash Pond) is not subject to CCR Rule requirements and was constructed in 1995 with a 48-inch-thick compacted clay liner having a vertical hydraulic conductivity of  $1 \times 10^{-7}$  cm/s.

**Leachate Pond:** The Leachate Pond (located east of the Landfill) is not subject to CCR Rule requirements and is a 25.5-acre-foot pond constructed with a composite liner consisting of 60-mil high-density polyethylene (HDPE) overlying two feet of compacted clay with a vertical hydraulic conductivity of 1 x  $10^{-7}$  cm/s. Construction was completed December 2010.

#### 2.4 Site Hydrogeology and Stratigraphy

Multiple site investigations have been completed at the HPP to characterize the geology, hydrogeology, and groundwater quality as required by 40 C.F.R. § 257.91 (Groundwater Monitoring Systems). Hennepin East, including the Landfill, has been well characterized and detailed in the Hydrogeologic Site Characterization Reports (HCR) for the HPP, including the most recent HCR for the adjacent East Ash Pond (Ramboll, 2021), that was included with the Operating Permit application submitted to the IEPA under the requirements of Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.

There are three dominant geomorphic features in the immediate vicinity of the HPP: an upper river terrace at an elevation of about 500 to 550 feet, a lower river terrace at an elevation of about 450 to 460 feet, and the current river valley filled with alluvium to an elevation of about 445 feet. The HPP, AP2, and the Landfill were constructed on the original narrow lower river terrace between the Illinois River and the upper terrace. The original lower river terrace is approximately 10 to 20 feet above the average river level at the HPP (elevation 443.7 feet) based upon measurements collected between 2003 and 2018 (OBG, part of Ramboll, 2020). The AP2 berm slopes steeply toward the river and its toe is close to the riverbank. The East Ash Pond, Polishing Pond, and AP4 were constructed on the upper river terrace at an elevation of approximately 500 to 505 feet, or 60 to 65 feet above the average river level.

The hydrogeological assessment identified that the stratigraphy within and immediately surrounding Hennepin East consists of fill, unlithified river alluvium, and Pleistocene-age glacial outwash deposits overlying Pennsylvanian-age shale bedrock. Constructed berms consist of a variety of locally available materials, primarily sand, gravel, and coal ash. Where undisturbed or partially excavated, the native surficial soil at the site is poorly drained, moderately permeable silty clay loam formed as alluvium in floodplains.

There are two hydrogeologic units present at Hennepin East: alluvium and Henry Formation sands and gravels. The river is immediately adjacent to the lower terrace, east of Hennepin East,

and there is minimal alluvium between Hennepin East and the river. The highly permeable Henry Formation sands and gravels make up the upper and lower terraces and fill the valley beneath the alluvium. The sands and gravels of the two terraces are indistinguishable, consisting of a heterogeneous mixture of silty-sandy gravel with cobble zones and boulders up to several feet in diameter. The Henry Formation is more than 100 feet thick in the river valley and at least 130 feet thick on the upper terrace.

The Henry Formation and alluvium comprise the Uppermost Aquifer at Hennepin East and extend from the water table to the bedrock. The Uppermost Aquifer extends about 7,000 feet upgradient from Hennepin East to the south, where clay-rich glacial till is encountered. Glacial tills such as this typically yield little water.

The Pennsylvanian-age bedrock consists of interbedded layers of shale with thin limestone, sandstone, and coal beds. The shale bedrock unit has low hydraulic conductivity and defines the lower boundary of the Uppermost Aguifer.

The hydraulic gradient within the Uppermost Aquifer in the vicinity of Hennepin East varies with the elevation of the Illinois River (see select groundwater elevation contour maps in **Appendix A**). The direction of groundwater flow is most often toward the river to the north and west, but comparison of groundwater and river elevation data indicate reversals in this flow direction during times of high river elevations. The relative duration of these events is short, which leads to the determination of a predominant groundwater flow direction toward the river to the north and west.

Groundwater elevations were obtained from measurements in monitoring wells on August 21, 2023, prior to the D13 sampling event at the site. Groundwater elevations for Hennepin East during the D13 sampling event are shown in **Figure 2** and ranged from 446.79 feet (in well 47) to 451.00 feet (in well 17). The groundwater elevation contours on the potentiometric surface map shown in **Figure 2** illustrate the presence of relatively high groundwater elevations originating from the Illinois River to the north, and the routinely upgradient areas to the south and east monitored by the background wells. Under these hydraulic conditions groundwater will flow towards the lower heads in the center of the map as illustrated by the 447-foot contour interval.

# 3. ALTERNATIVE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.94(e)(2), this ASD demonstrates that sources other than the Landfill (the CCR unit) caused the SSIs. LOEs supporting this ASD include the following:

- 1. Landfill liner design.
- 2. Concentrations of boron in Landfill leachate are lower than those observed in downgradient groundwater.
- 3. Concentrations of boron and pH in compliance monitoring wells are not increasing over time.
- 4. Previous vertical infiltration of surface water through ash fill in AP2.

Data and information supporting these LOEs are discussed in more detail below.

#### 3.1 LOE #1: Landfill Liner Design

The Landfill was constructed in 2010 with a 60-mil HDPE geomembrane overlying three feet of compacted clay with hydraulic conductivity of 1 x  $10^{-7}$  cm/s (CEC, 2010). Precipitation and/or leachate that collects on top of the liner is removed by a leachate collection system and transferred to the Leachate Pond for management. The Leachate Pond is also lined with a 60-mil HDPE liner overlying two feet of compacted clay.

The IEPA-approved Landfill composite liner system exceeds the design criteria for a composite liner for new CCR landfills established by 40 C.F.R. § 257.70(b). The composite liner design criteria were established to help prevent contaminants in CCR from leaking from the CCR unit and impacting groundwater. Therefore, the presence of the composite liner suggests that the Landfill is not the source of the observed SSIs.

# 3.2 LOE #2: Concentrations of Boron in Landfill Leachate are Lower than those Observed in Downgradient Groundwater

The only material that has been placed in the lined Landfill consists of a layer of coarse bottom ash (7,500 cubic yards or 11,625 tons) to protect the leachate collection system and geomembrane liner from freezing. There has been no additional CCR landfilling activity within the lined area since the bottom ash freeze protection layer was installed.

Analytical data from two samples of bottom ash leachate derived in the laboratory (extraction method ASTM D3987, shake extraction with water) identified boron concentrations of 0.193 milligrams per liter (mg/L) (2009 sample) and 0.197 mg/L (2008 sample) (**Appendix B**).

A box-whisker plot of total boron concentrations detected between 2015 and D13 at compliance monitoring wells near the Landfill is shown on **Figure A** on the following page. The boron concentrations of 0.193 and 0.197 mg/L detected in the laboratory-derived leachate samples are below the boron concentrations observed in compliance monitoring wells as shown in **Figure A**. Analytical data available for laboratory-derived leachate from the bottom ash placed in the Landfill indicates that the bottom ash is not capable of leaching boron in concentrations observed in the compliance monitoring wells.

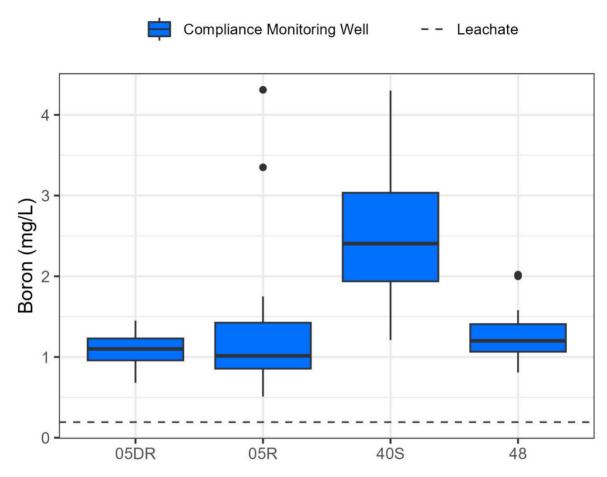


Figure A. Box-Whisker Plot Showing Distribution of Total Boron Concentrations in Compliance Monitoring Wells and Landfill Leachate

## 3.3 LOE #3: Concentrations of Boron and pH in Compliance Monitoring Wells are not Increasing Over Time

Boron is a common indicator of CCR impacts to groundwater due to its leachability from CCR and mobility in groundwater (Electric Power Research Institute [EPRI], 2012). If the Landfill were a "new" source of boron to groundwater, boron concentrations in the compliance monitoring wells would be expected to increase with time as concentrations in the compliance wells approach levels of boron from within the Landfill. Similarly, if the Landfill were a "new" source of pH to groundwater, pH values would also be expected to increase with time as values in the compliance wells approach those from within the Landfill.

Concentrations in compliance wells are not increasing for boron and pH as shown in **Table B**. Therefore, the Landfill is not the source of boron or pH in groundwater.

