Dynegy Midwest Generation, LLC
1500 Eastport Plaza Dr.
Collinsville, IL 62234

January 30, 2024

Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Re: Hennepin East Ash Pond (IEPA ID: W1550100002-05) 2023 Annual Consolidated Report

Dear Mr. LeCrone:

In accordance with 35 IAC § 845.550, Dynegy Midwest Generation, LLC (DMG) is submitting the annual consolidated report for the Hennepin East Ash Pond (IEPA ID: W1550100002-05), as enclosed.

Sincerely,

Dianna Tickner
Sr. Director Decommissioning & Demolition

Enclosures

Annual Consolidated Report
Dynegy Midwest Generation, LLC
Hennepin Power Plant
East Ash Pond; W1550100002-05

In accordance with 35 IAC § 845.550, Dynegy Midwest Generation, LLC (DMG) has prepared the annual consolidated report. The report is provided in three sections as follows:

Section 1
1) Annual CCR fugitive dust control report (Section 845.500(c))

Section 2
2) Annual inspection report (Section 845.540(b)), including:

A) Annual hazard potential classification certification

B) Annual structural stability assessment certification

C) Annual safety factor assessment certification

D) Inflow design flood control system plan certification

Section 3
3) Annual Groundwater Monitoring and Corrective Action Report (Section 845.610(e))

Section 1

Annual CCR Fugitive Dust Control Report

Annual CCR Fugitive Dust Control Report

for

Hennepin Power Plant

Prepared for:

Luminant

Dynegy Midwest Generation, LLC

Hennepin Power Plant
13498 East 800th Street
Hennepin, IL 61327

November 2023

Hennepin Power Plant
ANNUAL CCR FUGITIVE DUST CONTROL REPORT

Reporting Year: 4th Quarter 2022 through 3rd Quarter 2023

Completed by: _____ Plant Environmental Supervisor

Name Title

This Annual CCR Fugitive Dust Control Report has been prepared for the Hennepin Power Plant in accordance with 40 CFR 257.80(c) and 35 I.A.C. 845.500. Section 1 provides a description of the actions taken to control CCR fugitive dust at the facility during the reporting year, including a summary of any corrective measures taken. Section 2 provides a record of citizen complaints received concerning CCR fugitive dust at the facility during the reporting year, including a summary of any corrective measures taken.

Section 1 Actions Taken to Control CCR Fugitive Dust

In accordance with the Hennepin Power Plant CCR Fugitive Dust Control Plan (Plan), the following measures were used to control CCR fugitive dust from becoming airborne at the facility during the reporting year:

CCR Activity	Actions Taken to Control CCR Fugitive Dust
Management of CCR in the facility's CCR units	CCR to be emplaced in the landfill will be conditioned before emplacement.
	Water dry CCR material from periodic cleanout / maintenance of CCR handling or CCR dust control systems as it is added into the CCR surface impoundments, as necessary.
	Wet management of CCR bottom ash in CCR surface impoundments.
	Water areas of exposed CCR in CCR units, as necessary.
	Naturally occurring grass vegetation in areas of exposed CCR in CCR surface impoundments.
	Apply chemical dust suppressant on areas of exposed CCR in CCR units, as necessary.
	Wet sluice CCR fly ash and CCR bottom ash to CCR surface impoundments.

CCR Activity	Actions Taken to Control CCR Fugitive Dust
Handling of CCR at the facility	Pneumatically convey dry CCR fly ash and FGD ash to storage silos in an enclosed system.
	CCR to be emplaced in the landfill will be conditioned before emplacement.
	Load CCR transport trucks from the CCR fly ash silos in a partially enclosed area.
	Load CCR transport trucks from the CCR fly ash silos using vented spouts.
	Load FGD ash transport trucks from the FGD ash silo using a pug mill or vented spouts, as necessary.
	Perform housekeeping, as necessary, in the fly ash loading area.
	Operate fly ash handling system in accordance with good operating practices.
	Maintain and repair as necessary dust controls on the fly ash handling system.
Transportation of CCR at the facility	CCR to be emplaced in the landfill is conditioned before emplacement.
	Limit the speed of vehicles to no more than 15 mph on facility roads.
	Sweep or rinse off the outside of the trucks transporting CCR, as necessary.
	Remove CCR, as necessary, deposited on facility road surfaces during transport.

Based on a review of the Plan and inspections associated with CCR fugitive dust control performed in the reporting year, the control measures identified in the Plan as implemented at the facility effectively minimized CCR from becoming airborne at the facility. No revisions or additions to control measures identified in the Plan were needed in this report. The Hennepin Power Plant ceased to operate and ceased to be a generating unit effective November 1, 2019.

No material changes occurred in the reporting year in site conditions potentially resulting in CCR fugitive dust becoming airborne at the facility that warrant an amendment of the Plan. The plan was amended to reflect administrative changes and adjustments to site condition controls.

Section 2 Record of Citizen Complaints

No citizen complaints were received regarding CCR fugitive dust at Hennepin Power Plant in the reporting year.

Section 2

Annual inspection report (Section 845.540(b)), including:

A) Annual hazard potential classification certification, if applicable (Section 845.440)

B) Annual structural stability assessment certification, if applicable (Section 845.450)

C) Annual safety factor assessment certification, if applicable (Section 845.460)

D) Inflow design flood control system plan certification (Section 845.510(c))

ANNUAL INSPECTION BY A QUALIFIED PROFESSIONAL ENGINEER 35 IAC § 845.540
(b)(1) The CCR surface impoundment must be inspected on an annual basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR surface impoundment is consistent with recognized and generally accepted engineering standards. The inspection must, at a minimum, include: A) A review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections); B) A visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures; C) A visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation; D) The annual hazard potential classification certification, if applicable (see Section 845.440); E) The annual structural stability assessment certification, if applicable (see Section 845.450); F) The annual safety factor assessment certification, if applicable (see Section 845.460); and G) The inflow design flood control system plan certification (see Section 845.510(c)).

SITE INFORMATION	
Site Name / Address / Date of Inspection	Hennepin Power Station Putnam County, Illinois 62327 10/3/2023
Operator Name / Address	Luminant Generation Company LLC 6555 Sierra Drive, Irving, TX 75039
CCR unit	East Ash Pond

INSPECTION REPORT 35 IAC § 845.540	
(b)(1)(D) The annual hazard potential classification certification, if applicable (see Section 845.440).	Based on a review of the CCR unit's annual hazard potential classification, the unit is classified as a Class II CCR surface impoundment.
(b)(2)(A) Any changes in geometry of the structure since the previous annual inspection.	Based on a review of the CCR unit's records and visual observation during the on-site inspection, no changes in geometry of the structure have taken place since the previous annual inspection.
(b)(2)(B) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	See the attached.
b)(2)(C) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;	See the attached.
b)(2)(D) The storage capacity of the impounding structure at the time of the inspection	Approximately 800 acre-feet
(b)(2)(E) The approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Approximately 350 acre-feet
(b)(2)(F) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Based on a review of the CCR unit's records and visual observation during the on-site inspection, there was no appearance of an actual or potential structural weakness of the CCR unit, nor an existing condition that is disrupting or would disrupt the operation and safety of the unit.

INSPECTION REPORT 35 IAC § 845.540	
(b)(2)(G) Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.	Based on a review of the CCR unit's records and visual observation during the on-site inspection, no other changes which may have affected the stability or operation of the CCR unit have taken place since the previous annual inspection.
(b)(1)(G) The inflow design flood control system plan certification (see Section 845.510(c))	Based on a review of the CCR unit's records, the CCR unit is designed, operated, and maintained to adequately manage the flow from the CCR impoundment and control the peak discharge from the inflow design flood.

35 IAC § 845.540 - Annual inspection by a qualified professional engineer.

I, James Knutelski, P.E., certify under penalty of law that the information submitted in this report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Illinois. The information submitted, is to the best of my knowledge and belief, true, accurate and complete. Based on the annual inspection, the design, construction, operation, and maintenance of the CCR Unit is consistent with recognized and generally accepted good engineering standards. Based on a review of the records for the CCR unit and a visual inspection of the unit to document no material changes to the unit, the hazard potential classification was conducted in accordance with the requirements of Section 845.440, the structural stability assessment was conducted in accordance with the requirements of Section 845.450, the safety factor assessment was conducted in accordance with the requirements of Section 845.460, and the inflow design flood control system plan assessment was conducted in accordance with the requirements of Section 845.510.

James Knutelski, PE
Illinois PE No. 062-054206, Expires: 11/30/2025
Date: 01/07/2024

Site Name: Hennepin Power Station

CCR Unit: East Ash Pond

35 IAC § 845.540 (b)(2)(B)		
Instrument ID #	Type	Maximum recorded reading since previous annual inspection (ft)
P006	Piezometer	451.96'
P007	Piezometer	446.45'

35 IAC § 845.540 (b)(2)(C)						
	Approximate Depth / Elevation					
Since previous inspection:	Elevation (ft)			Depth (ft)		
	Minimum	Present	Maximum	Minimum	Present	Maximum
Impounded Water		479.5			5	
CCR	479		505	23		49

Section 3

Annual Groundwater Monitoring and Corrective Action Report (Section 845.610(e))

Prepared for
Dynegy Midwest Generation, LLC

Date
January 31, 2024

Project No.
1940103649-008

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

EAST ASH POND
HENNEPIN POWER PLANT
HENNEPIN, ILLINOIS
IEPA ID NO. W1550100002-05

RAMBOLL Bright ideas. Sustainable change.

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT HENNEPIN POWER PLANT EAST ASH POND

Project name	**Hennepin Power Plant East Ash Pond**
Project no.	**1940103649-008**
Recipient	**Dynegy Midwest Generation, LLC**
Document type	**Annual Groundwater Monitoring and Corrective Action Report**
Version	**FINAL**
Date	**January 31, 2024**
Prepared by	**Jeff R. Kampman**
Checked by	**Lauren D. Cook**
Approved by	**Eric J. Tlachac, PE**
Description	**Annual Report Required by 35 I.A.C. § 845**

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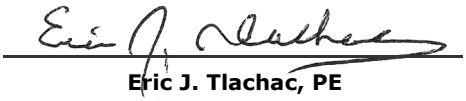
Jeff R. Kampman
Senior Project Scientist



Eric J. Tlachac, PE
Senior Managing Engineer

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ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
CCA	compliance commitment agreement
CCR	coal combustion residuals
CMA	assessment of corrective measures
DMG	Dynegy Midwest Generation, LLC
E001	Quarter 2, 2023 sampling event
E002	Quarter 3, 2023 sampling event
E003	Quarter 4, 2023 sampling event
EAP	East Ash Pond
GWPS	groundwater protection standard
HPP	Hennepin Power Plant
ID	identification
IEPA	Illinois Environmental Protection Agency
NID	National Inventory of Dams
No.	number
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SI	surface impoundment
SSI	statistically significant increase

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.610(e) (*Annual Groundwater Monitoring and Corrective Action Report*) for the East Ash Pond (EAP) located at Hennepin Power Plant (HPP) near Hennepin, Illinois. The EAP is recognized by coal combustion residuals (CCR) unit identification (ID) number (No.) 803, Illinois Environmental Protection Agency (IEPA) ID No. W1550100002-05, and National Inventory of Dams (NID) No. IL50363.

As required by 35 I.A.C. § 845, an operating permit application for the EAP was submitted by Dynegy Midwest Generation, LLC (DMG) to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. DMG entered into a compliance commitment agreement (CCA) with IEPA on December 28, 2022. As specified in the CCA, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the EAP commenced in the second quarter of 2023. All available groundwater monitoring data collected in 2023 is summarized in **Table 1** (field parameters and analytical results) and **Attachment A** (groundwater elevation data)[1]. After the EAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

In accordance with 35 I.A.C. § 845.610(b)(3)(C) and the statistical analysis plan submitted with the operating permit application (Appendix A of the Groundwater Monitoring Plan [Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021]), statistically derived values for constituent concentrations observed at compliance monitoring wells were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS (**Table 2**). No GWPS exceedances were determined[2], therefore an assessment of corrective measures (CMA) has not been initiated for the EAP. In accordance with 35 I.A.C. § 845.610(b)(3)(B), statistically derived values for constituent concentrations observed at compliance monitoring wells were also evaluated quarterly for statistical exceedances over background levels (**Attachment B**).

[1] Analytical data received after December 31, 2023 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

[2] GWPS exceedances determined after January 31, 2024 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of DMG, to provide the information required by 35 I.A.C. § 845.610(e) for the EAP located at HPP near Hennepin, Illinois. The owner or operator of a CCR SI must prepare and submit to IEPA by January 31st of each year an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year as part of the Annual Consolidated Report required by 35 I.A.C. § 845.550. The Annual Groundwater Monitoring and Corrective Action Report shall document the status of the groundwater monitoring and corrective action plan for the CCR SI (**Section 2**), summarize key actions completed, including the status of permit applications and Agency approvals (**Section 3**), describe any problems encountered and actions to resolve the problems (**Section 4**), and project key activities for the upcoming year (**Section 5**).

At a minimum, the annual report must contain the following information, to the extent available:

A. A map, aerial image, or diagram showing the CCR surface impoundment (SI) and all background (or upgradient) and [downgradient] compliance monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program for the CCR SI (**Figure 1**), and a visual delineation of any exceedances of the [groundwater protection standard] GWPS (**Figure 2**).

B. 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).

C. A potentiometric surface map for each groundwater elevation sampling event required by 35 I.A.C. § 845.650(b)(2) (**Figures 3 through 11**).

D. In addition to all the monitoring data obtained under 35 I.A.C. §§ 845.600-680, a summary including the number of groundwater samples that were collected for analysis for each background and [downgradient] compliance well, and the dates the samples were collected (**Section 3.1** and **Table A**).

