



Illinois Power Generating Company
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: Coffeen GMF Gypsum Stack Pond (IEPA ID: W1350150004-03) 2023 Annual Consolidated Report

Dear Mr. LeCrone:

In accordance with 35 IAC § 845.550, Illinois Power Generating Company (IPGC) is submitting the annual consolidated report for the GMF Gypsum Stack Pond (IEPA ID: W1350150004-03), as enclosed.

Sincerely,

A handwritten signature in blue ink that reads "Dianna Tickner".

Dianna Tickner
Sr. Director Decommissioning & Demolition

Enclosures

Annual Consolidated Report
Illinois Power Generating Company
Coffeen Power Plant
GMF Gypsum Stack Pond; IEPA ID: W1350150004-03

In accordance with 35 IAC § 845.550, Illinois Power Generating Company (IPGC) 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
Coffeen Power Station


Illinois Power Generating Company

Coffeen Power Plant
134 CIPS Lane
Coffeen, IL 62017

November 2023

**Coffeen Power Station
ANNUAL CCR FUGITIVE DUST CONTROL REPORT**

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

Approved by:  Director, Decommissioning and Demolition
Name Title

This Annual CCR Fugitive Dust Control Report has been prepared for the Coffeen Power Station 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 Coffeen Power Station 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 is conditioned before emplacement.
	Wet management of CCR bottom ash and flue gas desulfurization materials 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.
Handling of CCR at the facility	CCR bottom ash removed from CCR surface impoundments and loaded into trucks for transport remains conditioned during handling.
	CCR fly ash to be emplaced in the landfill is conditioned before emplacement.
	Load CCR transport trucks from the CCR fly ash silo using a chute with a sock (skirt).
	Perform housekeeping, as necessary, in the fly ash loading area.

**Coffeen Power Station
ANNUAL CCR FUGITIVE DUST CONTROL REPORT**

CCR Activity	Actions Taken to Control CCR Fugitive Dust
Handling of CCR at the facility	CCR to be emplaced in the landfill is conditioned before emplacement.
	Cover or enclose trucks used to transport CCR fly ash.
	Limit the speed of vehicles to no more than 15 mph on facility roads.
Transportation of CCR at the facility	Cover or enclose trucks used to transport CCR other than fly ash, as necessary.
	Sweep or rinse off the outside of the trucks transporting CCR, as necessary.
	Remove CCR, as necessary, deposited on facility road surfaces during transport.
	Water CCR haul roads, including landfill roads, as necessary.

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.

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.

Coffeen Power Plant ceased operation in November of 2019. Not all the CCR activities that are listed in the table occurred after the plant was permanently shut down. For the activities that did occur, the actions taken to control CCR Fugitive Dust that are listed in the table were followed and were adequate to effectively minimize fugitive dust.

Section 2 Record of Citizen Complaints

No citizen complaints were received regarding CCR fugitive dust at Coffeen Power Station 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	Coffeen Power Station Montgomery County, Illinois 62017 10/2/2023
Operator Name / Address	Luminant Generation Company LLC 6555 Sierra Drive, Irving, TX 75039
CCR unit	Gypsum Stack 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 I 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	No Instrumentation
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 1150 acre-feet – Plant closed in 2020
(b)(2)(E) The approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Approximately 950 acre-feet – Plant closed in 2020
(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: Coffeen Power Station

CCR Unit: Gypsum Stack Pond

35 IAC § 845.540 (b)(2)(B)		
Instrument ID #	Type	Maximum recorded reading since previous annual inspection (ft)
None		

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		627.43			25	
CCR	609		627	7.5		26

Section 3

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

Prepared for
Illinois Power Generating Company

Date
January 31, 2024

Project No.
1940103649-003

**2023 35 I.A.C. § 845 ANNUAL
GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
GYPSUM MANAGEMENT FACILITY GYPSUM
STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS
IEPA ID NO. W1350150004-03**

**2023 35 I.A.C. § 845 ANNUAL GROUNDWATER
MONITORING AND CORRECTIVE ACTION REPORT
COFFEEN POWER PLANT GYPSUM MANAGEMENT FACILITY
GYPSUM STACK POND**

Project name **Coffeen Power Plant Gypsum Management Facility Gypsum Stack Pond**
Project no. **1940103649-003**
Recipient **Illinois Power Generating Company**
Document type **Annual Groundwater Monitoring and Corrective Action Report**
Version **FINAL**
Date **January 31, 2024**
Prepared by **Kristen L. Theesfeld**
Checked by **Lauren D. Cook**
Approved by **Brian G. Hennings, PG**
Description **Annual Report required by 35 I.A.C. § 845**

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TABLES (IN TEXT)

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

TABLES (ATTACHED)

Table 1 Field Parameters and Analytical Results – Quarter 2, 2023
Field Parameters and Analytical Results – Quarter 3, 2023

Table 2 Comparison of Statistical Results to GWPS – Quarter 2, 2023
Comparison of Statistical Results to GWPS – Quarter 3, 2023

FIGURES (ATTACHED)

Figure 1 Monitoring Well Location Map

Figure 2 GWPS Exceedance Map Uppermost Aquifer, Quarters 2-3, 2023

Figure 3 GWPS Exceedance Map Lower Confining Unit, Quarters 2-3, 2023

Figure 4 Potentiometric Surface Map, April 30, 2023

Figure 5 Potentiometric Surface Map, May 30, 2023

Figure 6 Potentiometric Surface Map, June 8, 2023

Figure 7 Potentiometric Surface Map, July 8, 2023

Figure 8 Potentiometric Surface Map, August 8, 2023

Figure 9 Potentiometric Surface Map, September 25, 2023

Figure 10 Potentiometric Surface Map, October 24 and 25, 2023

Figure 11 Potentiometric Surface Map, November 13, 2023

Figure 12 Potentiometric Surface Map, December 18, 2023

ATTACHMENTS

Attachment A Groundwater Elevation Data

Attachment B Corrective Measures Assessment Extension Request and IEPA Approval Letter