Table B. Mann-Kendall Trend Analyses of Total Boron and pH Concentrations in Compliance Monitoring Wells

	Mann-Kendall Results - Total Boron Concentrations							
Sample Location	Start Date	Start Date End Date		Trend (95% Confidence)				
05R	12/9/2015	8/23/2023	31	Decreasing				
05DR	12/9/2015	8/23/2023	31	Decreasing				
405	12/9/2015	8/23/2023	30	No Trend				
48	12/9/2015	8/23/2023	25	No Trend				

	Mann-Kendall Results – pH Concentrations								
Sample Location	Start Date End Date Sa		Sample Count	Trend (95% Confidence)					
05R	12/9/2015	8/23/2023	38	No Trend					
05DR	12/9/2015	8/23/2023	33	No Trend					
40S	12/9/2015	8/23/2023	38	No Trend					
48	12/9/2015	8/23/2023	26	No Trend					

### 3.4 LOE #4: Previous Vertical Infiltration of Surface Water through Ash Fill in AP2

The Landfill was constructed over the eastern portion of AP2 as Phase I of an IEPA-approved Modified Closure Work Plan for AP2. The portions of AP2 to the west of the Landfill were previously exposed, and subject to infiltration of precipitation and generation of CCR leachate. However, a soil cover designed to minimize surface water infiltration and CCR-impacts to groundwater was constructed over these exposed portions of AP2 in 2020 as part of a Closure and Post Closure Care Plan for AP2 approved by IEPA on February 26, 2020. AP2 is unlined, and prior to capping of the ash pond by construction of the Landfill liner and the AP2 cover system, precipitation that came into contact with CCR in AP2 may have allowed CCR constituents to percolate downward to groundwater. The previously exposed portions of AP2 may be an alternative source for CCR parameters observed in groundwater near the Landfill.

Comparison of groundwater and Illinois River elevation data indicate that natural variation in river elevation related to flood events occasionally causes groundwater flow reversal and increases in groundwater elevations in the Uppermost Aquifer beneath the Landfill. When river elevations rise above 451 to 454 feet, low-lying ash deposits underlying the Landfill have the potential to become partially saturated for a transient period. The short-term, partial saturation may result in a temporary change to some CCR constituent concentrations and pH at some compliance monitoring wells after the predominant groundwater flow direction is reestablished.

Explicit simulation of flood events (OBG, part of Ramboll, 2020) indicates that potential increases in concentrations from flooding of the Illinois River are small and transient, such that long-term concentrations will not be significantly affected.

#### 4. CONCLUSIONS

Based on these four LOEs, it has been demonstrated that the Landfill is not the source of the boron SSIs identified in wells 05R, 05DR, 40S, and 48 and the pH SSIs identified in wells 05R, 40S, and 48.

- 1. Landfill liner design.
- 2. Concentrations of boron in Landfill leachate are lower than those observed in downgradient groundwater.
- 3. Concentrations of boron and pH in compliance monitoring wells are not increasing over time.
- 4. Previous vertical infiltration of surface water through ash fill in AP2.

Based on the LOEs presented, the following alternative sources are causing the SSIs observed in the Landfill's compliance wells:

 Boron and pH: SSIs for boron and pH may be attributed to portions of AP2 to the west of the Landfill that were previously exposed, and subject to infiltration of precipitation and generation of CCR leachate outside the Landfill boundary.

This information serves as the written ASD report prepared in accordance with 40 C.F.R. § 257.94(e)(2) that SSIs observed during the D13 monitoring event were not caused by the Landfill but were from other sources. Therefore, an Assessment Monitoring Program is not required, and the Landfill will remain in Detection Monitoring.

#### 5. REFERENCES

AECOM, 2016. Hennepin Power Station – History of Construction, 40 CFR § 257.73(c). October 2016.

Civil & Environmental Consultants, Inc. (CEC), 2010. Hennepin CCW Landfill – Phase 1 Construction Completion Report, Hennepin Power Station, Hennepin, Putnam County, Illinois. December 2010.

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

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

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

#### **FIGURES**



#### **MONITORING WELL LOCATION MAP**

#### ALTERNATIVE SOURCE DEMONSTRATION LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 1

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

PORE WATER WELL

STAFF GAGE, CCR UNIT

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### NOTE

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

0 175 350 I I I Fe

#### POTENTIOMETRIC SURFACE MAP AUGUST 21, 2023

### ALTERNATE SOURCE DEMONSTRATION LANDFILL

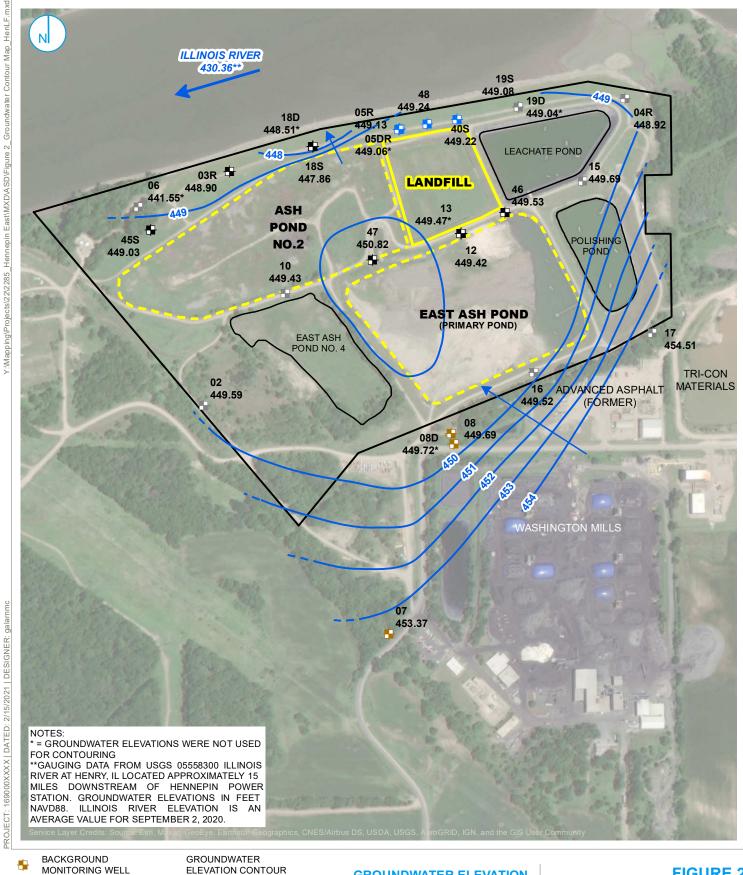
HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2



#### **APPENDICES**

# APPENDIX A SELECTED GROUNDWATER ELEVATION CONTOUR MAPS





NON-CCR RULE MONITORING WELL **GROUNDWATER** MANAGEMENT ZONE AND EAST ASH POND

**GROUNDWATER FLOW DIRECTION** CCR MONITORED UNIT, SUBJECT SITE CCR MONITORED UNIT 250 500 ☐ Feet NON-CCR UNIT

(1-FT CONTOUR

GROUNDWATER

**INFERRED** 

INTERVAL, NAVD88)

**ELEVATION CONTOUR** 

**GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 2, 2020** 

ALTERNATE SOURCE DEMONSTRATION HENNEPIN POWER STATION HENNEPIN, ILLINOIS FIGURE 2



BACKGROUND WELL

MONITORING WELL

SOURCE SAMPLE LOCATION

STAFF GAGE

GROUNDWATER ELEVATION CONTOUR (0.5 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW ARROW

PART 257 REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### NOTE

\*GROUNDWATER ELEVATIONS SHOWN IN FEET, NAVD88. ELEVATIONS IN PARENTHESIS WERE NOT USED FOR CONTOURING.
\*\*GAUGING DATA FROM USGS 05558300
ILLINOIS RIVER AT HENRY, IL LOCATED APPROXIMATELY 15 MILES DOWNSTREAM OF HENNEPIN POWER STATION. SURFACE WATER ELEVATIONS IN FEET NAVD88. ILLINOIS RIVER ELEVATION IS AN AVERAGE VALUE FOR MARCH 18, 2021.

175 350

# GROUNDWATER ELEVATION CONTOUR MAP MARCH 17, 2021

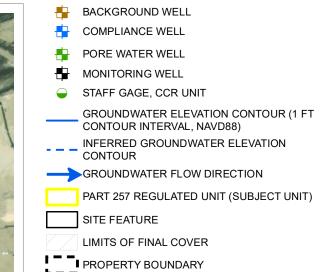
ALTERNATE SOURCE DEMONSTRATION COAL COMBUSTION WASTE LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2







#### NOTE

- 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
- 2. NM = NOT MEASURED
- 3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988
- \*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

)	175	350		
1	1	I Fee		

#### POTENTIOMETRIC SURFACE MAP SEPTEMBER 8, 2021

### 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS





BACKGROUND WELL
COMPLIANCE WELL
MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