E. A narrative discussion of any statistically significant increases (SSIs) over background levels for the constituents listed in 35 I.A.C. § 845.600 (**Section 3.3** and **Attachment B**).

F. Other information required to be included in the annual report as specified in 35 I.A.C. §§ 845.600-680.

A section at the beginning of the annual report that provides an overview of the current status of the groundwater monitoring program and corrective action plan for the CCR SI (see **Executive Summary**). At a minimum, the summary must:

A. Specify whether groundwater monitoring data shows an SSI over background concentrations for one or more constituents listed in 35 I.A.C. § 845.600.

B. Identify those constituents having an SSI over background concentrations and the names of the monitoring wells associated with the SSI(s).

C. Specify whether there have been any exceedances of the GWPS for one or more constituents listed in 35 I.A.C. § 845.600.

D. Identify those constituents with exceedances of the GWPS in 35 I.A.C. § 845.600 and the names of the monitoring wells associated with the exceedance.

E. Provide the date when the assessment of corrective measures was initiated for the CCR SI.

F. Provide the date when the assessment of corrective measures was completed for the CCR SI.

G. Specify whether a remedy was selected under 35 I.A.C. § 845.670 during the current annual reporting period, and if so, the date of remedy selection.

H. Specify whether remedial activities were initiated or are ongoing under 35 I.A.C. § 845.780 during the current annual reporting period.

This report provides the required information for EAP for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

An operating permit application for the EAP was submitted by DMG to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. DMG entered into a CCA with IEPA on December 28, 2022. As specified in the CCA, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the EAP commenced in the second quarter of 2023. After the EAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit. As specified in the CCA, groundwater sampling requirements that apply to the CCR SI under other existing permit programs will become void upon issuance of an approved operating permit pursuant to 35 I.A.C § 845.

A construction permit application for closure of the EAP was also submitted by DMG to IEPA on January 28, 2022 in accordance with the requirements specified in 35 I.A.C. § 845.220(a) and (d) and is pending approval.

As noted in the **Executive Summary** and **Section 3.2**, no GWPS exceedances were determined for the EAP in 2023.

3. KEY ACTIONS COMPLETED IN 2023

The proposed 35 I.A.C. § 845 monitoring system is presented in **Figure 1**. No wells were installed or decommissioned in 2023.

Monitoring well inspections and redevelopment of the monitoring wells that were not sampled in 2022 were also completed prior to initiating groundwater monitoring in the second quarter of 2023.

Pressure transducers equipped with data loggers were deployed in monitoring system monitoring wells for measurement of monthly water level elevations as required by 35 I.A.C. § 845.650(b)(2). **Attachment A** summarizes the groundwater elevation data collected in 2023. Potentiometric surfaces for April through December 2023 are included in **Figures 3 through 11**.

A summary of the samples collected in 2023 is included in **Section 3.1**. Narrative discussions of exceedances of GWPSs and background are included in **Section 3.2** and **Section 3.3**, respectively. Statistical procedures used to evaluate groundwater results are provided in Appendix A of the Groundwater Monitoring Plan provided in the operating permit application (Ramboll, 2021).

3.1 Sample and Analysis Summary

One groundwater sample was collected from each background and compliance well during each quarterly monitoring event beginning in the second quarter of 2023. All samples were collected and analyzed in accordance with the Groundwater Monitoring Plan provided in the operating permit application (Ramboll, 2021). A summary of the samples collected from background and compliance monitoring wells in 2023 is included in **Table A** on the following page. **Table 1** is a summary of the field parameters and analytical results from the 2023 sampling events. Laboratory analytical reports and field data sheets were previously provided in the quarterly Groundwater Monitoring Data and Detected Exceedances Reports for Quarter 2 and Quarter 3 (Ramboll, 2023a; Ramboll, 2023b); therefore, these reports are not attached to this annual report to avoid reproduction of lengthy data transmittals that have been previously provided in hardcopy. Analytical data received after December 31, 2023 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

Table A. 35 I.A.C. § 845 Monitoring Program Summary for 2023

Event ID	Sampling Dates [1, 2, 3]	Analytical Data Receipt Date [4]	Exceedance Determination Date	ASD Completion Date	Required CMA Initiation Date
E001	May 31 - June 1, 2023	July 13, 2023	September 11, 2023	NA	NA
E002	August 23 - 24, and 28, 2023	November 7, 2023	January 6, 2024	NA	NA
E003	November 17 and 20, 2023	January 4, 2024	TBD	TBD	TBD

Notes:

ASD: Alternative Source Demonstration

NA: not applicable

TBD: to be determined in 2024

[1] All samples were analyzed for the parameters listed in 35 I.A.C. § 845.600, calcium, and turbidity.

[2] The following background wells were sampled for each event: 07, 08, 08D, 16, and 17

[3] The following compliance wells were sampled for each event: 12, 13, 46, 47, 52, and 54

[4] Analytical data received after December 31, 2023 and GWPS exceedances determined after January 31, 2024 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

3.2 Exceedances of GWPS

In accordance with 35 I.A.C. § 845.610(b)(3)(C), the statistically derived values identified as Statistical Results in **Table 2** were compared with the GWPSs described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS. No statistical exceedances of the GWPSs were determined as shown on **Figure 2**[3].

3.3 Exceedances of Background

In accordance with 35 I.A.C. § 845.610(b)(3)(B), groundwater monitoring data were evaluated quarterly for exceedances over background levels for the constituents listed in 35 I.A.C. § 845.600. **Attachment B** shows the statistically derived values identified as Statistical Results compared to background levels.

[3] GWPS exceedances determined after January 31, 2024 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

Groundwater monitoring commenced in the second quarter of 2023. Groundwater samples were collected and analyzed in accordance with the Groundwater Monitoring Plan provided in the operating permit application (Ramboll, 2021) and all data were accepted. After the EAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

Due to malfunctioning pressure transducers, data gaps exist in monthly water level elevations prior to the fourth quarter. Monthly depth to water measurements were collected manually in the fourth quarter. Pressure transducers were refurbished and were redeployed in January 2024.

5. KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

- Continuation of groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the EAP. After the EAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit. Groundwater monitoring will include:
  - Monthly groundwater elevations
  - Quarterly groundwater sampling
- Complete evaluation of analytical data from the compliance wells to determine whether exceedances above GWPSs have occurred.
- If a GWPS exceedance is identified, potential alternative sources (*i.e.,* a source other than the CCR unit caused the GWPS exceedance or that the exceedance 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 GWPS exceedance, a written demonstration will be completed within 60 days of determination and included in the 2024 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternative source(s) is not identified to be the cause of the GWPS exceedance, the applicable requirements of 35 I.A.C. § 845.660 (*i.e.,* assessment of corrective measures) will be met.

6. REFERENCES

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.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Groundwater Monitoring Plan.* Hennepin Power Plant, East Ash Pond, Hennepin, Illinois. Dynegy Midwest Generation, LLC. October 25, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 2, East Ash Pond, Hennepin Power Plant, Hennepin, Illinois. September 11, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023b. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 3, East Ash Pond, Hennepin Power Plant, Hennepin, Illinois. January 6, 2024.

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
07	Background	E001	06/01/2023	Antimony, total	0.0004 U	mg/L
07	Background	E001	06/01/2023	Arsenic, total	0.0087 U	mg/L
07	Background	E001	06/01/2023	Barium, total	0.124	mg/L
07	Background	E001	06/01/2023	Beryllium, total	0.0002 U	mg/L
07	Background	E001	06/01/2023	Boron, total	0.0701	mg/L
07	Background	E001	06/01/2023	Cadmium, total	0.0005 U	mg/L
07	Background	E001	06/01/2023	Calcium, total	144	mg/L
07	Background	E001	06/01/2023	Chloride, total	68.0	mg/L
07	Background	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
07	Background	E001	06/01/2023	Cobalt, total	0.0875	mg/L
07	Background	E001	06/01/2023	Dissolved Oxygen	2.60	mg/L
07	Background	E001	06/01/2023	Fluoride, total	0.100	mg/L
07	Background	E001	06/01/2023	Lead, total	0.004 U	mg/L
07	Background	E001	06/01/2023	Lithium, total	0.0038 U	mg/L
07	Background	E001	06/01/2023	Mercury, total	0.00006 U	mg/L
07	Background	E001	06/01/2023	Molybdenum, total	0.0037 U	mg/L
07	Background	E001	06/01/2023	Oxidation Reduction Potential	155	mV
07	Background	E001	06/01/2023	pH (field)	6.7	SU
07	Background	E001	06/01/2023	Radium 226 + Radium 228, total	0.203	pCi/L
07	Background	E001	06/01/2023	Selenium, total	0.0006 U	mg/L
07	Background	E001	06/01/2023	Specific Conductance @ 25C (field)	1,210	micromhos/cm
07	Background	E001	06/01/2023	Sulfate, total	109	mg/L
07	Background	E001	06/01/2023	Temperature	11.8	degrees C
07	Background	E001	06/01/2023	Thallium, total	0.001 U	mg/L
07	Background	E001	06/01/2023	Total Dissolved Solids	730	mg/L
07	Background	E001	06/01/2023	Turbidity, field	1 U	NTU
08	Background	E001	06/01/2023	Antimony, total	0.0004 U	mg/L
08	Background	E001	06/01/2023	Arsenic, total	0.0087 U	mg/L
08	Background	E001	06/01/2023	Barium, total	0.0883	mg/L
08	Background	E001	06/01/2023	Beryllium, total	0.0002 U	mg/L
08	Background	E001	06/01/2023	Boron, total	0.121	mg/L
08	Background	E001	06/01/2023	Cadmium, total	0.0005 U	mg/L
08	Background	E001	06/01/2023	Calcium, total	0.035 U	mg/L
08	Background	E001	06/01/2023	Chloride, total	149	mg/L
08	Background	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
08	Background	E001	06/01/2023	Cobalt, total	0.00320	mg/L
08	Background	E001	06/01/2023	Dissolved Oxygen	2.59	mg/L
08	Background	E001	06/01/2023	Fluoride, total	0.09 J	mg/L
08	Background	E001	06/01/2023	Lead, total	0.004 U	mg/L
08	Background	E001	06/01/2023	Lithium, total	0.00900 J+	mg/L
08	Background	E001	06/01/2023	Mercury, total	0.00006 U	mg/L
08	Background	E001	06/01/2023	Molybdenum, total	0.0037 U	mg/L
08	Background	E001	06/01/2023	Oxidation Reduction Potential	168	mV
08	Background	E001	06/01/2023	pH (field)	6.5	SU
08	Background	E001	06/01/2023	Radium 226 + Radium 228, total	0.598 J	pCi/L
08	Background	E001	06/01/2023	Selenium, total	0.0006 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
08	Background	E001	06/01/2023	Specific Conductance @ 25C (field)	1,620	micromhos/cm
08	Background	E001	06/01/2023	Sulfate, total	134 J	mg/L
08	Background	E001	06/01/2023	Temperature	13.3	degrees C
08	Background	E001	06/01/2023	Thallium, total	0.001 U	mg/L
08	Background	E001	06/01/2023	Total Dissolved Solids	902	mg/L
08	Background	E001	06/01/2023	Turbidity, field	1 U	NTU
08D	Background	E001	05/31/2023	Antimony, total	0.0004 U	mg/L
08D	Background	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L
08D	Background	E001	05/31/2023	Barium, total	0.108	mg/L
08D	Background	E001	05/31/2023	Beryllium, total	0.0003 J	mg/L
08D	Background	E001	05/31/2023	Boron, total	0.0842	mg/L
08D	Background	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
08D	Background	E001	05/31/2023	Calcium, total	200	mg/L
08D	Background	E001	05/31/2023	Chloride, total	285	mg/L
08D	Background	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
08D	Background	E001	05/31/2023	Cobalt, total	0.00460	mg/L
08D	Background	E001	05/31/2023	Dissolved Oxygen	1.55	mg/L
08D	Background	E001	05/31/2023	Fluoride, total	0.08 J	mg/L
08D	Background	E001	05/31/2023	Lead, total	0.004 U	mg/L
08D	Background	E001	05/31/2023	Lithium, total	0.0114 J+	mg/L
08D	Background	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
08D	Background	E001	05/31/2023	Molybdenum, total	0.0037 U	mg/L
08D	Background	E001	05/31/2023	Oxidation Reduction Potential	77.0	mV
08D	Background	E001	05/31/2023	pH (field)	6.6	SU
08D	Background	E001	05/31/2023	Radium 226 + Radium 228, total	2.10 J+	pCi/L
08D	Background	E001	05/31/2023	Selenium, total	0.0006 U	mg/L
08D	Background	E001	05/31/2023	Specific Conductance @ 25C (field)	2,250	micromhos/cm
08D	Background	E001	05/31/2023	Sulfate, total	198	mg/L
08D	Background	E001	05/31/2023	Temperature	13.8	degrees C
08D	Background	E001	05/31/2023	Thallium, total	0.001 U	mg/L
08D	Background	E001	05/31/2023	Total Dissolved Solids	1,290	mg/L
08D	Background	E001	05/31/2023	Turbidity, field	1 U	NTU
16	Background	E001	06/01/2023	Antimony, total	0.0004 U	mg/L
16	Background	E001	06/01/2023	Arsenic, total	0.0087 U	mg/L
16	Background	E001	06/01/2023	Barium, total	0.0617	mg/L
16	Background	E001	06/01/2023	Beryllium, total	0.0002 U	mg/L
16	Background	E001	06/01/2023	Boron, total	0.116	mg/L
16	Background	E001	06/01/2023	Cadmium, total	0.0005 U	mg/L
16	Background	E001	06/01/2023	Calcium, total	68.6	mg/L
16	Background	E001	06/01/2023	Chloride, total	83.0	mg/L
16	Background	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
16	Background	E001	06/01/2023	Cobalt, total	0.0001 U	mg/L
16	Background	E001	06/01/2023	Dissolved Oxygen	2.82	mg/L
16	Background	E001	06/01/2023	Fluoride, total	0.230	mg/L
16	Background	E001	06/01/2023	Lead, total	0.004 U	mg/L
16	Background	E001	06/01/2023	Lithium, total	0.0025 J	mg/L