Attachment C Comparison of Statistical Results to Background – Quarter 2, 2023
Comparison of Statistical Results to Background – Quarter 3, 2023

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
ASD	Alternative Source Demonstration
CCA	compliance commitment agreement
CCR	coal combustion residuals
CMA	assessment of corrective measures
CPP	Coffeen Power Plant
E001	Quarter 2, 2023 sampling event
E002	Quarter 3, 2023 sampling event
E003	Quarter 4, 2023 sampling event
GMF GSP	Gypsum Management Facility Gypsum Stack Pond
GWPS	groundwater protection standard
ID	identification
IEPA	Illinois Environmental Protection Agency
IPGC	Illinois Power Generating Company
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 Gypsum Management Facility Gypsum Stack Pond (GMF GSP) located at Coffeen Power Plant (CPP) near Coffeen, Illinois. The GMF GSP is recognized by coal combustion residuals (CCR) unit identification (ID) number (No.) 103, Illinois Environmental Protection Agency (IEPA) ID No. W1350150004-03, and National Inventory of Dams (NID) No. IL50579.

As required by 35 I.A.C. § 845, an operating permit application for the GMF GSP was submitted by Illinois Power Generating Company (IPGC) to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. IPGC 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 GMF GSP 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 GMF GSP 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**). The following GWPS exceedances were determined in 2023²:

- Sulfate in G215

An Alternative Source Demonstration (ASD) was not completed for the GWPS exceedances listed above; these exceedances will be addressed in accordance with 35 I.A.C. § 845.660. The assessment of corrective measures (CMA) was initiated on January 14, 2024. A CMA extension request was submitted to IEPA on January 15, 2024 and approved on January 17, 2024 (**Attachment B**). Because the CMA is in progress, a remedy has not yet been selected under 35 I.A.C. § 845.670 and remedial activities have not been initiated under 35 I.A.C. § 845.780 in 2023.

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 for statistical exceedances over background levels (**Attachment C**).

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 IPGC, to provide the information required by 35 I.A.C. § 845.610(e) for the GMF GSP located at CPP near Coffeen, Illinois. The owner or operator of a CCR surface impoundment (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 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 (**Figures 2 and 3**).
- 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 4 through 12**).
- 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 C**).
- 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 the GMF GSP for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

An operating permit application for the GMF GSP was submitted by IPGC to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. IPGC entered into a CCA with IEPA on December 28, 2022. The CCA required that groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the GMF GSP commenced in the second quarter of 2023. After the GMF GSP 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 the GMF GSP was also submitted by IPGC to IEPA on July 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**, GWPS exceedances were determined for the GMF GSP in 2023. An ASD was not completed for these GWPS exceedances; they will be addressed in accordance with 35 I.A.C. § 845.660. The CMA was initiated on January 14, 2024. A CMA extension request was submitted to IEPA on January 15, 2024 and approved on January 17, 2024 (**Attachment B**). Because the CMA is in progress, a remedy has not yet been selected under 35 I.A.C. § 845.670 and remedial activities have not been initiated under 35 I.A.C. § 845.780 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 4 through 12**.³

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 2023.⁴ 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 provided in the quarterly Groundwater Monitoring Data and Detected Exceedances Reports for Quarter 2 and Quarter 3 (Ramboll, 2023b; Ramboll, 2023c); 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.

³ Staff gage SG-04 was observed as damaged in October 2023; no groundwater elevations were recorded.

⁴ Background monitoring wells G200 and R201 were indicated as having insufficient water to sample during August 2023 and no groundwater samples were collected.

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 ⁵
E001	June 1 and 7 - 9, 2023	August 17, 2023	October 16, 2023	NA	January 14, 2024
E002 ⁶	August 10 and 14, 2023	November 29, 2023	January 28, 2024	TBD	NA
E003	November 14 - 17, 2023	January 10, 2024	TBD	TBD ⁴	NA

Notes:

ASD: Alternative Source Demonstration

CMA: assessment of corrective measures

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: G200 and R201

³ The following compliance wells were sampled for each event: G206, G206D, G209, G212, G213, G215, G217, and G218

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.

⁵ Exceedances for events E002 and E003 may be incorporated into the CMA initiated after event E001 on a case by case basis, as opposed to generating a new CMA.

⁶ Background monitoring wells G200 and R201 were indicated as having insufficient water to sample during August 2023 and no groundwater samples were collected.

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. The following statistical exceedances of the GWPSs were determined and are shown on **Figures 2 and 3**⁵:

- Sulfate in G215

As allowed in 35 I.A.C. § 845.650(e), an ASD was evaluated for the detected exceedances of the GWPS summarized above.

An ASD was not completed. The exceedances listed above will be addressed in accordance with 35 I.A.C. § 845.660. The CMA was initiated on January 14, 2024. A CMA extension request was submitted to IEPA on January 15, 2024 and approved on January 17, 2024. Because the CMA is in progress, a remedy was not selected under 35 I.A.C. § 845.670 and remedial activities have not been initiated under 35 I.A.C. § 845.780 in 2023.

3.3 Exceedances of Background

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

⁵ 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 GMF GSP 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 December 2023. SG-04 located on the unnamed tributary was destroyed following a rain event in October 2023; alternative construction methods for monitoring at this location are being evaluated.

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 GMF GSP. After the GMF GSP 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.
- The CMA process will continue in accordance with 35 I.A.C. § 845.660 in 2024. A CMA extension request was submitted to IEPA January 15, 2024 and approved on January 17, 2024. The CMA will be submitted to IEPA on or before June 12, 2024.