PART 257 REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### NOTE

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

0 175 350 I I I Fe

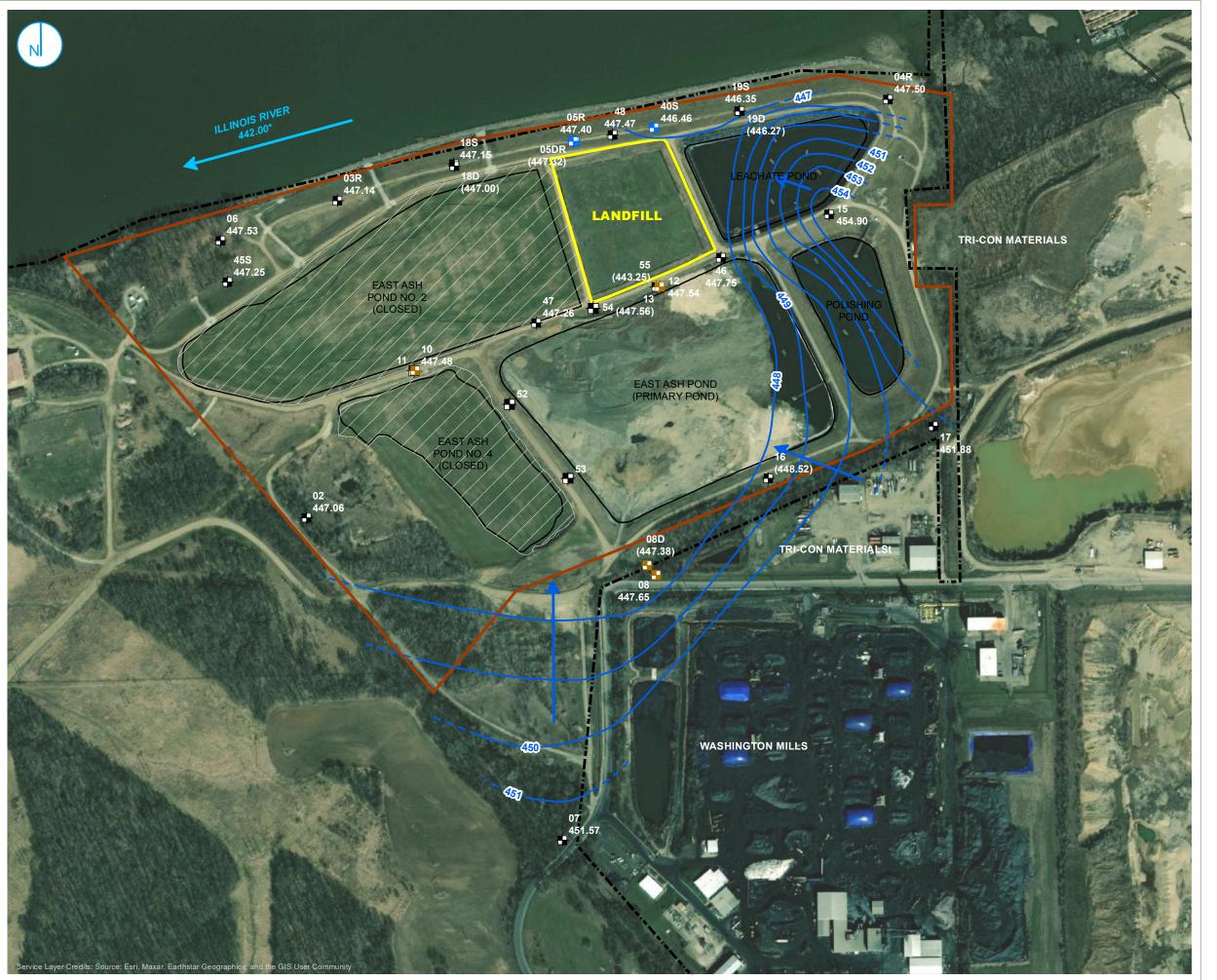
### POTENTIOMETRIC SURFACE MAP MARCH 21, 2022

# 2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

- - - INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

GROUNDWATER MANAGEMENT ZONE

PART 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

SITE FEATURE

PROPERTY BOUNDARY

#### NOTE:

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

175 350

#### POTENTIOMETRIC SURFACE MAP SEPTEMBER 13 AND 14, 2022

ALTERNATE SOURCE DEMONSTRATION COAL COMBUSTION WASTE LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

FIGURE 2





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

- - - INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### NOTE

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

)	175	350
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#### POTENTIOMETRIC SURFACE MAP FEBRUARY 28 AND MARCH 1, 2023

### ALTERNATE SOURCE DEMONSTRATION LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2



## APPENDIX B BOTTOM ASH LEACHATE DATA

### TEKLAB, INC.

#### ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

August 03, 2009

John Augspols Dynegy Midwest Generation 13498 East 800th Street Hennepin, IL 61327

TEL: (815) 339-9218

FAX:



NELAP Accredited #100226

**RE:** Hennepin Station Bottom Ash WorkOrder: 09070896

Dear John Augspols:

TEKLAB, INC received 1 sample on 7/24/2009 9:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column.

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

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

Sincerely,

ideather A. White

Heather A. White Project Manager (618)344-1004 ex 20

**CASE NARRATIVE** 

### TEKLAB, INC.

**ENVIRONMENTAL TESTING LABORATORY** 

TEL: 618-344-1004 FAX: 618-344-1005

**Client:** Dynegy Midwest Generation **Project:** Hennepin Station Bottom Ash

LabOrder: 09070896

Report Date: 03-Aug-09 Cooler Receipt Temp: 22.8 °C

**State accreditations:** 

KS: NELAP #E-10347 | KY: UST #0073 | MO: DNR #00930 | AR: ADEQ #70-028-0

#### Qualifiers

DF - Dilution Factor

RL - Reporting Limit

ND - Not Detected at the Reporting Limit

Surr - Surrogate Standard added by lab

**TNTC** - Too numerous to count ( > 200 CFU )

Q - QC criteria failed or noncompliant CCV

B - Analyte detected in the associated Method Blank

J - Analyte detected below reporting limits

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

X - Value exceeds Maximum Contaminant Level

# - Unknown hydrocarbon

NELAP - IL ELAP and NELAP Accredited Field of Testing

IDPH - IL Dept. of Public Health

C - Client requested RL below PQL

D - Diluted out of sample

E - Value above quantitation range

H - Holding time exceeded

MI - Matrix interference

DNI - Did not ignite



#### **ENVIRONMENTAL TESTING LABORATORY**

TEL: 618-344-1004 FAX: 618-344-1005

#### **LABORATORY RESULTS**

Client: Dynegy Midwest Generation

Client Project: Hennepin Station Bottom Ash

WorkOrder: 09070896

Client Sample ID: Hennipin Station Bottom Ash

Report Date: 03-Aug-09 Matrix: SOLID

Analyses	Certification RL	Qual	Result	Units	DF	Date Analyzed Ana	alyst
ASTM D3987, SW-846 3005A, 6010B,	METALS IN SHAKE EX	TRACT I	SY ICP				
Arsenic	0.0250		< 0.0250	mg/L	1	7/29/2009 3:49:50 PM	LAL
Barium	0.0050		0.116	mg/L	1	7/29/2009 11:19:44 AM	LAL
Beryllium	0.0010		< 0.0010	mg/L	1	7/29/2009 11:19:44 AM	LAL
Boron	0.0200		0.193	mg/L	1	8/3/2009 10:30:48 AM	LAL
Cadmium	0.0020		< 0.0020	mg/L	1	7/29/2009 3:49:50 PM	LAL
Chromium	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Cobalt	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Copper	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Iron	0.0300		0.0687	mg/L	1	7/29/2009 3:49:50 PM	LAL
Manganese	0.0050		< 0.0050	mg/L	1	7/29/2009 3:49:50 PM	LAL
Nickel	0.0100		< 0.0100	mg/L	1	7/29/2009 3:49:50 PM	LAL
Selenium	0.0500		< 0.0500	mg/L	1	7/29/2009 3:49:50 PM	LAL
Silver	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Zinc	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
ASTM D3987, SW-846 3020A, METAL	LS IN SHAKE EXTRAC	ΓBY GFA	<u>A</u>				
Antimony, SHAKE by GFAA 7041	0.0050		< 0.0050	mg/L	1	7/29/2009 2:45:16 PM	MEK
Lead, SHAKE by GFAA 7421	0.0020	J	0.0011	mg/L	1	7/29/2009 10:18:30 AM	MEK
Thallium, SHAKE by GFAA 7841	0.0020		< 0.0020	mg/L	1	7/29/2009 2:41:30 PM	MEK
ASTM D3987, SW-846 7470A IN SHA	KE EXTRACT						
Mercury, SHAKE	0.00020		< 0.00020	mg/L	1	7/28/2009	ALU

**Sample Narrative** 

### TEKLAB, INC.

**ENVIRONMENTAL TESTING LABORATORY** 

correct. Analyze for the same list of parameters as in 2008. EAH 7/27/09

TEL: 618-344-1004 FAX: 618-344-1005

RECEIVING CHECK LIST **Client:** Dynegy Midwest Generation **Project:** Hennepin Station Bottom Ash Lab Order: 09070896 Report Date: 03-Aug-09 Carrier: UPS Received By: DB Completed by: Marin L. Darling II Reviewed by: Ideash w A. White On: On: 24-Jul-09 24-Jul-09 Heather A. White Marvin L. Darling Pages to follow: Chain of custody Extra pages included Yes 🗸 No 🗌 Not Present Shipping container/cooler in good condition? Temp °C 22.8 Type of thermal preservation? None Ice Blue Ice Dry Ice No 🗹 Chain of custody present? Yes No 🗹 Chain of custody signed when relinquished and received? Yes Chain of custody agrees with sample labels? Yes No | **✓** Samples in proper container/bottle? Yes No 🗀 Sample containers intact? Yes 🔽 No 🗀 Sufficient sample volume for indicated test? Yes No 🗀 All samples received within holding time? Yes 🗸 No | NA 🗸 Field  $\bigsqcup$ Lab 🔲 Reported field parameters measured: Yes 🗹 No  $\square$ Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. Water - VOA vials have zero headspace? Yes No L No VOA vials submitted Yes 🗹 No 🗌 Water - pH acceptable upon receipt? Any No responses must be detailed below or on the COC. Sample id and collection date/time obtained from sample container. Per John Augspols, sample ID and collection/date time on the container are

Page 4 of 4

#### TEKLAB, INC

5445 Horseshoe Lake Road Collinsville, IL 62234-7425

TEL: (618) 344-1004 FAX: (618) 344-1005 **CHAIN-OF-CUSTODY RECORD** 

Page 1 of 1

WorkOrder: 09070896

Client:

Dynegy Midwest Generation 13498 East 800th Street

TEL: (815) 339-9218

FAX:

Hennepin, IL 61327 Project: Hennepin Station Bottom As

24-Jul-09

							R	lequested Tests		
Sample ID	ClientSampID	Matrix	Date Collected	Bottle	D3987/6010B	D3987/7000 G	D3987/SW74 70A			
09070896-001	Hennipin Station Bottom	Solid	7/22/2009 11:00:00 AM		Α	Α	Α			
Comments:			Date/Tir	me	22.8°c;	ICÉ	2 1 1		Date/Time	
Relinquished	by:				Received by	: <u>/</u>	13 AY	LUPS)	7/24/04 900	
Relinquished	by:		1172 TT 118889999073244444444444		Received by	7				
Relinquished	by:	MV-M-M-M-M-M-M-M-M-M-M-M-M-M-M-M-M-M-M-			Received by	7:				
E .										