TABLE 1.
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EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
16	Background	E001	06/01/2023	Mercury, total	0.00006 U	mg/L
16	Background	E001	06/01/2023	Molybdenum, total	0.0123	mg/L
16	Background	E001	06/01/2023	Oxidation Reduction Potential	138	mV
16	Background	E001	06/01/2023	pH (field)	7.2	SU
16	Background	E001	06/01/2023	Radium 226 + Radium 228, total	0.0656	pCi/L
16	Background	E001	06/01/2023	Selenium, total	0.0006 U	mg/L
16	Background	E001	06/01/2023	Specific Conductance @ 25C (field)	807	micromhos/cm
16	Background	E001	06/01/2023	Sulfate, total	68.0	mg/L
16	Background	E001	06/01/2023	Temperature	18.8	degrees C
16	Background	E001	06/01/2023	Thallium, total	0.001 U	mg/L
16	Background	E001	06/01/2023	Total Dissolved Solids	502	mg/L
16	Background	E001	06/01/2023	Turbidity, field	1 U	NTU
17	Background	E001	06/01/2023	Antimony, total	0.0004 U	mg/L
17	Background	E001	06/01/2023	Arsenic, total	0.0087 U	mg/L
17	Background	E001	06/01/2023	Barium, total	0.0950	mg/L
17	Background	E001	06/01/2023	Beryllium, total	0.0002 U	mg/L
17	Background	E001	06/01/2023	Boron, total	0.0829	mg/L
17	Background	E001	06/01/2023	Cadmium, total	0.0005 U	mg/L
17	Background	E001	06/01/2023	Calcium, total	94.6	mg/L
17	Background	E001	06/01/2023	Chloride, total	91.0	mg/L
17	Background	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
17	Background	E001	06/01/2023	Cobalt, total	0.0001 U	mg/L
17	Background	E001	06/01/2023	Dissolved Oxygen	8.01	mg/L
17	Background	E001	06/01/2023	Fluoride, total	0.130	mg/L
17	Background	E001	06/01/2023	Lead, total	0.004 U	mg/L
17	Background	E001	06/01/2023	Lithium, total	0.0034 J	mg/L
17	Background	E001	06/01/2023	Mercury, total	0.00006 U	mg/L
17	Background	E001	06/01/2023	Molybdenum, total	0.0037 U	mg/L
17	Background	E001	06/01/2023	Oxidation Reduction Potential	151	mV
17	Background	E001	06/01/2023	pH (field)	7.0	SU
17	Background	E001	06/01/2023	Radium 226 + Radium 228, total	0.597 J+	pCi/L
17	Background	E001	06/01/2023	Selenium, total	0.0006 U	mg/L
17	Background	E001	06/01/2023	Specific Conductance @ 25C (field)	872	micromhos/cm
17	Background	E001	06/01/2023	Sulfate, total	76.0	mg/L
17	Background	E001	06/01/2023	Temperature	15.9	degrees C
17	Background	E001	06/01/2023	Thallium, total	0.001 U	mg/L
17	Background	E001	06/01/2023	Total Dissolved Solids	498	mg/L
17	Background	E001	06/01/2023	Turbidity, field	1 U	NTU
12	Compliance	E001	05/31/2023	Antimony, total	0.0004 U	mg/L
12	Compliance	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L
12	Compliance	E001	05/31/2023	Barium, total	0.0570	mg/L
12	Compliance	E001	05/31/2023	Beryllium, total	0.0002 U	mg/L
12	Compliance	E001	05/31/2023	Boron, total	0.114	mg/L
12	Compliance	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
12	Compliance	E001	05/31/2023	Calcium, total	71.7	mg/L
12	Compliance	E001	05/31/2023	Chloride, total	78.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023
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EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
12	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
12	Compliance	E001	05/31/2023	Cobalt, total	0.0001 U	mg/L
12	Compliance	E001	05/31/2023	Dissolved Oxygen	5.17	mg/L
12	Compliance	E001	05/31/2023	Fluoride, total	0.180	mg/L
12	Compliance	E001	05/31/2023	Lead, total	0.004 U	mg/L
12	Compliance	E001	05/31/2023	Lithium, total	0.0019 U	mg/L
12	Compliance	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
12	Compliance	E001	05/31/2023	Molybdenum, total	0.0151	mg/L
12	Compliance	E001	05/31/2023	Oxidation Reduction Potential	148	mV
12	Compliance	E001	05/31/2023	pH (field)	7.2	SU
12	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	2.36 J+	pCi/L
12	Compliance	E001	05/31/2023	Selenium, total	0.0009 J	mg/L
12	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	817	micromhos/cm
12	Compliance	E001	05/31/2023	Sulfate, total	64.0	mg/L
12	Compliance	E001	05/31/2023	Temperature	15.7	degrees C
12	Compliance	E001	05/31/2023	Thallium, total	0.001 U	mg/L
12	Compliance	E001	05/31/2023	Total Dissolved Solids	474	mg/L
12	Compliance	E001	05/31/2023	Turbidity, field	1 U	NTU
13	Compliance	E001	05/31/2023	Antimony, total	0.00130	mg/L
13	Compliance	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L
13	Compliance	E001	05/31/2023	Barium, total	0.0426	mg/L
13	Compliance	E001	05/31/2023	Beryllium, total	0.0002 U	mg/L
13	Compliance	E001	05/31/2023	Boron, total	0.107	mg/L
13	Compliance	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
13	Compliance	E001	05/31/2023	Calcium, total	72.7	mg/L
13	Compliance	E001	05/31/2023	Chloride, total	90.0	mg/L
13	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
13	Compliance	E001	05/31/2023	Cobalt, total	0.0001 J	mg/L
13	Compliance	E001	05/31/2023	Dissolved Oxygen	5.20	mg/L
13	Compliance	E001	05/31/2023	Fluoride, total	0.160	mg/L
13	Compliance	E001	05/31/2023	Lead, total	0.004 U	mg/L
13	Compliance	E001	05/31/2023	Lithium, total	0.0188 J+	mg/L
13	Compliance	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
13	Compliance	E001	05/31/2023	Molybdenum, total	0.0103	mg/L
13	Compliance	E001	05/31/2023	Oxidation Reduction Potential	152	mV
13	Compliance	E001	05/31/2023	pH (field)	7.2	SU
13	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	1.60 J+	pCi/L
13	Compliance	E001	05/31/2023	Selenium, total	0.0009 J	mg/L
13	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	814	micromhos/cm
13	Compliance	E001	05/31/2023	Sulfate, total	73.0	mg/L
13	Compliance	E001	05/31/2023	Temperature	16.2	degrees C
13	Compliance	E001	05/31/2023	Thallium, total	0.001 U	mg/L
13	Compliance	E001	05/31/2023	Total Dissolved Solids	408	mg/L
13	Compliance	E001	05/31/2023	Turbidity, field	1 U	NTU
46	Compliance	E001	05/31/2023	Antimony, total	0.0004 U	mg/L
46	Compliance	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
46	Compliance	E001	05/31/2023	Barium, total	0.0624	mg/L
46	Compliance	E001	05/31/2023	Beryllium, total	0.0002 U	mg/L
46	Compliance	E001	05/31/2023	Boron, total	0.133	mg/L
46	Compliance	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
46	Compliance	E001	05/31/2023	Calcium, total	72.7	mg/L
46	Compliance	E001	05/31/2023	Chloride, total	86.0	mg/L
46	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
46	Compliance	E001	05/31/2023	Cobalt, total	0.0001 J	mg/L
46	Compliance	E001	05/31/2023	Dissolved Oxygen	4.84	mg/L
46	Compliance	E001	05/31/2023	Fluoride, total	0.170	mg/L
46	Compliance	E001	05/31/2023	Lead, total	0.004 U	mg/L
46	Compliance	E001	05/31/2023	Lithium, total	0.0019 U	mg/L
46	Compliance	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
46	Compliance	E001	05/31/2023	Molybdenum, total	0.0138	mg/L
46	Compliance	E001	05/31/2023	Oxidation Reduction Potential	140	mV
46	Compliance	E001	05/31/2023	pH (field)	7.1	SU
46	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	2.20 J+	pCi/L
46	Compliance	E001	05/31/2023	Selenium, total	0.0007 J	mg/L
46	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	815	micromhos/cm
46	Compliance	E001	05/31/2023	Sulfate, total	91.0	mg/L
46	Compliance	E001	05/31/2023	Temperature	16.1	degrees C
46	Compliance	E001	05/31/2023	Thallium, total	0.001 U	mg/L
46	Compliance	E001	05/31/2023	Total Dissolved Solids	464	mg/L
46	Compliance	E001	05/31/2023	Turbidity, field	1 U	NTU
47	Compliance	E001	05/31/2023	Antimony, total	0.0009 J	mg/L
47	Compliance	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L
47	Compliance	E001	05/31/2023	Barium, total	0.0802	mg/L
47	Compliance	E001	05/31/2023	Beryllium, total	0.0002 U	mg/L
47	Compliance	E001	05/31/2023	Boron, total	0.378	mg/L
47	Compliance	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
47	Compliance	E001	05/31/2023	Calcium, total	88.2	mg/L
47	Compliance	E001	05/31/2023	Chloride, total	77.0	mg/L
47	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
47	Compliance	E001	05/31/2023	Cobalt, total	0.0005 J	mg/L
47	Compliance	E001	05/31/2023	Dissolved Oxygen	3.60	mg/L
47	Compliance	E001	05/31/2023	Fluoride, total	0.270	mg/L
47	Compliance	E001	05/31/2023	Lead, total	0.004 U	mg/L
47	Compliance	E001	05/31/2023	Lithium, total	0.0101 J+	mg/L
47	Compliance	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
47	Compliance	E001	05/31/2023	Molybdenum, total	0.0302	mg/L
47	Compliance	E001	05/31/2023	Oxidation Reduction Potential	145	mV
47	Compliance	E001	05/31/2023	pH (field)	6.9	SU
47	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	1.73 J+	pCi/L
47	Compliance	E001	05/31/2023	Selenium, total	0.00140	mg/L
47	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	868	micromhos/cm
47	Compliance	E001	05/31/2023	Sulfate, total	85.0	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
47	Compliance	E001	05/31/2023	Temperature	18.1	degrees C
47	Compliance	E001	05/31/2023	Thallium, total	0.001 U	mg/L
47	Compliance	E001	05/31/2023	Total Dissolved Solids	512	mg/L
47	Compliance	E001	05/31/2023	Turbidity, field	1 U	NTU
52	Compliance	E001	06/01/2023	Antimony, total	0.0004 U	mg/L
52	Compliance	E001	06/01/2023	Arsenic, total	0.0087 U	mg/L
52	Compliance	E001	06/01/2023	Barium, total	0.0731	mg/L
52	Compliance	E001	06/01/2023	Beryllium, total	0.0002 J	mg/L
52	Compliance	E001	06/01/2023	Boron, total	0.195	mg/L
52	Compliance	E001	06/01/2023	Cadmium, total	0.0005 U	mg/L
52	Compliance	E001	06/01/2023	Calcium, total	79.0	mg/L
52	Compliance	E001	06/01/2023	Chloride, total	88.0	mg/L
52	Compliance	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
52	Compliance	E001	06/01/2023	Cobalt, total	0.0003 J	mg/L
52	Compliance	E001	06/01/2023	Dissolved Oxygen	3.71	mg/L
52	Compliance	E001	06/01/2023	Fluoride, total	0.250	mg/L
52	Compliance	E001	06/01/2023	Lead, total	0.004 U	mg/L
52	Compliance	E001	06/01/2023	Lithium, total	0.002 J	mg/L
52	Compliance	E001	06/01/2023	Mercury, total	0.00006 U	mg/L
52	Compliance	E001	06/01/2023	Molybdenum, total	0.0145	mg/L
52	Compliance	E001	06/01/2023	Oxidation Reduction Potential	92.0	mV
52	Compliance	E001	06/01/2023	pH (field)	7.5	SU
52	Compliance	E001	06/01/2023	Radium 226 + Radium 228, total	1.37 J+	pCi/L
52	Compliance	E001	06/01/2023	Selenium, total	0.0008 J	mg/L
52	Compliance	E001	06/01/2023	Specific Conductance @ 25C (field)	817	micromhos/cm
52	Compliance	E001	06/01/2023	Sulfate, total	77.0	mg/L
52	Compliance	E001	06/01/2023	Temperature	17.3	degrees C
52	Compliance	E001	06/01/2023	Thallium, total	0.001 U	mg/L
52	Compliance	E001	06/01/2023	Total Dissolved Solids	456	mg/L
52	Compliance	E001	06/01/2023	Turbidity, field	2.80	NTU
54	Compliance	E001	05/31/2023	Antimony, total	0.0004 U	mg/L
54	Compliance	E001	05/31/2023	Arsenic, total	0.0087 U	mg/L
54	Compliance	E001	05/31/2023	Barium, total	0.0537	mg/L
54	Compliance	E001	05/31/2023	Beryllium, total	0.0002 U	mg/L
54	Compliance	E001	05/31/2023	Boron, total	0.294	mg/L
54	Compliance	E001	05/31/2023	Cadmium, total	0.0005 U	mg/L
54	Compliance	E001	05/31/2023	Calcium, total	85.9	mg/L
54	Compliance	E001	05/31/2023	Chloride, total	84.0	mg/L
54	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
54	Compliance	E001	05/31/2023	Cobalt, total	0.0002 J	mg/L
54	Compliance	E001	05/31/2023	Dissolved Oxygen	5.71	mg/L
54	Compliance	E001	05/31/2023	Fluoride, total	0.200	mg/L
54	Compliance	E001	05/31/2023	Lead, total	0.004 U	mg/L
54	Compliance	E001	05/31/2023	Lithium, total	0.0108 J+	mg/L
54	Compliance	E001	05/31/2023	Mercury, total	0.00006 U	mg/L
54	Compliance	E001	05/31/2023	Molybdenum, total	0.0223	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
54	Compliance	E001	05/31/2023	Oxidation Reduction Potential	149	mV
54	Compliance	E001	05/31/2023	pH (field)	7.1	SU
54	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	0.504	pCi/L
54	Compliance	E001	05/31/2023	Selenium, total	0.00140	mg/L
54	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	828	micromhos/cm
54	Compliance	E001	05/31/2023	Sulfate, total	76.0	mg/L
54	Compliance	E001	05/31/2023	Temperature	17.1	degrees C
54	Compliance	E001	05/31/2023	Thallium, total	0.001 U	mg/L
54	Compliance	E001	05/31/2023	Total Dissolved Solids	480	mg/L
54	Compliance	E001	05/31/2023	Turbidity, field	1 U	NTU