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*. Coffeen Power Plant, Gypsum Management Facility Gypsum Stack Pond, Coffeen, Illinois. Illinois Power Generating Company. October 25, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 2, GMF Gypsum Stack Pond, Coffeen Power Plant, Coffeen, Illinois. October 16, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2024 Quarter 3, GMF Gypsum Stack Pond, Coffeen Power Plant, Coffeen, Illinois. January 20, 2024.

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G200	Background	E001	06/07/2023	Antimony, total	0.0011 J	mg/L
G200	Background	E001	06/07/2023	Arsenic, total	0.00850	mg/L
G200	Background	E001	06/07/2023	Barium, total	0.150	mg/L
G200	Background	E001	06/07/2023	Beryllium, total	0.00083 J	mg/L
G200	Background	E001	06/07/2023	Boron, total	0.0110	mg/L
G200	Background	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G200	Background	E001	06/07/2023	Calcium, total	110	mg/L
G200	Background	E001	06/07/2023	Chloride, total	65.0	mg/L
G200	Background	E001	06/07/2023	Chromium, total	0.0120	mg/L
G200	Background	E001	06/07/2023	Cobalt, total	0.00730	mg/L
G200	Background	E001	06/07/2023	Dissolved Oxygen	1.30	mg/L
G200	Background	E001	06/07/2023	Fluoride, total	0.216 J	mg/L
G200	Background	E001	06/07/2023	Lead, total	0.0160	mg/L
G200	Background	E001	06/07/2023	Lithium, total	0.013 J	mg/L
G200	Background	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G200	Background	E001	06/07/2023	Molybdenum, total	0.00079 J	mg/L
G200	Background	E001	06/07/2023	Oxidation Reduction Potential	26.0	mV
G200	Background	E001	06/07/2023	pH (field)	7.1	SU
G200	Background	E001	06/07/2023	Radium 226 + Radium 228, total	4.48 J+	pCi/L
G200	Background	E001	06/07/2023	Selenium, total	0.00290	mg/L
G200	Background	E001	06/07/2023	Specific Conductance @ 25C (field)	913	micromhos/cm
G200	Background	E001	06/07/2023	Sulfate, total	110	mg/L
G200	Background	E001	06/07/2023	Temperature	25.4	degrees C
G200	Background	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G200	Background	E001	06/07/2023	Total Dissolved Solids	630	mg/L
G200	Background	E001	06/07/2023	Turbidity, field	1,000	NTU
R201	Background	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
R201	Background	E001	06/07/2023	Arsenic, total	0.00390	mg/L
R201	Background	E001	06/07/2023	Barium, total	0.0780	mg/L
R201	Background	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
R201	Background	E001	06/07/2023	Boron, total	0.01 U	mg/L
R201	Background	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
R201	Background	E001	06/07/2023	Calcium, total	120	mg/L
R201	Background	E001	06/07/2023	Chloride, total	89.0	mg/L
R201	Background	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
R201	Background	E001	06/07/2023	Cobalt, total	0.00048 U	mg/L
R201	Background	E001	06/07/2023	Dissolved Oxygen	2.40	mg/L
R201	Background	E001	06/07/2023	Fluoride, total	0.19 J	mg/L
R201	Background	E001	06/07/2023	Lead, total	0.00058 J	mg/L
R201	Background	E001	06/07/2023	Lithium, total	0.005 U	mg/L
R201	Background	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
R201	Background	E001	06/07/2023	Molybdenum, total	0.00074 U	mg/L
R201	Background	E001	06/07/2023	Oxidation Reduction Potential	-123	mV
R201	Background	E001	06/07/2023	pH (field)	7.3	SU
R201	Background	E001	06/07/2023	Radium 226 + Radium 228, total	1.50 J+	pCi/L
R201	Background	E001	06/07/2023	Selenium, total	0.00074 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