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Please find enclosed a bottom ash sample to be run for the same parameters as last year. I enclosed those results with the sample. I would like to pay for this with a credit card. If you have any questions please contact, me:

John Augspols

Supv. Environmental and Chemistry

(815) 339-9218

Fax (815) 339 -2772

**ENVIRONMENTAL TESTING LABORATORY** 

TEL: 618-344-1004

FAX: 618-344-1005

#### LABORATORY RESULTS

Client: Dynegy Midwest Generation

WorkOrder: 08060909

Lab ID: 08060909-001

Report Date: 02-Jul-08

Client Project: Hennepin Station Bottom Ash

Client Sample ID: Hennipin Station Botton Ash

Collection Date: 6/24/2008 9:00:00 AM

Matrix: SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	nalyst
ASTM D3987, SW-846 3005A, 6010B,	METALS IN SHA	KE EX	TRACT	ЗҮ ІСР			<u>.</u>	
Arsenic		.0250		< 0.0250	mg/L	1	6/30/2008 12:29:55 PI	И LAL
Barium	C	.0050		0.0699	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Beryllium	C	.0010		< 0.0010	mg/L	1	6/30/2008 12:29:55 Pt	/ LAL
Boron	C	.0200		0.197	mg/L	1	6/30/2008 12:29:55 PI	/ LAL
Cadmium	0	.0020		< 0.0020	mg/L	1	6/30/2008 12:29:55 PI	VI LAL
Chromium	C	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	A LAL
Cobalt	0	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	V LAL
Copper	C	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	VI LAL
Iron	C	.0200		0.110	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Manganese	C	.0050		< 0.0050	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Nickel	C	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 Pi	M LAL
Selenium	C	.0500		< 0.0500	mg/L	1	6/30/2008 12:29:55 PI	И LAL
Silver	C	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	VI LAL
Zinc	C	.0100	j	0.0025	mg/L	1	6/30/2008 12:29:55 P	M LAL
ASTM D3987, SW-846 3020A, META	LS IN SHAKE EX	TRAC	T BY GFA	A				
Antimony, SHAKE by GFAA 7041		.0050	J	0.0024	mg/L	1	6/30/2008 11:51:48 A	NML N
Lead, SHAKE by GFAA 7421	(	.0020		< 0.0020	mg/L	1	6/30/2008 9:45:10 AM	VML N
Thallium, SHAKE by GFAA 7841	(	.0020	S	< 0.0020	mg/L	1	6/30/2008 11:17:06 A	M JMV
ASTM D3987, SW-846 7470A IN SHA	AKE EXTRACT							
Mercury, SHAKE		00020	J	0.00006	mg/L	1	6/30/2008	SRE

Sample Narrative

ASTM D3987, SW-846 3020A, Metals in Shake Extract by GFAA

TI - Matrix interference present in sample.

22-8 noice 03 7/14/09

900 Feips 087/14/09

Prepared for

**Dynegy Midwest Generation, LLC** 

Date

August 19, 2024

Project No.

1940106781-008

40 C.F.R. § 257.94(e)(2):
ALTERNATIVE SOURCE
DEMONSTRATION
LANDFILL
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS
CCR UNIT 801

#### **CERTIFICATIONS**

I, Eric J. Tlachac, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Eric J. Tlachac

Qualified Professional Engineer

062-063091

Illinois

Ramboll Americas Engineering Solutions, Inc.

Date: August 19, 2024



I, Brian G. Hennings, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Brian G. Hennings

Professional Geologist

196-001482

Illinois

Ramboll Americas Engineering Solutions, Inc.

Date: August 19, 2024



https://ramboll.com

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Table A Construction Events Affecting AP2 and AP4

Table B Mann-Kendall Trend Analyses of Total Boron Concentrations in Compliance Monitoring

Wells

Table C Mann-Kendall Trend Analyses of pH Concentrations in Compliance Monitoring Wells

#### FIGURES (IN TEXT)

Figure A Box-Whisker Plot Showing Distribution of Total Boron Concentrations in Compliance

Monitoring Wells and Landfill Leachate

#### FIGURES (ATTACHED)

Figure 1 Monitoring Well Location Map

Figure 2 Potentiometric Surface Map – January 22 and 23, 2024

#### **APPENDICES**

Appendix A Selected Groundwater Elevation Contour Maps

Appendix B Bottom Ash Leachate Data

#### **ACRONYMS AND ABBREVIATIONS**

35 I.A.C. Title 35 of the Illinois Administrative Code 40 C.F.R. Title 40 of the Code of Federal Regulations

AP2 Ash Pond No. 2 AP4 Ash Pond No. 4

ASD Alternative Source Demonstration

CCR coal combustion residuals
CCR Rule 40 C.F.R. § 257 Subpart D

CEC Civil & Environmental Consultants, Inc.

cm/s centimeters per second

D14 Detection Monitoring Round 14

HCR Hydrogeologic Site Characterization Report

HDPE high-density polyethylene

Hennepin East includes Landfill, AP2, AP4, and East Ash Pond

HPP Hennepin Power Plant

IEPA Illinois Environmental Protection Agency

LOE(s) line(s) of evidence mg/L milligrams per liter

NAVD88 North American Vertical Datum of 1988

No. Number

NPDES National Pollutant Discharge Elimination System

NRT Natural Resource Technology, Inc.
OBG O'Brien & Gere Engineers, Inc.

OWAP Old West Ash Pond oz/sy ounce per square yard

Ramboll Ramboll Americas Engineering Solutions, Inc.

SSI statistically significant increase

#### 1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.94(e)(2) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of statistically significant increases (SSI) over background for groundwater constituents listed in Appendix III of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSI(s), or that the SSI(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternative Source Demonstration [ASD]).

This ASD has been prepared on behalf of Dynegy Midwest Generation, LLC, by Ramboll Americas Engineering Solutions, Inc. (Ramboll), to provide pertinent information pursuant to 40 C.F.R. § 257.94(e)(2) for the Hennepin Power Plant (HPP) Landfill, located near Hennepin, Illinois.

The most recent Detection Monitoring sampling event (Detection Monitoring Round 14 [D14]) samples were collected on January 24 through 26, 2024 and analytical data were received on February 21, 2024. In accordance with 40 C.F.R. § 257.93(h)(2), statistical analysis of the data to identify SSIs of 40 C.F.R. § 257 Subpart D (CCR Rule) Appendix III parameters over background concentrations was completed by May 21, 2024. The statistical determination identified the following SSIs at compliance monitoring wells:

- Boron at wells 05R, 05DR, and 40S
- pH at wells 05R and 40S

Compliance monitoring well 48 was damaged in late 2023 and unable to be sampled during D14. A replacement well has been installed and will be sampled during the next Detection Monitoring sampling event.

Pursuant to 40 C.F.R. § 257.94(e)(2), the lines of evidence (LOEs) described in **Section 3** demonstrate that sources other than the Landfill were the cause of the SSIs listed above, and that the Landfill did not contribute to the SSIs. This ASD was completed by August 19, 2024, within 90 days of determination of the SSIs, as required by 40 C.F.R. § 257.94(e)(2).

#### 2. BACKGROUND

#### 2.1 Site Location and Description

The HPP is located in the northwest quarter of Section 26, Township 33 North, Range 2 West, Putnam County, Illinois and approximately 3 miles north-northeast of the Village of Hennepin. The Landfill is located east of the HPP, situated less than 200 feet from the south bank of the Illinois River and approximately one mile east of the Big Bend, where the river shifts course from predominantly west to predominantly south.

The Landfill is one of four CCR units regulated under the CCR Rule at the HPP. Three CCR units (the Landfill, Ash Pond Number (No.) 2 [AP2], and the East Ash Pond) and one unit not regulated by the CCR Rule (Ash Pond No. 4 [AP4]) are located adjacent to each other and east of the HPP and are collectively known as Hennepin East. The fourth CCR unit (Old West Ash Pond [OWAP]), is located west of the HPP. Areas surrounding the Landfill include industrial properties to the east and south, agricultural land to the southwest, and the HPP to the west. The CCR units at Hennepin East and surrounding properties are shown on **Figure 1**.

#### 2.2 Groundwater Monitoring

The Landfill groundwater monitoring system for compliance with the CCR Rule consists of five background monitoring wells (07, 08, 08D, 16, and 17) and four compliance monitoring wells (05R, 05DR, 40S, and 48). A map showing the groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. **Figure 1** also includes monitoring wells for other CCR units located upgradient of the Landfill (e.g., wells 12 and 13) which are not part of the Landfill monitoring system but are used to support the LOEs discussed in **Section 3**.