Notes:
C = Celsius
cm = centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
pCi/L = picocuries per liter
SU = Standard Units
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

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

Well ID	Well Type	Event	Date	Parameter	Result	Unit
07	Background	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
07	Background	E002	08/24/2023	Arsenic, total	0.001 UJ	mg/L
07	Background	E002	08/24/2023	Barium, total	0.120	mg/L
07	Background	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
07	Background	E002	08/24/2023	Boron, total	0.0670	mg/L
07	Background	E002	08/24/2023	Cadmium, total	0.00017 U	mg/L
07	Background	E002	08/24/2023	Calcium, total	94.0	mg/L
07	Background	E002	08/24/2023	Chloride, total	51.0	mg/L
07	Background	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
07	Background	E002	08/24/2023	Cobalt, total	0.0360	mg/L
07	Background	E002	08/24/2023	Dissolved Oxygen	4.15	mg/L
07	Background	E002	08/24/2023	Fluoride, total	0.24 J	mg/L
07	Background	E002	08/24/2023	Lead, total	0.00019 U	mg/L
07	Background	E002	08/24/2023	Lithium, total	0.00990	mg/L
07	Background	E002	08/24/2023	Mercury, total	0.000079 U	mg/L
07	Background	E002	08/24/2023	Molybdenum, total	0.0025 U	mg/L
07	Background	E002	08/24/2023	Oxidation Reduction Potential	180	mV
07	Background	E002	08/24/2023	pH (field)	6.9	SU
07	Background	E002	08/24/2023	Radium 226 + Radium 228, total	0.647	pCi/L
07	Background	E002	08/24/2023	Selenium, total	0.00098 U	mg/L
07	Background	E002	08/24/2023	Specific Conductance @ 25C (field)	699	micromhos/cm
07	Background	E002	08/24/2023	Sulfate, total	67.0	mg/L
07	Background	E002	08/24/2023	Temperature	13.8	degrees C
07	Background	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
07	Background	E002	08/24/2023	Total Dissolved Solids	640	mg/L
07	Background	E002	08/24/2023	Turbidity, field	3.55	NTU
08	Background	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
08	Background	E002	08/24/2023	Arsenic, total	0.001 UJ	mg/L
08	Background	E002	08/24/2023	Barium, total	0.120	mg/L
08	Background	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
08	Background	E002	08/24/2023	Boron, total	0.0700	mg/L
08	Background	E002	08/24/2023	Cadmium, total	0.0005 UJ	mg/L
08	Background	E002	08/24/2023	Calcium, total	160	mg/L
08	Background	E002	08/24/2023	Chloride, total	240	mg/L
08	Background	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
08	Background	E002	08/24/2023	Cobalt, total	0.00360	mg/L
08	Background	E002	08/24/2023	Dissolved Oxygen	1.16	mg/L
08	Background	E002	08/24/2023	Fluoride, total	0.19 J	mg/L
08	Background	E002	08/24/2023	Lead, total	0.0005 UJ	mg/L
08	Background	E002	08/24/2023	Lithium, total	0.0140	mg/L
08	Background	E002	08/24/2023	Mercury, total	0.000079 U	mg/L
08	Background	E002	08/24/2023	Molybdenum, total	0.0025 U	mg/L
08	Background	E002	08/24/2023	Oxidation Reduction Potential	189	mV
08	Background	E002	08/24/2023	pH (field)	6.7	SU
08	Background	E002	08/24/2023	Radium 226 + Radium 228, total	0.572	pCi/L
08	Background	E002	08/24/2023	Selenium, total	0.00098 U	mg/L