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 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
R201	Background	E001	06/07/2023	Specific Conductance @ 25C (field)	1,430	micromhos/cm
R201	Background	E001	06/07/2023	Sulfate, total	220	mg/L
R201	Background	E001	06/07/2023	Temperature	19.0	degrees C
R201	Background	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
R201	Background	E001	06/07/2023	Total Dissolved Solids	930	mg/L
R201	Background	E001	06/07/2023	Turbidity, field	14.6	NTU
G206	Compliance	E001	06/09/2023	Antimony, total	0.00043 U	mg/L
G206	Compliance	E001	06/09/2023	Arsenic, total	0.00260	mg/L
G206	Compliance	E001	06/09/2023	Barium, total	0.0500	mg/L
G206	Compliance	E001	06/09/2023	Beryllium, total	0.00059 U	mg/L
G206	Compliance	E001	06/09/2023	Boron, total	0.0120 J+	mg/L
G206	Compliance	E001	06/09/2023	Cadmium, total	0.00074 U	mg/L
G206	Compliance	E001	06/09/2023	Calcium, total	86.0	mg/L
G206	Compliance	E001	06/09/2023	Chloride, total	22.0	mg/L
G206	Compliance	E001	06/09/2023	Chromium, total	0.0028 U	mg/L
G206	Compliance	E001	06/09/2023	Cobalt, total	0.00048 U	mg/L
G206	Compliance	E001	06/09/2023	Dissolved Oxygen	1.30	mg/L
G206	Compliance	E001	06/09/2023	Fluoride, total	0.430	mg/L
G206	Compliance	E001	06/09/2023	Lead, total	0.00022 U	mg/L
G206	Compliance	E001	06/09/2023	Lithium, total	0.005 U	mg/L
G206	Compliance	E001	06/09/2023	Mercury, total	0.00014 U	mg/L
G206	Compliance	E001	06/09/2023	Molybdenum, total	0.00074 U	mg/L
G206	Compliance	E001	06/09/2023	Oxidation Reduction Potential	-232	mV
G206	Compliance	E001	06/09/2023	pH (field)	7.1	SU
G206	Compliance	E001	06/09/2023	Radium 226 + Radium 228, total	0.227	pCi/L
G206	Compliance	E001	06/09/2023	Selenium, total	0.00074 U	mg/L
G206	Compliance	E001	06/09/2023	Specific Conductance @ 25C (field)	910	micromhos/cm
G206	Compliance	E001	06/09/2023	Sulfate, total	140	mg/L
G206	Compliance	E001	06/09/2023	Temperature	18.3	degrees C
G206	Compliance	E001	06/09/2023	Thallium, total	0.00038 U	mg/L
G206	Compliance	E001	06/09/2023	Total Dissolved Solids	600	mg/L
G206	Compliance	E001	06/09/2023	Turbidity, field	0 U	NTU
G206D	Compliance	E001	06/09/2023	Antimony, total	0.00043 U	mg/L
G206D	Compliance	E001	06/09/2023	Arsenic, total	0.0160	mg/L
G206D	Compliance	E001	06/09/2023	Barium, total	0.170	mg/L
G206D	Compliance	E001	06/09/2023	Beryllium, total	0.00059 U	mg/L
G206D	Compliance	E001	06/09/2023	Boron, total	0.120 J+	mg/L
G206D	Compliance	E001	06/09/2023	Cadmium, total	0.00074 U	mg/L
G206D	Compliance	E001	06/09/2023	Calcium, total	86.0	mg/L
G206D	Compliance	E001	06/09/2023	Chloride, total	25.0	mg/L
G206D	Compliance	E001	06/09/2023	Chromium, total	0.0028 U	mg/L
G206D	Compliance	E001	06/09/2023	Cobalt, total	0.00048 U	mg/L
G206D	Compliance	E001	06/09/2023	Dissolved Oxygen	0.850	mg/L
G206D	Compliance	E001	06/09/2023	Fluoride, total	0.873	mg/L
G206D	Compliance	E001	06/09/2023	Lead, total	0.00034 J	mg/L
G206D	Compliance	E001	06/09/2023	Lithium, total	0.005 U	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
G206D	Compliance	E001	06/09/2023	Mercury, total	0.00014 U	mg/L
G206D	Compliance	E001	06/09/2023	Molybdenum, total	0.0160	mg/L
G206D	Compliance	E001	06/09/2023	Oxidation Reduction Potential	-194	mV
G206D	Compliance	E001	06/09/2023	pH (field)	7.2	SU
G206D	Compliance	E001	06/09/2023	Radium 226 + Radium 228, total	0.701	pCi/L
G206D	Compliance	E001	06/09/2023	Selenium, total	0.00074 U	mg/L
G206D	Compliance	E001	06/09/2023	Specific Conductance @ 25C (field)	1,150	micromhos/cm
G206D	Compliance	E001	06/09/2023	Sulfate, total	160	mg/L
G206D	Compliance	E001	06/09/2023	Temperature	18.1	degrees C
G206D	Compliance	E001	06/09/2023	Thallium, total	0.00038 U	mg/L
G206D	Compliance	E001	06/09/2023	Total Dissolved Solids	680	mg/L
G206D	Compliance	E001	06/09/2023	Turbidity, field	17.6	NTU
G209	Compliance	E001	06/09/2023	Antimony, total	0.00043 U	mg/L
G209	Compliance	E001	06/09/2023	Arsenic, total	0.00290	mg/L
G209	Compliance	E001	06/09/2023	Barium, total	0.0700	mg/L
G209	Compliance	E001	06/09/2023	Beryllium, total	0.00059 U	mg/L
G209	Compliance	E001	06/09/2023	Boron, total	0.0110 J+	mg/L
G209	Compliance	E001	06/09/2023	Cadmium, total	0.00074 U	mg/L
G209	Compliance	E001	06/09/2023	Calcium, total	140	mg/L
G209	Compliance	E001	06/09/2023	Chloride, total	61.0	mg/L
G209	Compliance	E001	06/09/2023	Chromium, total	0.0028 U	mg/L
G209	Compliance	E001	06/09/2023	Cobalt, total	0.001 J	mg/L
G209	Compliance	E001	06/09/2023	Dissolved Oxygen	7.20	mg/L
G209	Compliance	E001	06/09/2023	Fluoride, total	0.396	mg/L
G209	Compliance	E001	06/09/2023	Lead, total	0.00022 U	mg/L
G209	Compliance	E001	06/09/2023	Lithium, total	0.005 U	mg/L
G209	Compliance	E001	06/09/2023	Mercury, total	0.00014 U	mg/L
G209	Compliance	E001	06/09/2023	Molybdenum, total	0.00380	mg/L
G209	Compliance	E001	06/09/2023	Oxidation Reduction Potential	-33.0	mV
G209	Compliance	E001	06/09/2023	pH (field)	7.0	SU
G209	Compliance	E001	06/09/2023	Radium 226 + Radium 228, total	0.292	pCi/L
G209	Compliance	E001	06/09/2023	Selenium, total	0.00074 U	mg/L
G209	Compliance	E001	06/09/2023	Specific Conductance @ 25C (field)	1,290	micromhos/cm
G209	Compliance	E001	06/09/2023	Sulfate, total	230	mg/L
G209	Compliance	E001	06/09/2023	Temperature	16.1	degrees C
G209	Compliance	E001	06/09/2023	Thallium, total	0.00038 U	mg/L
G209	Compliance	E001	06/09/2023	Total Dissolved Solids	860	mg/L
G209	Compliance	E001	06/09/2023	Turbidity, field	2.20	NTU
G212	Compliance	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
G212	Compliance	E001	06/07/2023	Arsenic, total	0.00069 U	mg/L
G212	Compliance	E001	06/07/2023	Barium, total	0.0510	mg/L
G212	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G212	Compliance	E001	06/07/2023	Boron, total	0.01 U	mg/L
G212	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G212	Compliance	E001	06/07/2023	Calcium, total	56.0	mg/L
G212	Compliance	E001	06/07/2023	Chloride, total	41.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