Groundwater samples are collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (Ramboll, 2023). Statistical evaluation of analytical data is performed in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022).

#### 2.3 Site History

The HPP has two coal-fired generating units constructed in 1953 and 1959 with a total capacity of 210 Megawatts. Operations were ceased in November 2019. The history of CCR management at Hennepin East is summarized below.

**AP2/AP4:** AP2 was used to store and dispose fly ash, bottom ash, and other non-CCR waste streams, including coal pile runoff. The pond originally encompassed the area that currently includes the existing AP2, the Landfill, and the Leachate Pond (not a CCR unit). AP2 has been inactive since 1996 and currently encompasses approximately 18 acres. AP2 is unlined with a lowermost, but variable, bottom elevation of 451 feet<sup>1</sup>. AP4 (located south of AP2) is an unlined, closed impoundment (capped or otherwise maintained) not subject to CCR Rule requirements.

A Modified Closure Work Plan was submitted to Illinois Environmental Protection Agency (IEPA) in 2010 proposing closure of AP2 by capping with future Landfill phases as they were constructed (Kelron Environmental and Natural Resource Technology, Inc. [NRT], 2010). The Modified

<sup>&</sup>lt;sup>1</sup> All elevations in this report are referenced to the North American Vertical Datum of 1988 (NAVD88) unless otherwise noted.

Closure Work Plan was approved by IEPA in a letter dated March 3, 2010. The Landfill is Phase I of the Modified Closure Work Plan. The formerly proposed Landfill Phases II, III, and IV will no longer be constructed upon AP2. Therefore, a Closure and Post Closure Care Plan for AP2 was submitted for IEPA approval in February 2018 (Civil & Environmental Consultants, Inc. [CEC], 2018). A Closure Plan Addendum, which incorporates AP4, was submitted in October 2018 (O'Brien & Gere Engineers, Inc. [OBG] and CEC, 2018). IEPA approved the Closure and Post Closure Care Plan for Hennepin AP2/AP4 on February 26, 2020, following correspondence in 2019 (OBG, part of Ramboll, 2019) to address IEPA comments. Closure construction began on May 21, 2020, and was completed on November 17, 2020. The final cover system on AP2/AP4 consists of a 24-inch compacted soil barrier with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  centimeters per second (cm/s) overlain by a 6-inch thick vegetative cover layer. The cover system was extended eastward to overlap with the western end of the Landfill geomembrane liner and southward to the side slope of the East Ash Pond. The approximate dates of construction affecting AP2 and AP4 are summarized in **Table A** below (AECOM, 2016).

Table A. Construction Events Affecting AP2 and AP4

Date	Event
1958	Construction of AP2.
1978	Embankment raise of AP2.
1985	Embankment raise of AP2 to elevation 484 feet.
1989	Embankment raise of AP2 to elevation 494 feet.
1996	AP2 was removed from service and completely dewatered.
2009 to 2010	Eastern portion of AP2 was removed to facilitate construction of the Leachate Pond.
2010/2011	Landfill Phase I cell was constructed in 2010 over placed CCR in AP2 adjacent to the Leachate Pond. In February 2011, 7,500 cubic yards of bottom ash was placed into the Phase I cell as a post-construction freeze-protection measure to protect the leachate collection system and geomembrane liner. No other material (fly ash or bottom ash) has been placed in the Landfill since.
2014	North Embankment tree removal, grading, and vegetation re-establishment adjacent to AP2.
2020	AP2 and AP4 closed in place in accordance with IEPA-approved closure plan.

**Landfill:** The Landfill Phase I cell, covering approximately 4.5 acres, was constructed in 2010 over existing, dewatered CCR in AP2 as part of the Modified Closure Work Plan for AP2. The Phase I cell was constructed with a composite liner (geomembrane over compacted clay) and leachate collection system above the liner that transfers collected precipitation and leachate to the Leachate Pond. Ash fill underlying the Landfill is known to be present to a minimum elevation of 454 feet.

In February 2011, 7,500 cubic yards of bottom ash was placed into the Landfill as a post-construction freeze protection measure to protect the leachate collection system and geomembrane liner. No other material has been placed in the Landfill since.

**East Ash Pond:** The East Ash Pond was used to store and dispose bottom ash, fly ash, and other non-CCR waste, and to clarify process water prior to discharge in accordance with the plant's National Pollutant Discharge Elimination System (NPDES) permit. The pond was constructed in two phases. The first phase occurred in 1995 when the initial embankment was constructed to a

total height of 32 feet with a lowermost, but variable, bottom elevation of the pond at 458 feet. The original pond bottom was lined with a 4-foot thick layer of compacted clay with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/s, underlain by a 1-foot thick sand layer (AECOM, 2016). The pond depth behind the original embankment was 15 feet with 5 feet of freeboard. The embankment was raised 12 feet in 2003 to a total impoundment depth of 30 feet with 2 feet of freeboard. The liner system of the embankment raise consisted of (from top to bottom) a 45-mil reinforced polypropylene geomembrane, a 1-foot thick clay layer, and an 8 ounce per square yard (oz/sy) polypropylene geotextile fabric. This pond was used for the treatment of bottom ash transport water, miscellaneous low volume wastewater streams, and storage of unsold fly ash until plant operations ceased in November 2019.

**Polishing Pond:** The Polishing Pond (located east of the East Ash Pond) is not subject to CCR Rule requirements and was constructed in 1995 with a 48-inch-thick compacted clay liner having a vertical hydraulic conductivity of  $1 \times 10^{-7}$  cm/s.

**Leachate Pond:** The Leachate Pond (located east of the Landfill) is not subject to CCR Rule requirements and is a 25.5-acre-foot pond constructed with a composite liner consisting of 60-mil high-density polyethylene (HDPE) overlying two feet of compacted clay with a vertical hydraulic conductivity of 1 x  $10^{-7}$  cm/s. Construction was completed December 2010.

#### 2.4 Site Hydrogeology and Stratigraphy

Multiple site investigations have been completed at the HPP to characterize the geology, hydrogeology, and groundwater quality as required by 40 C.F.R. § 257.91 (Groundwater Monitoring Systems). Hennepin East, including the Landfill, has been well characterized and detailed in the Hydrogeologic Site Characterization Reports (HCR) for the HPP, including the most recent HCR for the adjacent East Ash Pond (Ramboll, 2021), that was included with the Operating Permit application submitted to the IEPA under the requirements of Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.

There are three dominant geomorphic features in the immediate vicinity of the HPP: an upper river terrace at an elevation of about 500 to 550 feet, a lower river terrace at an elevation of about 450 to 460 feet, and the current river valley filled with alluvium to an elevation of about 445 feet. The HPP, AP2, and the Landfill were constructed on the original narrow lower river terrace between the Illinois River and the upper terrace. The original lower river terrace is approximately 10 to 20 feet above the average river level at the HPP (elevation 443.7 feet) based upon measurements collected between 2003 and 2018 (OBG, part of Ramboll, 2020). The AP2 berm slopes steeply toward the river and its toe is close to the riverbank. The East Ash Pond, Polishing Pond, and AP4 were constructed on the upper river terrace at an elevation of approximately 500 to 505 feet, or 60 to 65 feet above the average river level.

The hydrogeological assessment identified that the stratigraphy within and immediately surrounding Hennepin East consists of fill, unlithified river alluvium, and Pleistocene-age glacial outwash deposits overlying Pennsylvanian-age shale bedrock. Constructed berms consist of a variety of locally available materials, primarily sand, gravel, and coal ash. Where undisturbed or partially excavated, the native surficial soil at the site is poorly drained, moderately permeable silty clay loam formed as alluvium in floodplains.

There are two hydrogeologic units present at Hennepin East: alluvium and Henry Formation sands and gravels. The river is immediately adjacent to the lower terrace, east of Hennepin East,

and there is minimal alluvium between Hennepin East and the river. The highly permeable Henry Formation sands and gravels make up the upper and lower terraces and fill the valley beneath the alluvium. The sands and gravels of the two terraces are indistinguishable, consisting of a heterogeneous mixture of silty-sandy gravel with cobble zones and boulders up to several feet in diameter. The Henry Formation is more than 100 feet thick in the river valley and at least 130 feet thick on the upper terrace.

The Henry Formation and alluvium comprise the Uppermost Aquifer at Hennepin East and extend from the water table to the bedrock. The Uppermost Aquifer extends about 7,000 feet upgradient from Hennepin East to the south, where clay-rich glacial till is encountered. Glacial tills such as this typically yield little water.

The Pennsylvanian-age bedrock consists of interbedded layers of shale with thin limestone, sandstone, and coal beds. The shale bedrock unit has low hydraulic conductivity and defines the lower boundary of the Uppermost Aquifer.

The hydraulic gradient within the Uppermost Aquifer in the vicinity of Hennepin East varies with the elevation of the Illinois River (see select groundwater elevation contour maps in **Appendix A**). The direction of groundwater flow is most often toward the river to the north and west, but comparison of groundwater and river elevation data indicate reversals in this flow direction during times of high river elevations. The relative duration of these events is short, which leads to the determination of a predominant groundwater flow direction toward the river to the north and west.

Groundwater elevations were obtained from measurements in monitoring wells on January 22 and 23, 2024, prior to the D14 sampling event at the site. Groundwater elevations for Hennepin East during the D14 sampling event are shown in **Figure 2** and ranged from 446.45 feet (in well 54) to 449.49 feet (in well 07). The groundwater elevation contours on the potentiometric surface map shown in **Figure 2** illustrate the presence of relatively high groundwater elevations in wells adjacent to the Illinois River to the north, and the routinely upgradient areas to the south and east monitored by the background wells. Under these hydraulic conditions groundwater will flow towards the lower heads in the center of the map and the Illinois River which have heads around 446.5 feet, as illustrated by the 447-foot contour.