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

Well ID	Well Type	Event	Date	Parameter	Result	Unit
08	Background	E002	08/24/2023	Specific Conductance @ 25C (field)	1,241	micromhos/cm
08	Background	E002	08/24/2023	Sulfate, total	100	mg/L
08	Background	E002	08/24/2023	Temperature	14.7	degrees C
08	Background	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
08	Background	E002	08/24/2023	Total Dissolved Solids	1,100	mg/L
08	Background	E002	08/24/2023	Turbidity, field	3.49	NTU
08D	Background	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
08D	Background	E002	08/24/2023	Arsenic, total	0.00110 J+	mg/L
08D	Background	E002	08/24/2023	Barium, total	0.120	mg/L
08D	Background	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
08D	Background	E002	08/24/2023	Boron, total	0.0510	mg/L
08D	Background	E002	08/24/2023	Cadmium, total	0.0005 UJ	mg/L
08D	Background	E002	08/24/2023	Calcium, total	200	mg/L
08D	Background	E002	08/24/2023	Chloride, total	310	mg/L
08D	Background	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
08D	Background	E002	08/24/2023	Cobalt, total	0.00320	mg/L
08D	Background	E002	08/24/2023	Dissolved Oxygen	0.630	mg/L
08D	Background	E002	08/24/2023	Fluoride, total	0.19 U	mg/L
08D	Background	E002	08/24/2023	Lead, total	0.0005 UJ	mg/L
08D	Background	E002	08/24/2023	Lithium, total	0.0140	mg/L
08D	Background	E002	08/24/2023	Mercury, total	0.000079 U	mg/L
08D	Background	E002	08/24/2023	Molybdenum, total	0.0025 U	mg/L
08D	Background	E002	08/24/2023	Oxidation Reduction Potential	192	mV
08D	Background	E002	08/24/2023	pH (field)	6.6	SU
08D	Background	E002	08/24/2023	Radium 226 + Radium 228, total	0.573	pCi/L
08D	Background	E002	08/24/2023	Selenium, total	0.00098 U	mg/L
08D	Background	E002	08/24/2023	Specific Conductance @ 25C (field)	1,435	micromhos/cm
08D	Background	E002	08/24/2023	Sulfate, total	170	mg/L
08D	Background	E002	08/24/2023	Temperature	17.3	degrees C
08D	Background	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
08D	Background	E002	08/24/2023	Total Dissolved Solids	1,400	mg/L
08D	Background	E002	08/24/2023	Turbidity, field	4.32	NTU
16	Background	E002	08/28/2023	Antimony, total	0.0013 U	mg/L
16	Background	E002	08/28/2023	Arsenic, total	0.001 UJ	mg/L
16	Background	E002	08/28/2023	Barium, total	0.0770	mg/L
16	Background	E002	08/28/2023	Beryllium, total	0.00053 U	mg/L
16	Background	E002	08/28/2023	Boron, total	0.110	mg/L
16	Background	E002	08/28/2023	Cadmium, total	0.00017 U	mg/L
16	Background	E002	08/28/2023	Calcium, total	73.0	mg/L
16	Background	E002	08/28/2023	Chloride, total	81.0	mg/L
16	Background	E002	08/28/2023	Chromium, total	0.0011 U	mg/L
16	Background	E002	08/28/2023	Cobalt, total	0.0004 U	mg/L
16	Background	E002	08/28/2023	Dissolved Oxygen	0.370	mg/L
16	Background	E002	08/28/2023	Fluoride, total	0.31 J	mg/L
16	Background	E002	08/28/2023	Lead, total	0.00019 U	mg/L
16	Background	E002	08/28/2023	Lithium, total	0.00760	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
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HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
16	Background	E002	08/28/2023	Mercury, total	0.0002 UJ	mg/L
16	Background	E002	08/28/2023	Molybdenum, total	0.0100	mg/L
16	Background	E002	08/28/2023	Oxidation Reduction Potential	123	mV
16	Background	E002	08/28/2023	pH (field)	7.2	SU
16	Background	E002	08/28/2023	Radium 226 + Radium 228, total	0.522	pCi/L
16	Background	E002	08/28/2023	Selenium, total	0.00098 U	mg/L
16	Background	E002	08/28/2023	Specific Conductance @ 25C (field)	556	micromhos/cm
16	Background	E002	08/28/2023	Sulfate, total	56.0	mg/L
16	Background	E002	08/28/2023	Temperature	22.8	degrees C
16	Background	E002	08/28/2023	Thallium, total	0.00057 U	mg/L
16	Background	E002	08/28/2023	Total Dissolved Solids	450	mg/L
16	Background	E002	08/28/2023	Turbidity, field	3.99	NTU
17	Background	E002	08/28/2023	Antimony, total	0.0013 U	mg/L
17	Background	E002	08/28/2023	Arsenic, total	0.00057 J	mg/L
17	Background	E002	08/28/2023	Barium, total	0.0720	mg/L
17	Background	E002	08/28/2023	Beryllium, total	0.00053 U	mg/L
17	Background	E002	08/28/2023	Boron, total	0.0760	mg/L
17	Background	E002	08/28/2023	Cadmium, total	0.00017 U	mg/L
17	Background	E002	08/28/2023	Calcium, total	58.0	mg/L
17	Background	E002	08/28/2023	Chloride, total	80.0	mg/L
17	Background	E002	08/28/2023	Chromium, total	0.0011 U	mg/L
17	Background	E002	08/28/2023	Cobalt, total	0.0004 U	mg/L
17	Background	E002	08/28/2023	Dissolved Oxygen	5.76	mg/L
17	Background	E002	08/28/2023	Fluoride, total	0.36 J	mg/L
17	Background	E002	08/28/2023	Lead, total	0.00019 U	mg/L
17	Background	E002	08/28/2023	Lithium, total	0.00640	mg/L
17	Background	E002	08/28/2023	Mercury, total	0.0002 UJ	mg/L
17	Background	E002	08/28/2023	Molybdenum, total	0.00710	mg/L
17	Background	E002	08/28/2023	Oxidation Reduction Potential	148	mV
17	Background	E002	08/28/2023	pH (field)	7.3	SU
17	Background	E002	08/28/2023	Radium 226 + Radium 228, total	0.574	pCi/L
17	Background	E002	08/28/2023	Selenium, total	0.00098 U	mg/L
17	Background	E002	08/28/2023	Specific Conductance @ 25C (field)	506	micromhos/cm
17	Background	E002	08/28/2023	Sulfate, total	58.0	mg/L
17	Background	E002	08/28/2023	Temperature	22.4	degrees C
17	Background	E002	08/28/2023	Thallium, total	0.00057 U	mg/L
17	Background	E002	08/28/2023	Total Dissolved Solids	420	mg/L
17	Background	E002	08/28/2023	Turbidity, field	4.02	NTU
12	Compliance	E002	08/23/2023	Antimony, total	0.0013 U	mg/L
12	Compliance	E002	08/23/2023	Arsenic, total	0.00051 J	mg/L
12	Compliance	E002	08/23/2023	Barium, total	0.0600	mg/L
12	Compliance	E002	08/23/2023	Beryllium, total	0.00053 U	mg/L
12	Compliance	E002	08/23/2023	Boron, total	0.100	mg/L
12	Compliance	E002	08/23/2023	Cadmium, total	0.00017 U	mg/L
12	Compliance	E002	08/23/2023	Calcium, total	73.0	mg/L
12	Compliance	E002	08/23/2023	Chloride, total	83.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
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HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
12	Compliance	E002	08/23/2023	Chromium, total	0.0011 U	mg/L
12	Compliance	E002	08/23/2023	Cobalt, total	0.0004 U	mg/L
12	Compliance	E002	08/23/2023	Dissolved Oxygen	1.88	mg/L
12	Compliance	E002	08/23/2023	Fluoride, total	0.3 J	mg/L
12	Compliance	E002	08/23/2023	Lead, total	0.00019 U	mg/L
12	Compliance	E002	08/23/2023	Lithium, total	0.00930	mg/L
12	Compliance	E002	08/23/2023	Mercury, total	0.000079 U	mg/L
12	Compliance	E002	08/23/2023	Molybdenum, total	0.0170	mg/L
12	Compliance	E002	08/23/2023	Oxidation Reduction Potential	154	mV
12	Compliance	E002	08/23/2023	pH (field)	7.3	SU
12	Compliance	E002	08/23/2023	Radium 226 + Radium 228, total	0.743	pCi/L
12	Compliance	E002	08/23/2023	Selenium, total	0.00098 U	mg/L
12	Compliance	E002	08/23/2023	Specific Conductance @ 25C (field)	558	micromhos/cm
12	Compliance	E002	08/23/2023	Sulfate, total	65.0	mg/L
12	Compliance	E002	08/23/2023	Temperature	19.5	degrees C
12	Compliance	E002	08/23/2023	Thallium, total	0.00057 U	mg/L
12	Compliance	E002	08/23/2023	Total Dissolved Solids	500	mg/L
12	Compliance	E002	08/23/2023	Turbidity, field	3.00	NTU
13	Compliance	E002	08/23/2023	Antimony, total	0.0013 U	mg/L
13	Compliance	E002	08/23/2023	Arsenic, total	0.00067 J	mg/L
13	Compliance	E002	08/23/2023	Barium, total	0.0440	mg/L
13	Compliance	E002	08/23/2023	Beryllium, total	0.00053 U	mg/L
13	Compliance	E002	08/23/2023	Boron, total	0.130	mg/L
13	Compliance	E002	08/23/2023	Cadmium, total	0.00017 U	mg/L
13	Compliance	E002	08/23/2023	Calcium, total	75.0	mg/L
13	Compliance	E002	08/23/2023	Chloride, total	81.0	mg/L
13	Compliance	E002	08/23/2023	Chromium, total	0.0011 U	mg/L
13	Compliance	E002	08/23/2023	Cobalt, total	0.0004 U	mg/L
13	Compliance	E002	08/23/2023	Dissolved Oxygen	2.10	mg/L
13	Compliance	E002	08/23/2023	Fluoride, total	0.27 J	mg/L
13	Compliance	E002	08/23/2023	Lead, total	0.00019 U	mg/L
13	Compliance	E002	08/23/2023	Lithium, total	0.0110	mg/L
13	Compliance	E002	08/23/2023	Mercury, total	0.000079 U	mg/L
13	Compliance	E002	08/23/2023	Molybdenum, total	0.0130	mg/L
13	Compliance	E002	08/23/2023	Oxidation Reduction Potential	150	mV
13	Compliance	E002	08/23/2023	pH (field)	7.4	SU
13	Compliance	E002	08/23/2023	Radium 226 + Radium 228, total	0.643	pCi/L
13	Compliance	E002	08/23/2023	Selenium, total	0.00098 U	mg/L
13	Compliance	E002	08/23/2023	Specific Conductance @ 25C (field)	563	micromhos/cm
13	Compliance	E002	08/23/2023	Sulfate, total	68.0	mg/L
13	Compliance	E002	08/23/2023	Temperature	21.4	degrees C
13	Compliance	E002	08/23/2023	Thallium, total	0.00057 U	mg/L
13	Compliance	E002	08/23/2023	Total Dissolved Solids	480	mg/L
13	Compliance	E002	08/23/2023	Turbidity, field	3.05	NTU
46	Compliance	E002	08/23/2023	Antimony, total	0.0013 U	mg/L
46	Compliance	E002	08/23/2023	Arsenic, total	0.00051 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023
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HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
46	Compliance	E002	08/23/2023	Barium, total	0.0650	mg/L
46	Compliance	E002	08/23/2023	Beryllium, total	0.00053 U	mg/L
46	Compliance	E002	08/23/2023	Boron, total	0.110	mg/L
46	Compliance	E002	08/23/2023	Cadmium, total	0.00017 U	mg/L
46	Compliance	E002	08/23/2023	Calcium, total	74.0	mg/L
46	Compliance	E002	08/23/2023	Chloride, total	84.0	mg/L
46	Compliance	E002	08/23/2023	Chromium, total	0.0011 U	mg/L
46	Compliance	E002	08/23/2023	Cobalt, total	0.0004 U	mg/L
46	Compliance	E002	08/23/2023	Dissolved Oxygen	1.85	mg/L
46	Compliance	E002	08/23/2023	Fluoride, total	0.31 J	mg/L
46	Compliance	E002	08/23/2023	Lead, total	0.00019 U	mg/L
46	Compliance	E002	08/23/2023	Lithium, total	0.00870	mg/L
46	Compliance	E002	08/23/2023	Mercury, total	0.000079 U	mg/L
46	Compliance	E002	08/23/2023	Molybdenum, total	0.0190	mg/L
46	Compliance	E002	08/23/2023	Oxidation Reduction Potential	142	mV
46	Compliance	E002	08/23/2023	pH (field)	7.3	SU
46	Compliance	E002	08/23/2023	Radium 226 + Radium 228, total	0.563	pCi/L
46	Compliance	E002	08/23/2023	Selenium, total	0.00098 U	mg/L
46	Compliance	E002	08/23/2023	Specific Conductance @ 25C (field)	559	micromhos/cm
46	Compliance	E002	08/23/2023	Sulfate, total	87.0	mg/L
46	Compliance	E002	08/23/2023	Temperature	20.9	degrees C
46	Compliance	E002	08/23/2023	Thallium, total	0.00057 U	mg/L
46	Compliance	E002	08/23/2023	Total Dissolved Solids	460	mg/L
46	Compliance	E002	08/23/2023	Turbidity, field	19	NTU
47	Compliance	E002	08/23/2023	Antimony, total	0.0013 U	mg/L
47	Compliance	E002	08/23/2023	Arsenic, total	0.00048 J	mg/L
47	Compliance	E002	08/23/2023	Barium, total	0.0890	mg/L
47	Compliance	E002	08/23/2023	Beryllium, total	0.00053 U	mg/L
47	Compliance	E002	08/23/2023	Boron, total	0.470	mg/L
47	Compliance	E002	08/23/2023	Cadmium, total	0.00017 U	mg/L
47	Compliance	E002	08/23/2023	Calcium, total	89.0	mg/L
47	Compliance	E002	08/23/2023	Chloride, total	97.0	mg/L
47	Compliance	E002	08/23/2023	Chromium, total	0.0011 U	mg/L
47	Compliance	E002	08/23/2023	Cobalt, total	0.0004 U	mg/L
47	Compliance	E002	08/23/2023	Dissolved Oxygen	1.52	mg/L
47	Compliance	E002	08/23/2023	Fluoride, total	0.35 J	mg/L
47	Compliance	E002	08/23/2023	Lead, total	0.00019 U	mg/L
47	Compliance	E002	08/23/2023	Lithium, total	0.0110	mg/L
47	Compliance	E002	08/23/2023	Mercury, total	0.000079 U	mg/L
47	Compliance	E002	08/23/2023	Molybdenum, total	0.0260	mg/L
47	Compliance	E002	08/23/2023	Oxidation Reduction Potential	155	mV
47	Compliance	E002	08/23/2023	pH (field)	7.0	SU
47	Compliance	E002	08/23/2023	Radium 226 + Radium 228, total	0.578	pCi/L
47	Compliance	E002	08/23/2023	Selenium, total	0.00098 U	mg/L
47	Compliance	E002	08/23/2023	Specific Conductance @ 25C (field)	639	micromhos/cm
47	Compliance	E002	08/23/2023	Sulfate, total	80.0	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
47	Compliance	E002	08/23/2023	Temperature	21.5	degrees C
47	Compliance	E002	08/23/2023	Thallium, total	0.00057 U	mg/L
47	Compliance	E002	08/23/2023	Total Dissolved Solids	520	mg/L
47	Compliance	E002	08/23/2023	Turbidity, field	3.20	NTU
52	Compliance	E002	08/24/2023	Antimony, total	0.0013 U	mg/L
52	Compliance	E002	08/24/2023	Arsenic, total	0.00053 J	mg/L
52	Compliance	E002	08/24/2023	Barium, total	0.0910	mg/L
52	Compliance	E002	08/24/2023	Beryllium, total	0.00053 U	mg/L
52	Compliance	E002	08/24/2023	Boron, total	0.160	mg/L
52	Compliance	E002	08/24/2023	Cadmium, total	0.00017 U	mg/L
52	Compliance	E002	08/24/2023	Calcium, total	85.0	mg/L
52	Compliance	E002	08/24/2023	Chloride, total	88.0	mg/L
52	Compliance	E002	08/24/2023	Chromium, total	0.0011 U	mg/L
52	Compliance	E002	08/24/2023	Cobalt, total	0.0004 U	mg/L
52	Compliance	E002	08/24/2023	Dissolved Oxygen	1.96	mg/L
52	Compliance	E002	08/24/2023	Fluoride, total	0.34 J	mg/L
52	Compliance	E002	08/24/2023	Lead, total	0.00019 U	mg/L
52	Compliance	E002	08/24/2023	Lithium, total	0.00960	mg/L
52	Compliance	E002	08/24/2023	Mercury, total	0.0002 UJ	mg/L
52	Compliance	E002	08/24/2023	Molybdenum, total	0.0130	mg/L
52	Compliance	E002	08/24/2023	Oxidation Reduction Potential	146	mV
52	Compliance	E002	08/24/2023	pH (field)	7.0	SU
52	Compliance	E002	08/24/2023	Radium 226 + Radium 228, total	0.616	pCi/L
52	Compliance	E002	08/24/2023	Selenium, total	0.00098 U	mg/L
52	Compliance	E002	08/24/2023	Specific Conductance @ 25C (field)	614	micromhos/cm
52	Compliance	E002	08/24/2023	Sulfate, total	62.0	mg/L
52	Compliance	E002	08/24/2023	Temperature	24.0	degrees C
52	Compliance	E002	08/24/2023	Thallium, total	0.00057 U	mg/L
52	Compliance	E002	08/24/2023	Total Dissolved Solids	520	mg/L
52	Compliance	E002	08/24/2023	Turbidity, field	4.08	NTU
54	Compliance	E002	08/23/2023	Antimony, total	0.0013 U	mg/L
54	Compliance	E002	08/23/2023	Arsenic, total	0.00059 J	mg/L
54	Compliance	E002	08/23/2023	Barium, total	0.0530	mg/L
54	Compliance	E002	08/23/2023	Beryllium, total	0.00053 U	mg/L
54	Compliance	E002	08/23/2023	Boron, total	0.230	mg/L
54	Compliance	E002	08/23/2023	Cadmium, total	0.00017 U	mg/L
54	Compliance	E002	08/23/2023	Calcium, total	77.0	mg/L
54	Compliance	E002	08/23/2023	Chloride, total	84.0	mg/L
54	Compliance	E002	08/23/2023	Chromium, total	0.0011 U	mg/L
54	Compliance	E002	08/23/2023	Cobalt, total	0.0004 U	mg/L
54	Compliance	E002	08/23/2023	Dissolved Oxygen	2.31	mg/L
54	Compliance	E002	08/23/2023	Fluoride, total	0.33 J	mg/L
54	Compliance	E002	08/23/2023	Lead, total	0.00019 U	mg/L
54	Compliance	E002	08/23/2023	Lithium, total	0.0110	mg/L
54	Compliance	E002	08/23/2023	Mercury, total	0.000079 U	mg/L
54	Compliance	E002	08/23/2023	Molybdenum, total	0.0300	mg/L

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

Well ID	Well Type	Event	Date	Parameter	Result	Unit
54	Compliance	E002	08/23/2023	Oxidation Reduction Potential	141	mV
54	Compliance	E002	08/23/2023	pH (field)	7.3	SU
54	Compliance	E002	08/23/2023	Radium 226 + Radium 228, total	0.649	pCi/L
54	Compliance	E002	08/23/2023	Selenium, total	0.00098 U	mg/L
54	Compliance	E002	08/23/2023	Specific Conductance @ 25C (field)	576	micromhos/cm
54	Compliance	E002	08/23/2023	Sulfate, total	85.0	mg/L
54	Compliance	E002	08/23/2023	Temperature	22.6	degrees C
54	Compliance	E002	08/23/2023	Thallium, total	0.00057 U	mg/L
54	Compliance	E002	08/23/2023	Total Dissolved Solids	510	mg/L
54	Compliance	E002	08/23/2023	Turbidity, field	13.8	NTU