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Well ID	Well Type	Event	Date	Parameter	Result	Unit
G212	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G212	Compliance	E001	06/07/2023	Cobalt, total	0.00048 U	mg/L
G212	Compliance	E001	06/07/2023	Dissolved Oxygen	1.60	mg/L
G212	Compliance	E001	06/07/2023	Fluoride, total	0.222 J	mg/L
G212	Compliance	E001	06/07/2023	Lead, total	0.00022 U	mg/L
G212	Compliance	E001	06/07/2023	Lithium, total	0.005 U	mg/L
G212	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G212	Compliance	E001	06/07/2023	Molybdenum, total	0.00074 U	mg/L
G212	Compliance	E001	06/07/2023	Oxidation Reduction Potential	110	mV
G212	Compliance	E001	06/07/2023	pH (field)	7.2	SU
G212	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	0.194	pCi/L
G212	Compliance	E001	06/07/2023	Selenium, total	0.00082 J	mg/L
G212	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	722	micromhos/cm
G212	Compliance	E001	06/07/2023	Sulfate, total	54.0	mg/L
G212	Compliance	E001	06/07/2023	Temperature	16.4	degrees C
G212	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G212	Compliance	E001	06/07/2023	Total Dissolved Solids	480 J	mg/L
G212	Compliance	E001	06/07/2023	Turbidity, field	8.79	NTU
G213	Compliance	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
G213	Compliance	E001	06/07/2023	Arsenic, total	0.00069 U	mg/L
G213	Compliance	E001	06/07/2023	Barium, total	0.0540	mg/L
G213	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G213	Compliance	E001	06/07/2023	Boron, total	0.01 U	mg/L
G213	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G213	Compliance	E001	06/07/2023	Calcium, total	65.0	mg/L
G213	Compliance	E001	06/07/2023	Chloride, total	45.0	mg/L
G213	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G213	Compliance	E001	06/07/2023	Cobalt, total	0.00048 U	mg/L
G213	Compliance	E001	06/07/2023	Dissolved Oxygen	1.60	mg/L
G213	Compliance	E001	06/07/2023	Fluoride, total	0.24 J	mg/L
G213	Compliance	E001	06/07/2023	Lead, total	0.00024 J	mg/L
G213	Compliance	E001	06/07/2023	Lithium, total	0.005 U	mg/L
G213	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G213	Compliance	E001	06/07/2023	Molybdenum, total	0.00074 U	mg/L
G213	Compliance	E001	06/07/2023	Oxidation Reduction Potential	-1.50	mV
G213	Compliance	E001	06/07/2023	pH (field)	7.2	SU
G213	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	0.399 <0	pCi/L
G213	Compliance	E001	06/07/2023	Selenium, total	0.00110	mg/L
G213	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	686	micromhos/cm
G213	Compliance	E001	06/07/2023	Sulfate, total	59.0	mg/L
G213	Compliance	E001	06/07/2023	Temperature	17.6	degrees C
G213	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G213	Compliance	E001	06/07/2023	Total Dissolved Solids	500	mg/L
G213	Compliance	E001	06/07/2023	Turbidity, field	66.9	NTU
G215	Compliance	E001	06/01/2023	Antimony, total	0.00043 U	mg/L
G215	Compliance	E001	06/01/2023	Arsenic, total	0.0130	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
G215	Compliance	E001	06/01/2023	Barium, total	0.0450	mg/L
G215	Compliance	E001	06/01/2023	Beryllium, total	0.00059 U	mg/L
G215	Compliance	E001	06/01/2023	Boron, total	0.840	mg/L
G215	Compliance	E001	06/01/2023	Cadmium, total	0.00074 U	mg/L
G215	Compliance	E001	06/01/2023	Calcium, total	180	mg/L
G215	Compliance	E001	06/01/2023	Chloride, total	130	mg/L
G215	Compliance	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
G215	Compliance	E001	06/01/2023	Cobalt, total	0.00057 J	mg/L
G215	Compliance	E001	06/01/2023	Dissolved Oxygen	2.60	mg/L
G215	Compliance	E001	06/01/2023	Fluoride, total	0.209 J	mg/L
G215	Compliance	E001	06/01/2023	Lead, total	0.00022 J	mg/L
G215	Compliance	E001	06/01/2023	Lithium, total	0.0082 J	mg/L
G215	Compliance	E001	06/01/2023	Mercury, total	0.00014 U	mg/L
G215	Compliance	E001	06/01/2023	Molybdenum, total	0.00074 U	mg/L
G215	Compliance	E001	06/01/2023	Oxidation Reduction Potential	-16.0	mV
G215	Compliance	E001	06/01/2023	pH (field)	7.0	SU
G215	Compliance	E001	06/01/2023	Radium 226 + Radium 228, total	0.881	pCi/L
G215	Compliance	E001	06/01/2023	Selenium, total	0.00074 U	mg/L
G215	Compliance	E001	06/01/2023	Specific Conductance @ 25C (field)	1,830	micromhos/cm