### 3. ALTERNATIVE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.94(e)(2), this ASD demonstrates that sources other than the Landfill (the CCR unit) caused the SSIs and that the Landfill did not contribute to the SSIs. LOEs supporting this ASD include the following:

- 1. Landfill liner design.
- 2. Concentrations of boron in Landfill leachate are lower than those observed in downgradient groundwater.
- 3. Concentrations of boron and pH in compliance monitoring wells are not increasing over time.
- 4. Previous vertical infiltration of surface water through ash fill in AP2.

Data and information supporting these LOEs are discussed in more detail below.

#### 3.1 LOE #1: Landfill Liner Design

The Landfill was constructed in 2010 with a 60-mil HDPE geomembrane overlying three feet of compacted clay with hydraulic conductivity of 1 x  $10^{-7}$  cm/s (CEC, 2010). Precipitation and/or leachate that collects on top of the liner is removed by a leachate collection system and transferred to the Leachate Pond for management. The Leachate Pond is also lined with a 60-mil HDPE liner overlying two feet of compacted clay.

The IEPA-approved Landfill composite liner system exceeds the design criteria for a composite liner for new CCR landfills established by 40 C.F.R. § 257.70(b). The composite liner design criteria were established to help prevent contaminants in CCR from leaking from the CCR unit and impacting groundwater. Therefore, the presence of the composite liner suggests that the Landfill is not the source of the observed SSIs.

### 3.2 LOE #2: Concentrations of Boron in Landfill Leachate are Lower than those Observed in Downgradient Groundwater

The only material that has been placed in the lined Landfill consists of a layer of coarse bottom ash (7,500 cubic yards or 11,625 tons) to protect the leachate collection system and geomembrane liner from freezing. There has been no additional CCR landfilling activity within the lined area since the bottom ash freeze protection layer was installed.

Analytical data from two samples of bottom ash leachate derived in the laboratory (extraction method ASTM D3987, shake extraction with water) identified boron concentrations of 0.193 milligrams per liter (mg/L) (2009 sample) and 0.197 mg/L (2008 sample) (**Appendix B**).

A box-whisker plot of total boron concentrations detected between 2015 and D14 at compliance monitoring wells near the Landfill is shown on **Figure A** on the following page. The boron concentrations of 0.193 and 0.197 mg/L detected in the laboratory-derived leachate samples are below the boron concentrations observed in compliance monitoring wells as shown in **Figure A**. Analytical data available for laboratory-derived leachate from the bottom ash placed in the Landfill indicates that the bottom ash is not capable of leaching boron in concentrations observed in the compliance monitoring wells.

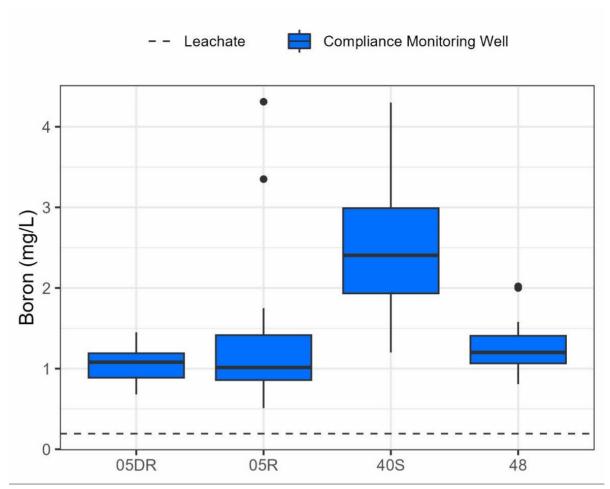


Figure A. Box-Whisker Plot Showing Distribution of Total Boron Concentrations in Compliance Monitoring Wells and Landfill Leachate

### 3.3 LOE #3: Concentrations of Boron and pH in Compliance Monitoring Wells are not Increasing Over Time

If the Landfill were a "new" source of boron to groundwater, boron concentrations in the compliance monitoring wells would be expected to increase with time as concentrations in the compliance wells approach levels of boron from within the Landfill. Similarly, if the Landfill were a "new" source of pH to groundwater, pH values would also be expected to increase with time as values in the compliance wells approach those from within the Landfill.

Concentrations in compliance wells are not increasing for boron and pH as shown in **Tables B** and **C** on the following page. Therefore, the Landfill is not the source of boron or pH in groundwater.

Table B. Mann-Kendall Trend Analyses of Total Boron Concentrations in Compliance Monitoring Wells

	Mann-Kendall Results - Total Boron Concentrations								
Sample Location	Start Date	End Date	Sample Count	Trend (95% Confidence)					
05R	12/9/2015	1/25/2024	32	Decreasing					
05DR	12/9/2015	1/25/2024	32	Decreasing					
40S	12/9/2015	1/25/2024	31	Decreasing					
48	12/9/2015	8/23/2023	25	No Trend					

Table C. Mann-Kendall Trend Analyses of pH Concentrations in Compliance Monitoring Wells

	Mann-Kendall Results – pH Concentrations								
Sample Location	Start Date	End Date	Sample Count	Trend (95% Confidence)					
05R	12/9/2015	1/25/2024	35	No Trend					
05DR	12/9/2015	1/25/2024	40	No Trend					
40S	12/9/2015	1/25/2024	40	No Trend					
48	12/9/2015	8/23/2023	26	No Trend					

### 3.4 LOE #4: Previous Vertical Infiltration of Surface Water through Ash Fill in AP2

The Landfill was constructed over the eastern portion of AP2 as Phase I of an IEPA-approved Modified Closure Work Plan for AP2. The portions of AP2 to the west of the Landfill were previously exposed, and subject to infiltration of precipitation and generation of CCR leachate. However, a soil cover designed to minimize surface water infiltration and CCR-impacts to groundwater was constructed over these exposed portions of AP2 in 2020 as part of a Closure and Post Closure Care Plan for AP2 approved by IEPA on February 26, 2020. AP2 is unlined, and prior to capping of the ash pond by construction of the Landfill liner and the AP2 cover system, precipitation that came into contact with CCR in AP2 may have allowed CCR constituents to percolate downward to groundwater. The previously exposed portions of AP2 may be an alternative source for CCR parameters observed in groundwater near the Landfill.

Comparison of groundwater and Illinois River elevation data indicate that natural variation in river elevation related to flood events occasionally causes groundwater flow reversal and increases in groundwater elevations in the Uppermost Aquifer beneath the Landfill. When river elevations rise above 451 to 454 feet, low-lying ash deposits underlying the Landfill have the potential to become partially saturated for a transient period. The short-term, partial saturation may result in a temporary change to some CCR constituent concentrations and pH at some compliance monitoring wells after the predominant groundwater flow direction is reestablished. Explicit simulation of flood events (OBG, part of Ramboll, 2020) indicates that potential increases in concentrations from flooding of the Illinois River are small and transient, such that long-term concentrations will not be significantly affected.

#### 4. CONCLUSIONS

Based on these four LOEs, it has been demonstrated that the Landfill is not the source of the boron SSIs identified in wells 05R, 05DR, and 40S and the pH SSIs identified in wells 05R and 40S.

- 1. Landfill liner design.
- 2. Concentrations of boron in Landfill leachate are lower than those observed in downgradient groundwater.
- 3. Concentrations of boron and pH in compliance monitoring wells are not increasing over time.
- 4. Previous vertical infiltration of surface water through ash fill in AP2.

Based on the LOEs presented, the SSIs for boron and pH may be attributed to portions of AP2 to the west of the Landfill that were previously exposed, and subject to infiltration of precipitation and generation of CCR leachate outside the Landfill boundary.

This information serves as the written ASD report prepared in accordance with 40 C.F.R. § 257.94(e)(2) that SSIs observed during the D14 monitoring event were not caused by the Landfill but were from other sources. Therefore, an Assessment Monitoring Program is not required, and the Landfill will remain in Detection Monitoring.

#### 5. REFERENCES

AECOM, 2016. Hennepin Power Station – History of Construction, 40 CFR § 257.73(c). October 2016.

Civil & Environmental Consultants, Inc. (CEC), 2010. Hennepin CCW Landfill – Phase 1 Construction Completion Report, Hennepin Power Station, Hennepin, Putnam County, Illinois. December 2010.

Civil & Environmental Consultants, Inc. (CEC), 2018. Closure and Post-Closure Care Plan for the Hennepin East Ash Pond No. 2, Hennepin Power Station. February 2018.

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

Illinois Administrative Code, Title 35, Subtitle G, Chapter I, Subchapter J, Part 845: Standards for The Disposal Of Coal Combustion Residuals In Surface Impoundments, effective April 21, 2021.

Kelron Environmental and Natural Resource Technology, Inc. (NRT), 2010. Initial Facility Report – Hennepin Power Station, New Coal Combustion Waste Landfill. December 10, 2010.

O'Brien & Gere Engineers, Inc. (OBG) and Civil & Environmental Consultants, Inc. (CEC), 2018. Closure Plan Addendum, Hennepin East Ash Pond No. 2, Hennepin, Illinois. October 25, 2018.

O'Brien & Gere Engineers, Inc., part of Ramboll (OBG, part of Ramboll), 2019. Response to IEPA Comments - Closure and Post-Closure Care Plan for the Hennepin East Ash Pond No. 2 and Closure Plan Addendum Hennepin East Ash Pond No 2 which includes closure of Ash Pond No. 4. July 22, 2019.