Notes:
C = Celsius
cm = centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
pCi/L = picocuries per liter
SU = Standard Units
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
12	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	17	100	All ND - Last	0.001	0.006	Standard	No Exceedance
12	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	22	100	All ND - Last	0.01	0.01	Standard	No Exceedance
12	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	0.051	2	Standard	No Exceedance
12	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
12	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	25	0	CB around T-S line	0.092	2	Standard	No Exceedance
12	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	26	89	CI around median	0.001	0.005	Standard	No Exceedance
12	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	69.8	435	Background	No Exceedance
12	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	22	97	CB around T-S line	0.00121	0.1	Standard	No Exceedance
12	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	20	81	Most recent sample	0.001	0.038	Background	No Exceedance
12	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.235	4	Standard	No Exceedance
12	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	22	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
12	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	21	5	CB around linear reg	0.00603	0.04	Standard	No Exceedance
12	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
12	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	24	0	CB around linear reg	0.0123	0.1	Standard	No Exceedance
12	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	32	0	CB around linear reg	7.0/7.3	6.5/9	Stnd/Standard	No Exceedance
12	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around geomean	0.317	5	Standard	No Exceedance
12	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	24	54	CB around T-S line	0.000721	0.05	Standard	No Exceedance
12	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	63.7	400	Standard	No Exceedance
12	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
12	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	458	1,620	Background	No Exceedance
13	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	17	96	CI around median	0.001	0.006	Standard	No Exceedance
13	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	22	97	CI around median	0.001	0.01	Standard	No Exceedance
13	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	0.0426	2	Standard	No Exceedance
13	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
13	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.618	2	Standard	No Exceedance
13	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	26	97	CI around median	0.001	0.005	Standard	No Exceedance
13	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	73.2	435	Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
13	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	22	85	CB around T-S line	0.00121	0.1	Standard	No Exceedance
13	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	20	81	Most recent sample	0.001	0.038	Background	No Exceedance
13	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.202	4	Standard	No Exceedance
13	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	22	97	CI around median	0.001	0.0075	Standard	No Exceedance
13	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.0176	0.04	Standard	No Exceedance
13	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
13	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	24	29	CI around mean	0.0152	0.1	Standard	No Exceedance
13	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	32	0	CI around mean	7.4/7.5	6.5/9	Stnd/Standard	No Exceedance
13	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around mean	0.466	5	Standard	No Exceedance
13	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	24	40	CI around mean	0.00135	0.05	Standard	No Exceedance
13	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	77.7	400	Standard	No Exceedance
13	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
13	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	478	1,620	Background	No Exceedance
46	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.001	0.006	Standard	No Exceedance
46	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.01	0.01	Standard	No Exceedance
46	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	20	0	CB around linear reg	0.0649	2	Standard	No Exceedance
46	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
46	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.204	2	Standard	No Exceedance
46	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.002	0.005	Standard	No Exceedance
46	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	69.2	435	Background	No Exceedance
46	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	18	89	CB around T-S line	0.00133	0.1	Standard	No Exceedance
46	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.001	0.038	Background	No Exceedance
46	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.239	4	Standard	No Exceedance
46	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
46	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	20	5	CI around median	0.009	0.04	Standard	No Exceedance
46	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
46	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	20	0	CB around T-S line	0.0102	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
46	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	21	0	CB around linear reg	7.0/7.3	6.5/9	Stnd/Standard	No Exceedance
46	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around geomean	0.285	5	Standard	No Exceedance
46	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	20	55	CI around median	0.001	0.05	Standard	No Exceedance
46	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	21	0	CI around geomean	61.4	400	Standard	No Exceedance
46	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
46	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	439	1,620	Background	No Exceedance
47	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.001	0.006	Standard	No Exceedance
47	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	18	94	CI around median	0.001	0.01	Standard	No Exceedance
47	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	20	0	CI around mean	0.0771	2	Standard	No Exceedance
47	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
47	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	21	0	CI around geomean	0.2	2	Standard	No Exceedance
47	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.002	0.005	Standard	No Exceedance
47	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	72.7	435	Background	No Exceedance
47	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	18	94	CB around T-S line	0.001	0.1	Standard	No Exceedance
47	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	19	79	CI around median	0.001	0.038	Background	No Exceedance
47	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	21	0	CB around linear reg	0.236	4	Standard	No Exceedance
47	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
47	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	20	0	CI around mean	0.00859	0.04	Standard	No Exceedance
47	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
47	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	20	0	CB around linear reg	0.0127	0.1	Standard	No Exceedance
47	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	21	0	CI around mean	7.0/7.2	6.5/9	Stnd/Standard	No Exceedance
47	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around mean	0.346	5	Standard	No Exceedance
47	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	19	90	CI around median	0.001	0.05	Standard	No Exceedance
47	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	62.8	400	Standard	No Exceedance
47	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
47	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	470	1,620	Background	No Exceedance
52	UA	E001	Antimony, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
52	UA	E001	Arsenic, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.01	0.01	Standard	No Exceedance
52	UA	E001	Barium, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.0685	2	Standard	No Exceedance
52	UA	E001	Beryllium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
52	UA	E001	Boron, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.122	2	Standard	No Exceedance
52	UA	E001	Cadmium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.002	0.005	Standard	No Exceedance
52	UA	E001	Chloride, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	69.5	435	Background	No Exceedance
52	UA	E001	Chromium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
52	UA	E001	Cobalt, total	mg/L	02/24/21 - 06/01/23	10	90	Most recent sample	0.001	0.038	Background	No Exceedance
52	UA	E001	Fluoride, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.275	4	Standard	No Exceedance
52	UA	E001	Lead, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
52	UA	E001	Lithium, total	mg/L	02/24/21 - 06/01/23	10	10	CI around mean	0.005	0.04	Standard	No Exceedance
52	UA	E001	Mercury, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
52	UA	E001	Molybdenum, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.00991	0.1	Standard	No Exceedance
52	UA	E001	pH (field)	SU	02/24/21 - 06/01/23	10	0	CI around mean	7.0/7.4	6.5/9	Stnd/Standard	No Exceedance
52	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 06/01/23	10	0	CI around mean	0.326	5	Standard	No Exceedance
52	UA	E001	Selenium, total	mg/L	02/24/21 - 06/01/23	10	90	CI around median	0.001	0.05	Standard	No Exceedance
52	UA	E001	Sulfate, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	57.7	400	Standard	No Exceedance
52	UA	E001	Thallium, total	mg/L	02/24/21 - 06/01/23	10	90	CI around median	0.002	0.002	Standard	No Exceedance
52	UA	E001	Total Dissolved Solids	mg/L	02/24/21 - 06/01/23	9	0	CI around mean	418	1,620	Background	No Exceedance
54	UA	E001	Antimony, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
54	UA	E001	Arsenic, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.01	0.01	Standard	No Exceedance
54	UA	E001	Barium, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.0562	2	Standard	No Exceedance
54	UA	E001	Beryllium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
54	UA	E001	Boron, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.573	2	Standard	No Exceedance
54	UA	E001	Cadmium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.002	0.005	Standard	No Exceedance
54	UA	E001	Chloride, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	79.8	435	Background	No Exceedance
54	UA	E001	Chromium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
54	UA	E001	Cobalt, total	mg/L	02/24/21 - 05/31/23	10	80	CI around median	0.001	0.038	Background	No Exceedance
54	UA	E001	Fluoride, total	mg/L	02/24/21 - 05/31/23	10	0	CB around linear reg	0.157	4	Standard	No Exceedance
54	UA	E001	Lead, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
54	UA	E001	Lithium, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.0133	0.04	Standard	No Exceedance
54	UA	E001	Mercury, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
54	UA	E001	Molybdenum, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.019	0.1	Standard	No Exceedance
54	UA	E001	pH (field)	SU	02/24/21 - 05/31/23	10	0	CI around geomean	6.9/7.4	6.5/9	Stnd/Standard	No Exceedance
54	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 05/31/23	10	0	CI around geomean	0.0653	5	Standard	No Exceedance
54	UA	E001	Selenium, total	mg/L	02/24/21 - 05/31/23	10	40	CI around mean	0.00102	0.05	Standard	No Exceedance
54	UA	E001	Sulfate, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	74.4	400	Standard	No Exceedance
54	UA	E001	Thallium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
54	UA	E001	Total Dissolved Solids	mg/L	02/24/21 - 05/31/23	8	0	CI around mean	484	1,620	Background	No Exceedance

Notes:
Exceedance Type:

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

HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:

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

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

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

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

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
12	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	18	100	All ND - Last	0.003	0.006	Standard	No Exceedance
12	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	23	100	All ND - Last	0.001	0.010	Standard	No Exceedance
12	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	0.0514	2.0	Standard	No Exceedance
12	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.001	0.004	Standard	No Exceedance
12	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	26	0	CB around T-S line	0.0751	2	Standard	No Exceedance
12	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	27	90	CI around median	0.001	0.005	Standard	No Exceedance
12	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	70.2	435	Background	No Exceedance
12	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	23	97	CB around T-S line	0.00148	0.1	Standard	No Exceedance
12	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	21	82	Most recent sample	0.001	0.0380	Background	No Exceedance
12	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	26	3	CI around median	0.24	4.0	Standard	No Exceedance
12	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	23	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
12	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	22	4	CB around linear reg	0.00613	0.04	Standard	No Exceedance
12	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
12	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	25	0	CB around linear reg	0.012	0.1	Standard	No Exceedance
12	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	33	0	CB around linear reg	7.1/7.3	6.5/9.0	Standard/Standard	No Exceedance
12	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around geomean	0.331	5	Standard	No Exceedance
12	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	25	56	CI around median	0.001	0.05	Standard	No Exceedance
12	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	63.8	400	Standard	No Exceedance
12	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.002	0.002	Standard	No Exceedance
12	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	460	1,620	Background	No Exceedance
13	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	18	96	CI around median	0.001	0.006	Standard	No Exceedance
13	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	23	97	CI around median	0.001	0.010	Standard	No Exceedance
13	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	0.0427	2.0	Standard	No Exceedance
13	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.001	0.004	Standard	No Exceedance
13	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	0.589	2	Standard	No Exceedance
13	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	27	97	CI around median	0.001	0.005	Standard	No Exceedance
13	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	73.5	435	Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
13	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	23	85	CB around T-S line	0.0015	0.1	Standard	No Exceedance
13	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	21	82	Most recent sample	0.001	0.0380	Background	No Exceedance
13	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	26	3	CI around median	0.2	4.0	Standard	No Exceedance
13	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	23	97	CI around median	0.001	0.0075	Standard	No Exceedance
13	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	0.0171	0.04	Standard	No Exceedance
13	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
13	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	25	28	CI around mean	0.015	0.1	Standard	No Exceedance
13	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	33	0	CI around mean	7.4/7.5	6.5/9.0	Standard/Standard	No Exceedance
13	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around mean	0.476	5	Standard	No Exceedance
13	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	25	42	CI around mean	0.00135	0.05	Standard	No Exceedance
13	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	77.2	400	Standard	No Exceedance
13	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.002	0.002	Standard	No Exceedance
13	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	478	1,620	Background	No Exceedance
46	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.003	0.006	Standard	No Exceedance
46	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.001	0.010	Standard	No Exceedance
46	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	21	0	CB around linear reg	0.0642	2.0	Standard	No Exceedance
46	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.001	0.004	Standard	No Exceedance
46	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	0.197	2	Standard	No Exceedance
46	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
46	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	69.8	435	Background	No Exceedance
46	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	19	90	CB around T-S line	0.00149	0.1	Standard	No Exceedance
46	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.001	0.0380	Background	No Exceedance
46	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	22	4	CI around median	0.24	4.0	Standard	No Exceedance
46	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
46	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	21	5	CI around median	0.009	0.04	Standard	No Exceedance
46	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
46	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	21	0	CB around T-S line	0.00879	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
46	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	22	0	CB around linear reg	7.0/7.3	6.5/9.0	Standard/Standard	No Exceedance
46	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around geomean	0.295	5	Standard	No Exceedance
46	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	21	57	CI around median	0.001	0.05	Standard	No Exceedance
46	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	22	0	CI around geomean	62	400	Standard	No Exceedance
46	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
46	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	440	1,620	Background	No Exceedance
47	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.003	0.006	Standard	No Exceedance
47	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	19	95	CI around median	0.001	0.010	Standard	No Exceedance
47	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	21	0	CI around mean	0.0777	2.0	Standard	No Exceedance
47	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.001	0.004	Standard	No Exceedance
47	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	22	0	CI around geomean	0.206	2	Standard	No Exceedance
47	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
47	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	73.5	435	Background	No Exceedance
47	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	19	95	CB around T-S line	0.001	0.1	Standard	No Exceedance
47	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	20	80	CI around median	0.001	0.0380	Background	No Exceedance
47	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	22	4	CB around T-S line	0.21	4.0	Standard	No Exceedance
47	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
47	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	21	0	CI around mean	0.0087	0.04	Standard	No Exceedance
47	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
47	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	21	0	CB around linear reg	0.0132	0.1	Standard	No Exceedance
47	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	22	0	CI around mean	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
47	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around mean	0.358	5	Standard	No Exceedance
47	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	20	90	CI around median	0.001	0.05	Standard	No Exceedance
47	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	63.5	400	Standard	No Exceedance
47	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
47	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	472	1,620	Background	No Exceedance
52	UA	E002	Antimony, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
52	UA	E002	Arsenic, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.001	0.010	Standard	No Exceedance
52	UA	E002	Barium, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.0704	2.0	Standard	No Exceedance
52	UA	E002	Beryllium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
52	UA	E002	Boron, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.126	2	Standard	No Exceedance
52	UA	E002	Cadmium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
52	UA	E002	Chloride, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	71.3	435	Background	No Exceedance
52	UA	E002	Chromium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.005	0.1	Standard	No Exceedance
52	UA	E002	Cobalt, total	mg/L	02/24/21 - 08/24/23	11	91	Most recent sample	0.001	0.0380	Background	No Exceedance
52	UA	E002	Fluoride, total	mg/L	02/24/21 - 08/24/23	11	9	CI around geomean	0.27	4.0	Standard	No Exceedance
52	UA	E002	Lead, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
52	UA	E002	Lithium, total	mg/L	02/24/21 - 08/24/23	11	9	CI around mean	0.00532	0.04	Standard	No Exceedance
52	UA	E002	Mercury, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
52	UA	E002	Molybdenum, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.0102	0.1	Standard	No Exceedance
52	UA	E002	pH (field)	SU	02/24/21 - 08/24/23	11	0	CI around mean	7.0/7.4	6.5/9.0	Standard/Standard	No Exceedance
52	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 08/24/23	11	0	CI around mean	0.36	5	Standard	No Exceedance
52	UA	E002	Selenium, total	mg/L	02/24/21 - 08/24/23	11	91	CI around median	0.001	0.05	Standard	No Exceedance
52	UA	E002	Sulfate, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	58.3	400	Standard	No Exceedance
52	UA	E002	Thallium, total	mg/L	02/24/21 - 08/24/23	11	91	CI around median	0.002	0.002	Standard	No Exceedance
52	UA	E002	Total Dissolved Solids	mg/L	02/24/21 - 08/24/23	10	0	CI around mean	427	1,620	Background	No Exceedance
54	UA	E002	Antimony, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance
54	UA	E002	Arsenic, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.001	0.010	Standard	No Exceedance
54	UA	E002	Barium, total	mg/L	02/24/21 - 08/23/23	11	0	CB around linear reg	0.0388	2.0	Standard	No Exceedance
54	UA	E002	Beryllium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
54	UA	E002	Boron, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	0.501	2	Standard	No Exceedance
54	UA	E002	Cadmium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
54	UA	E002	Chloride, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	80.3	435	Background	No Exceedance
54	UA	E002	Chromium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.005	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
54	UA	E002	Cobalt, total	mg/L	02/24/21 - 08/23/23	11	82	CI around median	0.001	0.0380	Background	No Exceedance
54	UA	E002	Fluoride, total	mg/L	02/24/21 - 08/23/23	11	9	CI around mean	0.284	4.0	Standard	No Exceedance
54	UA	E002	Lead, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
54	UA	E002	Lithium, total	mg/L	02/24/21 - 08/23/23	11	0	CB around linear reg	0.00769	0.04	Standard	No Exceedance
54	UA	E002	Mercury, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
54	UA	E002	Molybdenum, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	0.0199	0.1	Standard	No Exceedance
54	UA	E002	pH (field)	SU	02/24/21 - 08/23/23	11	0	CI around mean	6.9/7.4	6.5/9.0	Standard/Standard	No Exceedance
54	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 08/23/23	11	0	CI around mean	0.094	5	Standard	No Exceedance
54	UA	E002	Selenium, total	mg/L	02/24/21 - 08/23/23	11	46	CI around mean	0.00104	0.05	Standard	No Exceedance
54	UA	E002	Sulfate, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	75.7	400	Standard	No Exceedance
54	UA	E002	Thallium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.002	0.002	Standard	No Exceedance
54	UA	E002	Total Dissolved Solids	mg/L	02/24/21 - 08/23/23	9	0	CI around mean	488	1,620	Background	No Exceedance