G215	Compliance	E001	06/01/2023	Sulfate, total	540	mg/L
G215	Compliance	E001	06/01/2023	Temperature	20.9	degrees C
G215	Compliance	E001	06/01/2023	Thallium, total	0.00038 U	mg/L
G215	Compliance	E001	06/01/2023	Total Dissolved Solids	1,200	mg/L
G215	Compliance	E001	06/01/2023	Turbidity, field	218	NTU
G217	Compliance	E001	06/08/2023	Antimony, total	0.00043 U	mg/L
G217	Compliance	E001	06/08/2023	Arsenic, total	0.00130	mg/L
G217	Compliance	E001	06/08/2023	Barium, total	0.110	mg/L
G217	Compliance	E001	06/08/2023	Beryllium, total	0.00059 U	mg/L
G217	Compliance	E001	06/08/2023	Boron, total	0.0160	mg/L
G217	Compliance	E001	06/08/2023	Cadmium, total	0.00074 U	mg/L
G217	Compliance	E001	06/08/2023	Calcium, total	180	mg/L
G217	Compliance	E001	06/08/2023	Chloride, total	130	mg/L
G217	Compliance	E001	06/08/2023	Chromium, total	0.0039 J	mg/L
G217	Compliance	E001	06/08/2023	Cobalt, total	0.0012 J	mg/L
G217	Compliance	E001	06/08/2023	Dissolved Oxygen	2.30	mg/L
G217	Compliance	E001	06/08/2023	Fluoride, total	0.296	mg/L
G217	Compliance	E001	06/08/2023	Lead, total	0.00120	mg/L
G217	Compliance	E001	06/08/2023	Lithium, total	0.005 U	mg/L
G217	Compliance	E001	06/08/2023	Mercury, total	0.00014 U	mg/L
G217	Compliance	E001	06/08/2023	Molybdenum, total	0.00074 U	mg/L
G217	Compliance	E001	06/08/2023	Oxidation Reduction Potential	2.00	mV
G217	Compliance	E001	06/08/2023	pH (field)	6.7	SU
G217	Compliance	E001	06/08/2023	Radium 226 + Radium 228, total	0.574	pCi/L
G217	Compliance	E001	06/08/2023	Selenium, total	0.00074 U	mg/L
G217	Compliance	E001	06/08/2023	Specific Conductance @ 25C (field)	1,490	micromhos/cm
G217	Compliance	E001	06/08/2023	Sulfate, total	370	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
G217	Compliance	E001	06/08/2023	Temperature	19.6	degrees C
G217	Compliance	E001	06/08/2023	Thallium, total	0.00038 U	mg/L
G217	Compliance	E001	06/08/2023	Total Dissolved Solids	1,100	mg/L
G217	Compliance	E001	06/08/2023	Turbidity, field	61.5	NTU
G218	Compliance	E001	06/01/2023	Antimony, total	0.00043 U	mg/L
G218	Compliance	E001	06/01/2023	Arsenic, total	0.00330	mg/L
G218	Compliance	E001	06/01/2023	Barium, total	0.0850	mg/L
G218	Compliance	E001	06/01/2023	Beryllium, total	0.00059 U	mg/L
G218	Compliance	E001	06/01/2023	Boron, total	0.0140	mg/L
G218	Compliance	E001	06/01/2023	Cadmium, total	0.00074 U	mg/L
G218	Compliance	E001	06/01/2023	Calcium, total	170	mg/L
G218	Compliance	E001	06/01/2023	Chloride, total	160	mg/L
G218	Compliance	E001	06/01/2023	Chromium, total	0.0028 U	mg/L
G218	Compliance	E001	06/01/2023	Cobalt, total	0.00086 J	mg/L
G218	Compliance	E001	06/01/2023	Dissolved Oxygen	1.80	mg/L
G218	Compliance	E001	06/01/2023	Fluoride, total	0.255	mg/L
G218	Compliance	E001	06/01/2023	Lead, total	0.00052 J	mg/L
G218	Compliance	E001	06/01/2023	Lithium, total	0.0051 J	mg/L
G218	Compliance	E001	06/01/2023	Mercury, total	0.00014 U	mg/L
G218	Compliance	E001	06/01/2023	Molybdenum, total	0.00074 U	mg/L
G218	Compliance	E001	06/01/2023	Oxidation Reduction Potential	-27.0	mV
G218	Compliance	E001	06/01/2023	pH (field)	7.2	SU
G218	Compliance	E001	06/01/2023	Radium 226 + Radium 228, total	1.05 J+	pCi/L
G218	Compliance	E001	06/01/2023	Selenium, total	0.00074 U	mg/L
G218	Compliance	E001	06/01/2023	Specific Conductance @ 25C (field)	1,480	micromhos/cm
G218	Compliance	E001	06/01/2023	Sulfate, total	370	mg/L
G218	Compliance	E001	06/01/2023	Temperature	19.8	degrees C
G218	Compliance	E001	06/01/2023	Thallium, total	0.00038 U	mg/L
G218	Compliance	E001	06/01/2023	Total Dissolved Solids	1,000	mg/L
G218	Compliance	E001	06/01/2023	Turbidity, field	99.1	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
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G206	Compliance	E002	08/14/2023	Antimony, total	0.0008 U	mg/L
G206	Compliance	E002	08/14/2023	Arsenic, total	0.00150	mg/L
G206	Compliance	E002	08/14/2023	Barium, total	0.0581	mg/L
G206	Compliance	E002	08/14/2023	Beryllium, total	0.0002 U	mg/L
G206	Compliance	E002	08/14/2023	Boron, total	0.0092 U	mg/L
G206	Compliance	E002	08/14/2023	Cadmium, total	0.0002 U	mg/L
G206	Compliance	E002	08/14/2023	Calcium, total	86.8	mg/L