O'Brien & Gere Engineers, Inc., part of Ramboll (OBG, part of Ramboll), 2020. River Flood Evaluation Report, Hennepin East Ash Pond No. 2 and No. 4, Closure Plan Addendum 3. January 15, 2020.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. Hydrogeologic Site Characterization Report. Hennepin East Ash Pond. Hennepin Power Plant. Hennepin, Illinois. October 25, 2021.

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

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

#### **FIGURES**



175 350

#### **MONITORING WELL LOCATION MAP**

#### ALTERNATIVE SOURCE DEMONSTRATION LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 1





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

PORE WATER WELL

STAFF GAGE, CCR UNIT

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION
CONTOUR

GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)

SITE FEATURE

LIMITS OF FINAL COVER

PROPERTY BOUNDARY

#### **NOTES**

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

0 175 350

#### POTENTIOMETRIC SURFACE MAP JANUARY 22 AND 23, 2024

### ALTERNATIVE SOURCE DEMONSTRATION LANDFILL

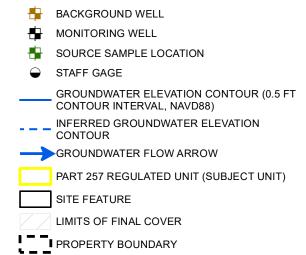
HENNEPIN POWER PLANT HENNEPIN, ILLINOIS

#### FIGURE 2



#### **APPENDICES**

# APPENDIX A SELECTED GROUNDWATER ELEVATION CONTOUR MAPS



#### NOTE

\*GROUNDWATER ELEVATIONS SHOWN IN FEET, NAVD88. ELEVATIONS IN PARENTHESIS WERE NOT USED FOR CONTOURING.
\*\*GAUGING DATA FROM USGS 05558300
ILLINOIS RIVER AT HENRY, IL LOCATED APPROXIMATELY 15 MILES DOWNSTREAM OF HENNEPIN POWER STATION. SURFACE WATER ELEVATIONS IN FEET NAVD88. ILLINOIS RIVER ELEVATION IS AN AVERAGE VALUE FOR MARCH 18, 2021.

175 350

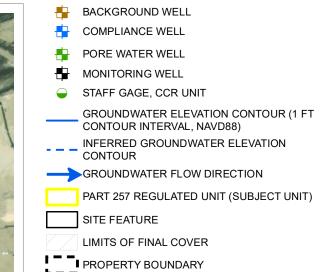
# GROUNDWATER ELEVATION CONTOUR MAP MARCH 17, 2021

ALTERNATE SOURCE DEMONSTRATION COAL COMBUSTION WASTE LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS







#### NOTE

- 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
- 2. NM = NOT MEASURED
- 3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988
- \*ILLINOIS RIVER ELEVATION OBTAINED FROM STAFF GAGE SG02, LOCATED AT THE HENNEPIN POWER PLANT

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## POTENTIOMETRIC SURFACE MAP SEPTEMBER 8, 2021

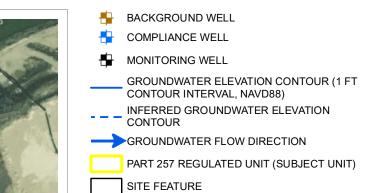
# 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS







LIMITS OF FINAL COVER

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

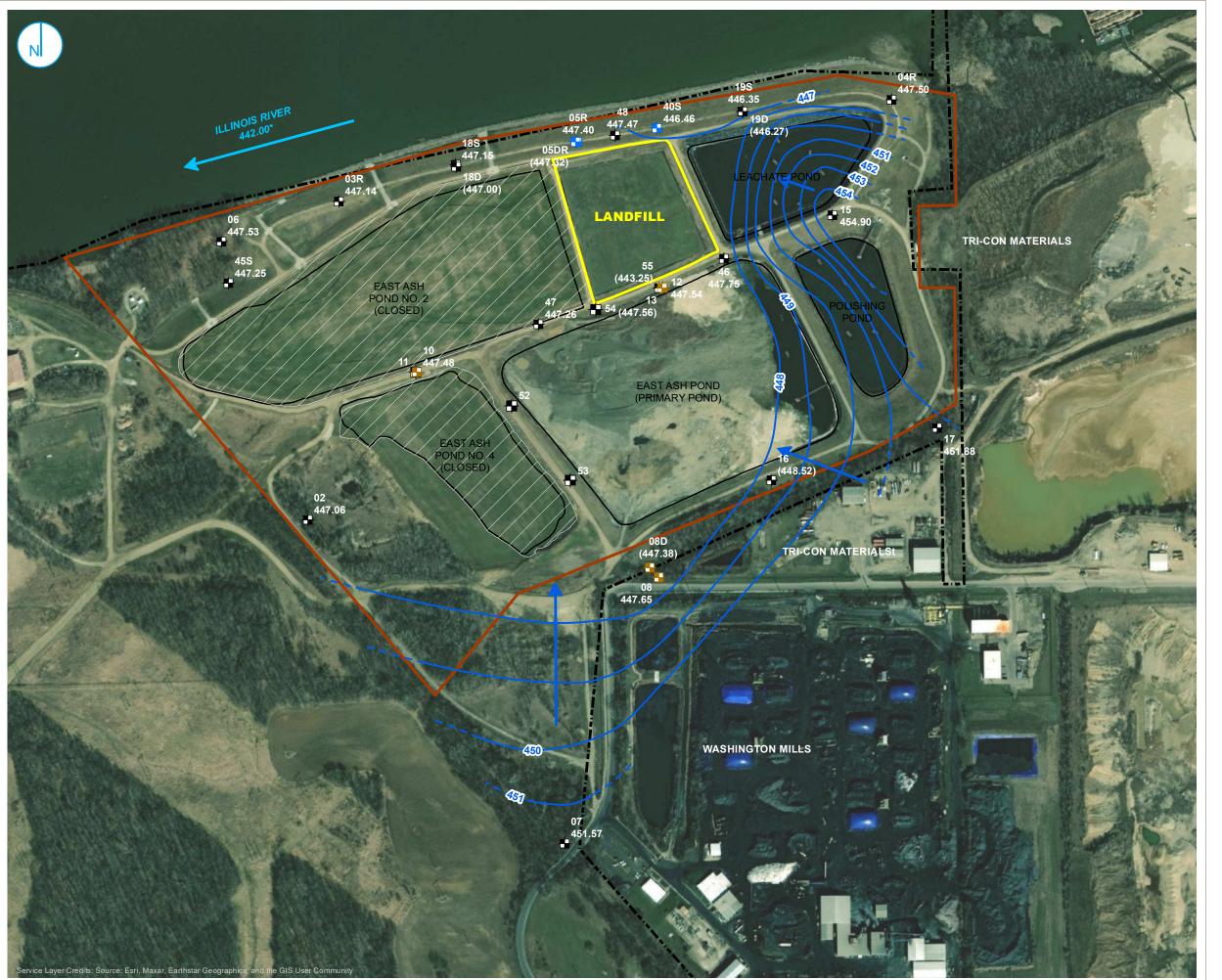
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## POTENTIOMETRIC SURFACE MAP **MARCH 21, 2022**

#### 2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS





COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1 FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

GROUNDWATER MANAGEMENT ZONE

PART 257 REGULATED UNIT (SUBJECT UNIT)

LIMITS OF FINAL COVER

\_\_\_\_ SITE FEATURE

PROPERTY BOUNDARY

#### NOTE

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

175 350

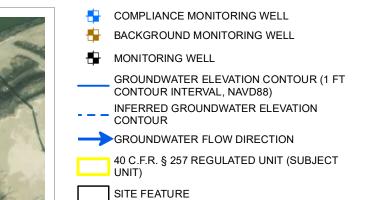
### POTENTIOMETRIC SURFACE MAP SEPTEMBER 13 AND 14, 2022

ALTERNATE SOURCE DEMONSTRATION COAL COMBUSTION WASTE LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS







LIMITS OF FINAL COVER

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

)	175	350
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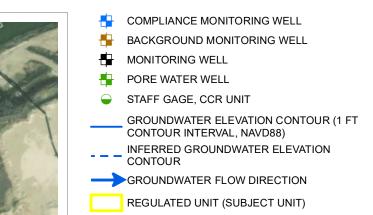
## POTENTIOMETRIC SURFACE MAP FEBRUARY 28 AND MARCH 1, 2023

#### **ALTERNATE SOURCE DEMONSTRATION** LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS







LIMITS OF FINAL COVER

SITE FEATURE

PROPERTY BOUNDARY

#### NOTE

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

)	175	350
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## POTENTIOMETRIC SURFACE MAP AUGUST 21, 2023

## ALTERNATE SOURCE DEMONSTRATION LANDFILL

HENNEPIN POWER PLANT HENNEPIN, ILLINOIS



# APPENDIX B BOTTOM ASH LEACHATE DATA

## TEKLAB, INC.

#### ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

August 03, 2009

John Augspols Dynegy Midwest Generation 13498 East 800th Street Hennepin, IL 61327

TEL: (815) 339-9218

FAX:



NELAP Accredited #100226

**RE:** Hennepin Station Bottom Ash WorkOrder: 09070896

Dear John Augspols:

TEKLAB, INC received 1 sample on 7/24/2009 9:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column.