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

Notes:
Compliance Result:

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

HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:

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

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

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

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

FIGURES

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

0 175 350
Feet

MONITORING WELL LOCATION MAP

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

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\222285\MXD\845_Operating_Permit\Hennepin\GMP\Figure 2-1_Proposed Monitoring Well Network.mxd

PROJECT: 169000XXX | DATED: 10/13/2021 | DESIGNER: HOTCALD

- COMPLIANCE WELL WITHOUT EXCEEDANCE
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

0 175 350 Feet

GWPS EXCEEDANCE MAP
UPPERMOST AQUIFER
QUARTERS 2-3, 2023

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

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\22851\MXD\8645_AnnualGWM2023\HEN\803\Figure 2. HEN 803 GWPS UA.mxd

PROJECT: 169000XXXX | DATED: 1/17/2024 | DESIGNER: GALARNMC

- 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
Feet

POTENTIOMETRIC SURFACE MAP APRIL 30, 2023

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

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\221228\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230430.mxd

PROJECT: 169000XXXX | DATED: 12/1/2023 | DESIGNER: GALARNMC

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
Feet

POTENTIOMETRIC SURFACE MAP MAY 30, 2023

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

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\2202285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230530.mxd

PROJECT: 169000XXXX | DATED: 9/27/2023 | DESIGNER: GALARNMC

- 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
Feet

POTENTIOMETRIC SURFACE MAP JUNE 21, 2023

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

FIGURE 5

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\2212285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230621.mxd

PROJECT: 169000XXXX | DATED: 11/20/2023 | DESIGNER: GALARNMC

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
Feet

POTENTIOMETRIC SURFACE MAP JULY 21, 2023

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

FIGURE 6

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\2202285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230721.mxd

PROJECT: 169000XXXX | DATED: 11/20/2023 | DESIGNER: GALARNMC

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- 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
Feet

POTENTIOMETRIC SURFACE MAP AUGUST 21, 2023

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

FIGURE 7

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\2202285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230821.mxd
PROJECT: 169000XXXX | DATED: 11/20/2023 | DESIGNER: GALARNMC

- 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
Feet

POTENTIOMETRIC SURFACE MAP SEPTEMBER 30, 2023

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

FIGURE 8

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\221228S\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20230930.mxd

PROJECT: 169000XXXX | DATED: 12/8/2023 | DESIGNER: GALARNMC

- 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
Feet

POTENTIOMETRIC SURFACE MAP
OCTOBER 31, 2023

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

FIGURE 9

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\221285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20231031.mxd

PROJECT: 169000XXXX | DATED: 12/8/2023 | DESIGNER: GALARNMC

- 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
Feet

POTENTIOMETRIC SURFACE MAP NOVEMBER 11, 2023

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

FIGURE 10

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\221228\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20231113.mxd

PROJECT: 169000XXXX | DATED: 12/7/2023 | DESIGNER: GALARNMC

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
Feet

POTENTIOMETRIC SURFACE MAP DECEMBER 21, 2023

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

FIGURE 11

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\2202285\MXD\GW_Contours\Round_2023\Hennepin\EAP_803\HEN 803 EAP Pot Surface 20231221.mxd

PROJECT: 169000XXXX | DATED: 1/10/2024 | DESIGNER: GALARNMC

ATTACHMENTS

ATTACHMENT A
GROUNDWATER ELEVATION DATA

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
07	Background	UA	04/30/2023	67.44	450.82
07	Background	UA	05/30/2023	67.80	450.47
07	Background	UA	06/21/2023	68.16	450.10
07	Background	UA	07/21/2023	68.13	450.13
07	Background	UA	08/21/2023	68.39	449.87
07	Background	UA	10/31/2023	68.55	449.72
07	Background	UA	11/13/2023	68.54	449.73
07	Background	UA	12/21/2023	69.03	449.24
08	Background	UA	04/30/2023	53.22	448.15
08	Background	UA	05/30/2023	53.84	447.54
08	Background	UA	06/21/2023	53.99	447.38
08	Background	UA	07/21/2023	53.66	447.71
08	Background	UA	08/21/2023	54.24	447.13
08	Background	UA	09/30/2023	54.43	446.95
08	Background	UA	10/31/2023	53.85	447.53
08	Background	UA	11/13/2023	54.02	447.36
08	Background	UA	12/21/2023	54.80	446.58
08D	Background	UA	04/30/2023	53.49	447.84
08D	Background	UA	05/30/2023	54.12	447.22
08D	Background	UA	06/21/2023	54.12	447.21
08D	Background	UA	07/21/2023	53.75	447.58
08D	Background	UA	08/21/2023	54.44	446.89
08D	Background	UA	09/30/2023	54.61	446.73
08D	Background	UA	10/31/2023	54.04	447.30
08D	Background	UA	11/13/2023	54.23	447.11
08D	Background	UA	12/21/2023	55.00	446.34
12	Compliance	UA	05/30/2023	51.21	447.23
12	Compliance	UA	09/30/2023	51.66	446.78
12	Compliance	UA	10/31/2023	51.07	447.37
12	Compliance	UA	11/13/2023	52.26	446.18
12	Compliance	UA	12/21/2023	52.05	446.39
13	Compliance	UA	04/30/2023	50.50	447.96
13	Compliance	UA	05/30/2023	51.21	447.26
13	Compliance	UA	06/21/2023	51.12	447.34
13	Compliance	UA	07/21/2023	50.75	447.71
13	Compliance	UA	08/21/2023	51.40	447.06
13	Compliance	UA	09/30/2023	51.52	446.95
13	Compliance	UA	10/31/2023	51.08	447.39
13	Compliance	UA	11/13/2023	51.25	447.22
13	Compliance	UA	12/21/2023	52.05	446.42
16	Background	UA	05/30/2023	54.57	447.17
16	Background	UA	08/28/2023	[53.90]	[447.84]
16	Background	UA	09/30/2023	55.00	446.74
16	Background	UA	10/31/2023	54.47	447.27
16	Background	UA	11/13/2023	54.67	447.07
16	Background	UA	12/21/2023	55.45	446.29

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
17	Background	UA	04/30/2023	56.31	450.81
17	Background	UA	05/30/2023	55.96	451.17
17	Background	UA	06/21/2023	54.99	452.13
17	Background	UA	07/21/2023	54.68	452.44
17	Background	UA	08/21/2023	56.12	451.00
17	Background	UA	10/31/2023	55.56	451.57
17	Background	UA	11/13/2023	56.23	450.90
17	Background	UA	12/21/2023	59.29	447.84
46	Compliance	UA	04/30/2023	50.70	448.04
46	Compliance	UA	05/30/2023	51.40	447.35
46	Compliance	UA	06/21/2023	51.39	447.35
46	Compliance	UA	07/21/2023	51.02	447.72
46	Compliance	UA	08/21/2023	51.71	447.03
46	Compliance	UA	10/31/2023	51.22	447.53
46	Compliance	UA	11/13/2023	51.46	447.29
46	Compliance	UA	12/21/2023	52.30	446.45
47	Compliance	UA	04/30/2023	54.95	447.69
47	Compliance	UA	05/30/2023	55.66	446.99
47	Compliance	UA	06/21/2023	55.56	447.08
47	Compliance	UA	07/21/2023	55.22	447.42
47	Compliance	UA	08/21/2023	55.85	446.79
47	Compliance	UA	09/30/2023	55.99	446.66
47	Compliance	UA	10/31/2023	55.52	447.13
47	Compliance	UA	11/13/2023	55.72	446.93
47	Compliance	UA	12/21/2023	56.49	446.16
52	Compliance	UA	04/30/2023	53.05	447.87
52	Compliance	UA	05/30/2023	53.89	447.04
52	Compliance	UA	06/21/2023	53.74	447.18
52	Compliance	UA	07/21/2023	53.35	447.57
52	Compliance	UA	08/21/2023	54.01	446.91
52	Compliance	UA	09/30/2023	54.07	446.86
52	Compliance	UA	10/31/2023	53.68	447.25
52	Compliance	UA	11/13/2023	53.88	447.05
52	Compliance	UA	12/21/2023	54.66	446.27
54	Compliance	UA	04/30/2023	52.47	447.82
54	Compliance	UA	05/30/2023	53.23	447.07
54	Compliance	UA	06/21/2023	53.16	447.13
54	Compliance	UA	07/21/2023	52.80	447.49
54	Compliance	UA	08/21/2023	53.44	446.85
54	Compliance	UA	09/30/2023	53.54	446.76
54	Compliance	UA	10/31/2023	53.07	447.23
54	Compliance	UA	11/13/2023	53.31	446.99
54	Compliance	UA	12/21/2023	54.06	446.24
XSG01	Water Level	CCR	05/30/2023	7.17	486.32
XSG01	Water Level	CCR	10/31/2023	10.29	483.20
XSG01	Water Level	CCR	11/13/2023	10.28	483.21

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
XSG01	Water Level	CCR	12/21/2023	10.21	483.28
SG02	Water Level	SW	04/30/2023	NA	448.50
SG02	Water Level	SW	05/30/2023	NA	440.50
SG02	Water Level	SW	06/21/2023	NA	440.50
SG02	Water Level	SW	07/21/2023	NA	441.75
SG02	Water Level	SW	08/21/2023	NA	440.75
SG02	Water Level	SW	09/30/2023	NA	440.75
SG02	Water Level	SW	10/31/2023	NA	441.50
SG02	Water Level	SW	11/13/2023	NA	441.00
SG02	Water Level	SW	12/21/2023	NA	441.75

Notes:
Due to malfunctioning pressure transducer, data gaps exist in monthly water level elevations prior to the fourth quarter. Monthly depth to water measurements were collected manually in the fourth quarter.
BMP = below measuring point
Bracketing [ ] indicates that the measurement was obtained outside of the episodic depth to groundwater measurements time frame.
NA = not available/not applicable
NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:

CCR = coal combustion residuals

SW = surface water

UA = uppermost aquifer

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ATTACHMENT B
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND

- **ATTACHMENT C FROM THE QUARTER 2, 2023 GROUNDWATER MONITORING DATA AND DETECTED EXCEEDANCES REPORT (RAMBOLL, 2023a)**

- **ATTACHMENT C FROM THE QUARTER 3, 2023 GROUNDWATER MONITORING DATA AND DETECTED EXCEEDANCES REPORT (RAMBOLL, 2023b)**

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
12	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	17	100	All ND - Last	0.001	0.001
12	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	22	100	All ND - Last	0.01	0.001
12	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	0.051	0.212
12	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.0005	0.001
12	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	25	0	CB around T-S line	0.092	0.163
12	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	26	89	CI around median	0.001	0.0023
12	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	69.8	435
12	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	22	97	CB around T-S line	0.00121	0.001
12	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	20	81	Most recent sample	0.001	0.038
12	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.235	0.12
12	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	22	100	All ND - Last	0.0075	0.0015
12	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	21	5	CB around linear reg	0.00603	0.019
12	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.0002	0.0002
12	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	24	0	CB around linear reg	0.0123	0.0017
12	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	32	0	CB around linear reg	7.0/7.3	6.6/7.5
12	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around geomean	0.317	2
12	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	24	54	CB around T-S line	0.000721	0.0014
12	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	63.7	214.6
12	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.002	0.001
12	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	458	1,620
13	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	17	96	CI around median	0.001	0.001
13	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	22	97	CI around median	0.001	0.001
13	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	0.0426	0.212
13	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.0005	0.001
13	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.618	0.163
13	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	26	97	CI around median	0.001	0.0023
13	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	73.2	435

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
13	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	22	85	CB around T-S line	0.00121	0.001
13	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	20	81	Most recent sample	0.001	0.038
13	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	0.202	0.12
13	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	22	97	CI around median	0.001	0.0015
13	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.0176	0.019
13	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.0002	0.0002
13	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	24	29	CI around mean	0.0152	0.0017
13	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	32	0	CI around mean	7.4/7.5	6.6/7.5
13	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around mean	0.466	2
13	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	24	40	CI around mean	0.00135	0.0014
13	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	25	0	CI around mean	77.7	214.6
13	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.002	0.001
13	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	24	0	CI around mean	478	1,620
46	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.001	0.001
46	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.01	0.001
46	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	20	0	CB around linear reg	0.0649	0.212
46	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0005	0.001
46	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.204	0.163
46	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.002	0.0023
46	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	69.2	435
46	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	18	89	CB around T-S line	0.00133	0.001
46	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.001	0.038
46	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	0.239	0.12
46	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.0075	0.0015
46	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	20	5	CI around median	0.009	0.019
46	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0002	0.0002
46	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	20	0	CB around T-S line	0.0102	0.0017