G206	Compliance	E002	08/14/2023	Chloride, total	23.0	mg/L
G206	Compliance	E002	08/14/2023	Chromium, total	0.0007 U	mg/L
G206	Compliance	E002	08/14/2023	Cobalt, total	0.0002 J	mg/L
G206	Compliance	E002	08/14/2023	Dissolved Oxygen	0.900	mg/L
G206	Compliance	E002	08/14/2023	Fluoride, total	0.430 J+	mg/L
G206	Compliance	E002	08/14/2023	Lead, total	0.0006 U	mg/L
G206	Compliance	E002	08/14/2023	Lithium, total	0.0026 J	mg/L
G206	Compliance	E002	08/14/2023	Mercury, total	0.00009 U	mg/L
G206	Compliance	E002	08/14/2023	Molybdenum, total	0.0006 U	mg/L
G206	Compliance	E002	08/14/2023	Oxidation Reduction Potential	-188	mV
G206	Compliance	E002	08/14/2023	pH (field)	6.9	SU
G206	Compliance	E002	08/14/2023	Radium 226 + Radium 228, total	0.645	pCi/L
G206	Compliance	E002	08/14/2023	Selenium, total	0.0006 U	mg/L
G206	Compliance	E002	08/14/2023	Specific Conductance @ 25C (field)	1,120	micromhos/cm
G206	Compliance	E002	08/14/2023	Sulfate, total	138	mg/L
G206	Compliance	E002	08/14/2023	Temperature	16.1	degrees C
G206	Compliance	E002	08/14/2023	Thallium, total	0.001 U	mg/L
G206	Compliance	E002	08/14/2023	Total Dissolved Solids	548	mg/L
G206	Compliance	E002	08/14/2023	Turbidity, field	3.10	NTU
G206D	Compliance	E002	08/14/2023	Antimony, total	0.0008 U	mg/L
G206D	Compliance	E002	08/14/2023	Arsenic, total	0.0149	mg/L
G206D	Compliance	E002	08/14/2023	Barium, total	0.200	mg/L
G206D	Compliance	E002	08/14/2023	Beryllium, total	0.0002 U	mg/L
G206D	Compliance	E002	08/14/2023	Boron, total	0.118 J+	mg/L
G206D	Compliance	E002	08/14/2023	Cadmium, total	0.0002 U	mg/L
G206D	Compliance	E002	08/14/2023	Calcium, total	84.9	mg/L
G206D	Compliance	E002	08/14/2023	Chloride, total	23.0	mg/L
G206D	Compliance	E002	08/14/2023	Chromium, total	0.0008 J	mg/L
G206D	Compliance	E002	08/14/2023	Cobalt, total	0.0002 J	mg/L
G206D	Compliance	E002	08/14/2023	Dissolved Oxygen	0.660	mg/L
G206D	Compliance	E002	08/14/2023	Fluoride, total	1.00	mg/L
G206D	Compliance	E002	08/14/2023	Lead, total	0.0006 U	mg/L
G206D	Compliance	E002	08/14/2023	Lithium, total	0.0022 J	mg/L
G206D	Compliance	E002	08/14/2023	Mercury, total	0.00009 U	mg/L
G206D	Compliance	E002	08/14/2023	Molybdenum, total	0.0143	mg/L
G206D	Compliance	E002	08/14/2023	Oxidation Reduction Potential	-48.0	mV
G206D	Compliance	E002	08/14/2023	pH (field)	6.9	SU
G206D	Compliance	E002	08/14/2023	Radium 226 + Radium 228, total	0.87	pCi/L
G206D	Compliance	E002	08/14/2023	Selenium, total	0.0006 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G206D	Compliance	E002	08/14/2023	Specific Conductance @ 25C (field)	1,380	micromhos/cm
G206D	Compliance	E002	08/14/2023	Sulfate, total	155	mg/L
G206D	Compliance	E002	08/14/2023	Temperature	15.4	degrees C
G206D	Compliance	E002	08/14/2023	Thallium, total	0.001 U	mg/L
G206D	Compliance	E002	08/14/2023	Total Dissolved Solids	685	mg/L
G206D	Compliance	E002	08/14/2023	Turbidity, field	6.90	NTU
G209	Compliance	E002	08/14/2023	Antimony, total	0.0008 U	mg/L
G209	Compliance	E002	08/14/2023	Arsenic, total	0.00140	mg/L
G209	Compliance	E002	08/14/2023	Barium, total	0.0685	mg/L
G209	Compliance	E002	08/14/2023	Beryllium, total	0.0002 U	mg/L
G209	Compliance	E002	08/14/2023	Boron, total	0.0092 U	mg/L
G209	Compliance	E002	08/14/2023	Cadmium, total	0.0002 U	mg/L
G209	Compliance	E002	08/14/2023	Calcium, total	149	mg/L
G209	Compliance	E002	08/14/2023	Chloride, total	53.0	mg/L
G209	Compliance	E002	08/14/2023	Chromium, total	0.0007 J	mg/L
G209	Compliance	E002	08/14/2023	Cobalt, total	0.0004 J	mg/L
G209	Compliance	E002	08/14/2023	Dissolved Oxygen	0.780	mg/L
G209	Compliance	E002	08/14/2023	Fluoride, total	0.460 J+	mg/L
G209	Compliance	E002	08/14/2023	Lead, total	0.0006 U	mg/L
G209	Compliance	E002	08/14/2023	Lithium, total	0.00570	mg/L
G209	Compliance	E002	08/14/2023	Mercury, total	0.00009 U	mg/L
G209	Compliance	E002	08/14/2023	Molybdenum, total	0.00260	mg/L
G209	Compliance	E002	08/14/2023	Oxidation Reduction Potential	84.0	mV
G209	Compliance	E002	08/14/2023	pH (field)	6.6	SU
G209	Compliance	E002	08/14/2023	Radium 226 + Radium 228, total	0.53	pCi/L
G209	Compliance	E002	08/14/2023	Selenium, total	0.0006 U	mg/L
G209	Compliance	E002	08/14/2023	Specific Conductance @ 25C (field)	1,640	micromhos/cm