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

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

Sincerely,

ideather A. White

Heather A. White Project Manager (618)344-1004 ex 20

**CASE NARRATIVE** 

# TEKLAB, INC.

**ENVIRONMENTAL TESTING LABORATORY** 

TEL: 618-344-1004 FAX: 618-344-1005

**Client:** Dynegy Midwest Generation **Project:** Hennepin Station Bottom Ash

LabOrder: 09070896

Report Date: 03-Aug-09 Cooler Receipt Temp: 22.8 °C

**State accreditations:** 

KS: NELAP #E-10347 | KY: UST #0073 | MO: DNR #00930 | AR: ADEQ #70-028-0

#### Qualifiers

DF - Dilution Factor

RL - Reporting Limit

ND - Not Detected at the Reporting Limit

Surr - Surrogate Standard added by lab

**TNTC** - Too numerous to count ( > 200 CFU )

Q - QC criteria failed or noncompliant CCV

B - Analyte detected in the associated Method Blank

J - Analyte detected below reporting limits

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

X - Value exceeds Maximum Contaminant Level

# - Unknown hydrocarbon

NELAP - IL ELAP and NELAP Accredited Field of Testing

IDPH - IL Dept. of Public Health

C - Client requested RL below PQL

D - Diluted out of sample

E - Value above quantitation range

H - Holding time exceeded

MI - Matrix interference

DNI - Did not ignite



#### **ENVIRONMENTAL TESTING LABORATORY**

TEL: 618-344-1004 FAX: 618-344-1005

## LABORATORY RESULTS

Client: Dynegy Midwest Generation

Client Project: Hennepin Station Bottom Ash

WorkOrder: 09070896

Client Sample ID: Hennipin Station Bottom Ash

Report Date: 03-Aug-09 Matrix: SOLID

Analyses	Certification RL	Qual	Result	Units	DF	Date Analyzed Ana	alyst
ASTM D3987, SW-846 3005A, 6010	B, METALS IN SHAKE EX	TRACT E	BY ICP				
Arsenic	0.0250		< 0.0250	mg/L	1	7/29/2009 3:49:50 PM	LAL
Barium	0.0050		0.116	mg/L	1	7/29/2009 11:19:44 AM	LAL
Beryllium	0.0010		< 0.0010	mg/L	1	7/29/2009 11:19:44 AM	LAL
Boron	0.0200		0.193	mg/L	1	8/3/2009 10:30:48 AM	LAL
Cadmium	0.0020		< 0.0020	mg/L	1	7/29/2009 3:49:50 PM	LAL
Chromium	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Cobalt	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Copper	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Iron	0.0300		0.0687	mg/L	1	7/29/2009 3:49:50 PM	LAL
Manganese	0.0050		< 0.0050	mg/L	1	7/29/2009 3:49:50 PM	LAL
Nickel	0.0100		< 0.0100	mg/L	1	7/29/2009 3:49:50 PM	LAL
Selenium	0.0500		< 0.0500	mg/L	1	7/29/2009 3:49:50 PM	LAL
Silver	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
Zinc	0.0100		< 0.0100	mg/L	1	7/29/2009 11:19:44 AM	LAL
ASTM D3987, SW-846 3020A, MET	ALS IN SHAKE EXTRAC	ΓBY GFA	<u>A</u>				
Antimony, SHAKE by GFAA 7041	0.0050		< 0.0050	mg/L	1	7/29/2009 2:45:16 PM	MEK
Lead, SHAKE by GFAA 7421	0.0020	J	0.0011	mg/L	1	7/29/2009 10:18:30 AM	MEK
Thallium, SHAKE by GFAA 7841	0.0020		< 0.0020	mg/L	1	7/29/2009 2:41:30 PM	MEK
ASTM D3987, SW-846 7470A IN SE	IAKE EXTRACT						
Mercury, SHAKE	0.00020		< 0.00020	mg/L	1	7/28/2009	ALU

**Sample Narrative** 

# TEKLAB, INC.

**ENVIRONMENTAL TESTING LABORATORY** 

TEL: 618-344-1004 FAX: 618-344-1005

RECEIVING CHECK LIST **Client:** Dynegy Midwest Generation **Project:** Hennepin Station Bottom Ash Lab Order: 09070896 Report Date: 03-Aug-09 Carrier: UPS Received By: DB Completed by: Marin L. Darling II Reviewed by: Ideash w A. White On: On: 24-Jul-09 24-Jul-09 Heather A. White Marvin L. Darling Pages to follow: Chain of custody Extra pages included Yes 🗸 No 🗌 Not Present Shipping container/cooler in good condition? Temp °C 22.8 Type of thermal preservation? None Ice Blue Ice Dry Ice No 🗹 Chain of custody present? Yes No 🗹 Chain of custody signed when relinquished and received? Yes Chain of custody agrees with sample labels? Yes No | **✓** Samples in proper container/bottle? Yes No 🗀 Sample containers intact? Yes 🔽 No 🗀 Sufficient sample volume for indicated test? Yes No 🗀 All samples received within holding time? Yes 🗸 No | NA 🗸 Field  $\bigsqcup$ Lab 🔲 Reported field parameters measured: Yes 🗹 No  $\square$ Container/Temp Blank temperature in compliance? When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected. Water - VOA vials have zero headspace? Yes No L No VOA vials submitted Yes 🗹 No 🗌 Water - pH acceptable upon receipt?

Sample id and collection date/time obtained from sample container. Per John Augspols, sample ID and collection/date time on the container are correct. Analyze for the same list of parameters as in 2008. EAH 7/27/09

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

## TEKLAB, INC

5445 Horseshoe Lake Road Collinsville, IL 62234-7425

TEL: (618) 344-1004 FAX: (618) 344-1005 **CHAIN-OF-CUSTODY RECORD** 

Page 1 of 1

WorkOrder: 09070896

#### Client:

Dynegy Midwest Generation 13498 East 800th Street

TEL: (815) 339-9218

FAX:

Hennepin, IL 61327 Project: Hennepin Station Bottom As

24-Jul-09

		ntSampID Matrix	Date Collected	Bottle	Requested Tests					
Sample ID	ClientSamplD				D3987/6010B	D3987/7000 G	D3987/SW74 70A		TO COLOR OF THE PROPERTY OF TH	
09070896-001	Hennipin Station Bottom	Solid	7/22/2009 11:00:00 AM		Α	Α	Α			
Comments:		MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA SA MAGA S	Date/Tir	me	22.800 2	T.C.E			Date/Time	
Relinquished	by:				Received by	:	BAY	(UPS)	712404 900	
Relinquished	by:		FIGURE STRANSFORM AND AND AND AND AND AND AND AND AND AND		Received by					
Relinquished	h				Received by					

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Please find enclosed a bottom ash sample to be run for the same parameters as last year. I enclosed those results with the sample. I would like to pay for this with a credit card. If you have any questions please contact, me:

John Augspols

Supv. Environmental and Chemistry

(815) 339-9218

Fax (815) 339 -2772

**ENVIRONMENTAL TESTING LABORATORY** 

TEL: 618-344-1004

FAX: 618-344-1005

#### LABORATORY RESULTS

Client: Dynegy Midwest Generation

WorkOrder: 08060909

Lab ID: 08060909-001

Report Date: 02-Jul-08

Client Project: Hennepin Station Bottom Ash

Client Sample ID: Hennipin Station Botton Ash

Collection Date: 6/24/2008 9:00:00 AM

Matrix: SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	nalyst
ASTM D3987, SW-846 3005A, 6010B	METALS IN SHA	KE EX	TRACT I	ЗҮ ІСР				
Arsenic		.0250		< 0.0250	mg/L	1	6/30/2008 12:29:55 PI	И LAL
Barium	(	.0050		0.0699	mg/L	1	6/30/2008 12:29:55 Pt	M LAL
Beryllium	(	.0010		< 0.0010	mg/L	1	6/30/2008 12:29:55 Pt	/ LAL
Boron	(	.0200		0.197	mg/L	1	6/30/2008 12:29:55 PI	/ LAL
Cadmium	(	.0020		< 0.0020	mg/L	1	6/30/2008 12:29:55 PI	VI LAL
Chromium	C	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	A LAL
Cobalt	(	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	V LAL
Copper	(	.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 Pt	VI LAL
Iron	C	0.0200		0.110	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Manganese	(	0.0050		< 0.0050	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Nickel	(	0.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	M LAL
Selenium	C	0.0500		< 0.0500	mg/L	1	6/30/2008 12:29:55 Pt	И LAL
Silver	(	0.0100		< 0.0100	mg/L	1	6/30/2008 12:29:55 PI	VI LAL
Zinc	(	0.0100	j	0.0025	mg/L	1	6/30/2008 12:29:55 PI	M LAL
ASTM D3987, SW-846 3020A, META	LS IN SHAKE EX	TRAC	T BY GFA	A				
Antimony, SHAKE by GFAA 7041		0.0050	J	0.0024	mg/L	1	6/30/2008 11:51:48 AI	NML N
Lead, SHAKE by GFAA 7421	(	0.0020		< 0.0020	mg/L	1	6/30/2008 9:45:10 AN	VML N
Thallium, SHAKE by GFAA 7841	(	0.0020	S	< 0.0020	mg/L	1	6/30/2008 11:17:06 Al	M JMV
ASTM D3987, SW-846 7470A IN SHA	AKE EXTRACT							
Mercury, SHAKE		00020	J	0.00006	mg/L	1	6/30/2008	SRE

Sample Narrative

ASTM D3987, SW-846 3020A, Metals in Shake Extract by GFAA

TI - Matrix interference present in sample.

22-8 noice 03 7/14/09

900 Feips 037/24/09