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
46	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	21	0	CB around linear reg	7.0/7.3	6.6/7.5
46	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around geomean	0.285	2
46	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	20	55	CI around median	0.001	0.0014
46	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	21	0	CI around geomean	61.4	214.6
46	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.002	0.001
46	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	439	1,620
47	UA	E001	Antimony, total	mg/L	12/09/15 - 05/31/23	16	100	All ND - Last	0.001	0.001
47	UA	E001	Arsenic, total	mg/L	12/09/15 - 05/31/23	18	94	CI around median	0.001	0.001
47	UA	E001	Barium, total	mg/L	12/09/15 - 05/31/23	20	0	CI around mean	0.0771	0.212
47	UA	E001	Beryllium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0005	0.001
47	UA	E001	Boron, total	mg/L	12/09/15 - 05/31/23	21	0	CI around geomean	0.2	0.163
47	UA	E001	Cadmium, total	mg/L	12/09/15 - 05/31/23	19	100	All ND - Last	0.002	0.0023
47	UA	E001	Chloride, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	72.7	435
47	UA	E001	Chromium, total	mg/L	12/09/15 - 05/31/23	18	94	CB around T-S line	0.001	0.001
47	UA	E001	Cobalt, total	mg/L	12/09/15 - 05/31/23	19	79	CI around median	0.001	0.038
47	UA	E001	Fluoride, total	mg/L	12/09/15 - 05/31/23	21	0	CB around linear reg	0.236	0.12
47	UA	E001	Lead, total	mg/L	12/09/15 - 05/31/23	18	100	All ND - Last	0.0075	0.0015
47	UA	E001	Lithium, total	mg/L	12/09/15 - 05/31/23	20	0	CI around mean	0.00859	0.019
47	UA	E001	Mercury, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.0002	0.0002
47	UA	E001	Molybdenum, total	mg/L	12/09/15 - 05/31/23	20	0	CB around linear reg	0.0127	0.0017
47	UA	E001	pH (field)	SU	12/09/15 - 05/31/23	21	0	CI around mean	7.0/7.2	6.6/7.5
47	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 05/31/23	20	0	CI around mean	0.346	2
47	UA	E001	Selenium, total	mg/L	12/09/15 - 05/31/23	19	90	CI around median	0.001	0.0014
47	UA	E001	Sulfate, total	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	62.8	214.6
47	UA	E001	Thallium, total	mg/L	12/09/15 - 05/31/23	15	100	All ND - Last	0.002	0.001
47	UA	E001	Total Dissolved Solids	mg/L	12/09/15 - 05/31/23	21	0	CI around mean	470	1,620
52	UA	E001	Antimony, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.001	0.001

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
52	UA	E001	Arsenic, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.01	0.001
52	UA	E001	Barium, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.0685	0.212
52	UA	E001	Beryllium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0005	0.001
52	UA	E001	Boron, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.122	0.163
52	UA	E001	Cadmium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.002	0.0023
52	UA	E001	Chloride, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	69.5	435
52	UA	E001	Chromium, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.005	0.001
52	UA	E001	Cobalt, total	mg/L	02/24/21 - 06/01/23	10	90	Most recent sample	0.001	0.038
52	UA	E001	Fluoride, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.275	0.12
52	UA	E001	Lead, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0075	0.0015
52	UA	E001	Lithium, total	mg/L	02/24/21 - 06/01/23	10	10	CI around mean	0.005	0.019
52	UA	E001	Mercury, total	mg/L	02/24/21 - 06/01/23	10	100	All ND - Last	0.0002	0.0002
52	UA	E001	Molybdenum, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	0.00991	0.0017
52	UA	E001	pH (field)	SU	02/24/21 - 06/01/23	10	0	CI around mean	7.0/7.4	6.6/7.5
52	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 06/01/23	10	0	CI around mean	0.326	2
52	UA	E001	Selenium, total	mg/L	02/24/21 - 06/01/23	10	90	CI around median	0.001	0.0014
52	UA	E001	Sulfate, total	mg/L	02/24/21 - 06/01/23	10	0	CI around mean	57.7	214.6
52	UA	E001	Thallium, total	mg/L	02/24/21 - 06/01/23	10	90	CI around median	0.002	0.001
52	UA	E001	Total Dissolved Solids	mg/L	02/24/21 - 06/01/23	9	0	CI around mean	418	1,620
54	UA	E001	Antimony, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.001	0.001
54	UA	E001	Arsenic, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.01	0.001
54	UA	E001	Barium, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.0562	0.212
54	UA	E001	Beryllium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0005	0.001
54	UA	E001	Boron, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.573	0.163
54	UA	E001	Cadmium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.002	0.0023
54	UA	E001	Chloride, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	79.8	435
54	UA	E001	Chromium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.005	0.001

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
HENNEPIN POWER PLANT
EAST ASH POND
HENNEPIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
54	UA	E001	Cobalt, total	mg/L	02/24/21 - 05/31/23	10	80	CI around median	0.001	0.038
54	UA	E001	Fluoride, total	mg/L	02/24/21 - 05/31/23	10	0	CB around linear reg	0.157	0.12
54	UA	E001	Lead, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0075	0.0015
54	UA	E001	Lithium, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.0133	0.019
54	UA	E001	Mercury, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.0002	0.0002
54	UA	E001	Molybdenum, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	0.019	0.0017
54	UA	E001	pH (field)	SU	02/24/21 - 05/31/23	10	0	CI around geomean	6.9/7.4	6.6/7.5
54	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 05/31/23	10	0	CI around geomean	0.0653	2
54	UA	E001	Selenium, total	mg/L	02/24/21 - 05/31/23	10	40	CI around mean	0.00102	0.0014
54	UA	E001	Sulfate, total	mg/L	02/24/21 - 05/31/23	10	0	CI around mean	74.4	214.6
54	UA	E001	Thallium, total	mg/L	02/24/21 - 05/31/23	10	100	All ND - Last	0.002	0.001
54	UA	E001	Total Dissolved Solids	mg/L	02/24/21 - 05/31/23	8	0	CI around mean	484	1,620

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

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:

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

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
12	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	18	100	All ND - Last	0.003	0.001
12	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	23	100	All ND - Last	0.001	0.001
12	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	0.0514	0.212
12	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.001	0.001
12	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	26	0	CB around T-S line	0.0751	0.163
12	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	27	90	CI around median	0.001	0.00230
12	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	70.2	435
12	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	23	97	CB around T-S line	0.00148	0.00100
12	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	21	82	Most recent sample	0.001	0.0380
12	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	26	3	CI around median	0.24	0.120
12	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	23	100	All ND - Last	0.0005	0.00150
12	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	22	4	CB around linear reg	0.00613	0.0190
12	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0002	0.0002
12	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	25	0	CB around linear reg	0.012	0.00170
12	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	33	0	CB around linear reg	7.1/7.3	6.6/7.5
12	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around geomean	0.331	2.00
12	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	25	56	CI around median	0.001	0.00140
12	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	63.8	215
12	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.002	0.001
12	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	460	1,620
13	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	18	96	CI around median	0.001	0.001
13	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	23	97	CI around median	0.001	0.001
13	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	0.0427	0.212
13	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.001	0.001
13	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	0.589	0.163
13	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	27	97	CI around median	0.001	0.00230
13	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	73.5	435

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
13	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	23	85	CB around T-S line	0.0015	0.00100
13	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	21	82	Most recent sample	0.001	0.0380
13	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	26	3	CI around median	0.2	0.120
13	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	23	97	CI around median	0.001	0.00150
13	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	0.0171	0.0190
13	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0002	0.0002
13	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	25	28	CI around mean	0.015	0.00170
13	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	33	0	CI around mean	7.4/7.5	6.6/7.5
13	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around mean	0.476	2.00
13	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	25	42	CI around mean	0.00135	0.00140
13	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	26	0	CI around mean	77.2	215
13	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.002	0.001
13	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	25	0	CI around mean	478	1,620
46	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.003	0.001
46	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.001	0.001
46	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	21	0	CB around linear reg	0.0642	0.212
46	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.001	0.001
46	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	0.197	0.163
46	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0005	0.00230
46	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	69.8	435
46	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	19	90	CB around T-S line	0.00149	0.00100
46	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.001	0.0380
46	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	22	4	CI around median	0.24	0.120
46	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.0005	0.00150
46	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	21	5	CI around median	0.009	0.0190
46	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.0002	0.0002
46	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	21	0	CB around T-S line	0.00879	0.00170

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
46	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	22	0	CB around linear reg	7.0/7.3	6.6/7.5
46	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around geomean	0.295	2.00
46	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	21	57	CI around median	0.001	0.00140
46	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	22	0	CI around geomean	62	215
46	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.002	0.001
46	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	440	1,620
47	UA	E002	Antimony, total	mg/L	12/09/15 - 08/23/23	17	100	All ND - Last	0.003	0.001
47	UA	E002	Arsenic, total	mg/L	12/09/15 - 08/23/23	19	95	CI around median	0.001	0.001
47	UA	E002	Barium, total	mg/L	12/09/15 - 08/23/23	21	0	CI around mean	0.0777	0.212
47	UA	E002	Beryllium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.001	0.001
47	UA	E002	Boron, total	mg/L	12/09/15 - 08/23/23	22	0	CI around geomean	0.206	0.163
47	UA	E002	Cadmium, total	mg/L	12/09/15 - 08/23/23	20	100	All ND - Last	0.0005	0.00230
47	UA	E002	Chloride, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	73.5	435
47	UA	E002	Chromium, total	mg/L	12/09/15 - 08/23/23	19	95	CB around T-S line	0.001	0.00100
47	UA	E002	Cobalt, total	mg/L	12/09/15 - 08/23/23	20	80	CI around median	0.001	0.0380
47	UA	E002	Fluoride, total	mg/L	12/09/15 - 08/23/23	22	4	CB around T-S line	0.21	0.120
47	UA	E002	Lead, total	mg/L	12/09/15 - 08/23/23	19	100	All ND - Last	0.0005	0.00150
47	UA	E002	Lithium, total	mg/L	12/09/15 - 08/23/23	21	0	CI around mean	0.0087	0.0190
47	UA	E002	Mercury, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.0002	0.0002
47	UA	E002	Molybdenum, total	mg/L	12/09/15 - 08/23/23	21	0	CB around linear reg	0.0132	0.00170
47	UA	E002	pH (field)	SU	12/09/15 - 08/23/23	22	0	CI around mean	7.0/7.2	6.6/7.5
47	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 08/23/23	21	0	CI around mean	0.358	2.00
47	UA	E002	Selenium, total	mg/L	12/09/15 - 08/23/23	20	90	CI around median	0.001	0.00140
47	UA	E002	Sulfate, total	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	63.5	215
47	UA	E002	Thallium, total	mg/L	12/09/15 - 08/23/23	16	100	All ND - Last	0.002	0.001
47	UA	E002	Total Dissolved Solids	mg/L	12/09/15 - 08/23/23	22	0	CI around mean	472	1,620
52	UA	E002	Antimony, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.003	0.001

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
52	UA	E002	Arsenic, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.001	0.001
52	UA	E002	Barium, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.0704	0.212
52	UA	E002	Beryllium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.001	0.001
52	UA	E002	Boron, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.126	0.163
52	UA	E002	Cadmium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0005	0.00230
52	UA	E002	Chloride, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	71.3	435
52	UA	E002	Chromium, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.005	0.00100
52	UA	E002	Cobalt, total	mg/L	02/24/21 - 08/24/23	11	91	Most recent sample	0.001	0.0380
52	UA	E002	Fluoride, total	mg/L	02/24/21 - 08/24/23	11	9	CI around geomean	0.27	0.120
52	UA	E002	Lead, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0005	0.00150
52	UA	E002	Lithium, total	mg/L	02/24/21 - 08/24/23	11	9	CI around mean	0.00532	0.0190
52	UA	E002	Mercury, total	mg/L	02/24/21 - 08/24/23	11	100	All ND - Last	0.0002	0.0002
52	UA	E002	Molybdenum, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	0.0102	0.00170
52	UA	E002	pH (field)	SU	02/24/21 - 08/24/23	11	0	CI around mean	7.0/7.4	6.6/7.5
52	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 08/24/23	11	0	CI around mean	0.36	2.00
52	UA	E002	Selenium, total	mg/L	02/24/21 - 08/24/23	11	91	CI around median	0.001	0.00140
52	UA	E002	Sulfate, total	mg/L	02/24/21 - 08/24/23	11	0	CI around mean	58.3	215
52	UA	E002	Thallium, total	mg/L	02/24/21 - 08/24/23	11	91	CI around median	0.002	0.001
52	UA	E002	Total Dissolved Solids	mg/L	02/24/21 - 08/24/23	10	0	CI around mean	427	1,620
54	UA	E002	Antimony, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.003	0.001
54	UA	E002	Arsenic, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.001	0.001
54	UA	E002	Barium, total	mg/L	02/24/21 - 08/23/23	11	0	CB around linear reg	0.0388	0.212
54	UA	E002	Beryllium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.001	0.001
54	UA	E002	Boron, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	0.501	0.163
54	UA	E002	Cadmium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0005	0.00230
54	UA	E002	Chloride, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	80.3	435
54	UA	E002	Chromium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.005	0.00100

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
54	UA	E002	Cobalt, total	mg/L	02/24/21 - 08/23/23	11	82	CI around median	0.001	0.0380
54	UA	E002	Fluoride, total	mg/L	02/24/21 - 08/23/23	11	9	CI around mean	0.284	0.120
54	UA	E002	Lead, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0005	0.00150
54	UA	E002	Lithium, total	mg/L	02/24/21 - 08/23/23	11	0	CB around linear reg	0.00769	0.0190
54	UA	E002	Mercury, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.0002	0.0002
54	UA	E002	Molybdenum, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	0.0199	0.00170
54	UA	E002	pH (field)	SU	02/24/21 - 08/23/23	11	0	CI around mean	6.9/7.4	6.6/7.5
54	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/24/21 - 08/23/23	11	0	CI around mean	0.094	2.00
54	UA	E002	Selenium, total	mg/L	02/24/21 - 08/23/23	11	46	CI around mean	0.00104	0.00140
54	UA	E002	Sulfate, total	mg/L	02/24/21 - 08/23/23	11	0	CI around mean	75.7	215
54	UA	E002	Thallium, total	mg/L	02/24/21 - 08/23/23	11	100	All ND - Last	0.002	0.001
54	UA	E002	Total Dissolved Solids	mg/L	02/24/21 - 08/23/23	9	0	CI around mean	488	1,620

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

UA = Uppermost Aquifer

mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:

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

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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