G209	Compliance	E002	08/14/2023	Sulfate, total	243	mg/L
G209	Compliance	E002	08/14/2023	Temperature	15.4	degrees C
G209	Compliance	E002	08/14/2023	Thallium, total	0.001 U	mg/L
G209	Compliance	E002	08/14/2023	Total Dissolved Solids	878	mg/L
G209	Compliance	E002	08/14/2023	Turbidity, field	3.10	NTU
G212	Compliance	E002	08/10/2023	Antimony, total	0.0004 U	mg/L
G212	Compliance	E002	08/10/2023	Arsenic, total	0.0004 U	mg/L
G212	Compliance	E002	08/10/2023	Barium, total	0.0529	mg/L
G212	Compliance	E002	08/10/2023	Beryllium, total	0.0002 U	mg/L
G212	Compliance	E002	08/10/2023	Boron, total	0.0092 U	mg/L
G212	Compliance	E002	08/10/2023	Cadmium, total	0.0002 U	mg/L
G212	Compliance	E002	08/10/2023	Calcium, total	53.6	mg/L
G212	Compliance	E002	08/10/2023	Chloride, total	46.0	mg/L
G212	Compliance	E002	08/10/2023	Chromium, total	0.001 J	mg/L
G212	Compliance	E002	08/10/2023	Cobalt, total	0.0004 U	mg/L
G212	Compliance	E002	08/10/2023	Dissolved Oxygen	2.95	mg/L
G212	Compliance	E002	08/10/2023	Fluoride, total	0.350 J+	mg/L
G212	Compliance	E002	08/10/2023	Lead, total	0.0006 U	mg/L
G212	Compliance	E002	08/10/2023	Lithium, total	0.0015 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G212	Compliance	E002	08/10/2023	Mercury, total	0.00006 U	mg/L
G212	Compliance	E002	08/10/2023	Molybdenum, total	0.0007 J	mg/L
G212	Compliance	E002	08/10/2023	Oxidation Reduction Potential	68.0	mV
G212	Compliance	E002	08/10/2023	pH (field)	7.2	SU
G212	Compliance	E002	08/10/2023	Radium 226 + Radium 228, total	0.57	pCi/L
G212	Compliance	E002	08/10/2023	Selenium, total	0.0008 J	mg/L
G212	Compliance	E002	08/10/2023	Specific Conductance @ 25C (field)	906	micromhos/cm
G212	Compliance	E002	08/10/2023	Sulfate, total	65.0 J+	mg/L
G212	Compliance	E002	08/10/2023	Temperature	17.6	degrees C
G212	Compliance	E002	08/10/2023	Thallium, total	0.001 U	mg/L
G212	Compliance	E002	08/10/2023	Total Dissolved Solids	412	mg/L
G212	Compliance	E002	08/10/2023	Turbidity, field	3.90	NTU
G213	Compliance	E002	08/10/2023	Antimony, total	0.0006 U	mg/L
G213	Compliance	E002	08/10/2023	Arsenic, total	0.0004 U	mg/L
G213	Compliance	E002	08/10/2023	Barium, total	0.0541	mg/L
G213	Compliance	E002	08/10/2023	Beryllium, total	0.0002 U	mg/L
G213	Compliance	E002	08/10/2023	Boron, total	0.0092 U	mg/L
G213	Compliance	E002	08/10/2023	Cadmium, total	0.0002 U	mg/L
G213	Compliance	E002	08/10/2023	Calcium, total	65.6	mg/L
G213	Compliance	E002	08/10/2023	Chloride, total	46.0	mg/L
G213	Compliance	E002	08/10/2023	Chromium, total	0.00160	mg/L
G213	Compliance	E002	08/10/2023	Cobalt, total	0.0003 J	mg/L
G213	Compliance	E002	08/10/2023	Dissolved Oxygen	1.78	mg/L
G213	Compliance	E002	08/10/2023	Fluoride, total	0.340 J+	mg/L
G213	Compliance	E002	08/10/2023	Lead, total	0.0006 U	mg/L
G213	Compliance	E002	08/10/2023	Lithium, total	0.00340	mg/L
G213	Compliance	E002	08/10/2023	Mercury, total	0.00006 U	mg/L
G213	Compliance	E002	08/10/2023	Molybdenum, total	0.0006 U	mg/L
G213	Compliance	E002	08/10/2023	Oxidation Reduction Potential	102	mV
G213	Compliance	E002	08/10/2023	pH (field)	7.2	SU
G213	Compliance	E002	08/10/2023	Radium 226 + Radium 228, total	0.568	pCi/L
G213	Compliance	E002	08/10/2023	Selenium, total	0.0006 U	mg/L
G213	Compliance	E002	08/10/2023	Specific Conductance @ 25C (field)	877	micromhos/cm
G213	Compliance	E002	08/10/2023	Sulfate, total	68.0 J+	mg/L
G213	Compliance	E002	08/10/2023	Temperature	17.6	degrees C
G213	Compliance	E002	08/10/2023	Thallium, total	0.001 U	mg/L
G213	Compliance	E002	08/10/2023	Total Dissolved Solids	402	mg/L
G213	Compliance	E002	08/10/2023	Turbidity, field	7.40	NTU
G215	Compliance	E002	08/10/2023	Antimony, total	0.0006 U	mg/L
G215	Compliance	E002	08/10/2023	Arsenic, total	0.00240	mg/L
G215	Compliance	E002	08/10/2023	Barium, total	0.0402	mg/L
G215	Compliance	E002	08/10/2023	Beryllium, total	0.0002 U	mg/L
G215	Compliance	E002	08/10/2023	Boron, total	0.712 J+	mg/L
G215	Compliance	E002	08/10/2023	Cadmium, total	0.0002 U	mg/L
G215	Compliance	E002	08/10/2023	Calcium, total	171	mg/L
G215	Compliance	E002	08/10/2023	Chloride, total	127	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G215	Compliance	E002	08/10/2023	Chromium, total	0.0007 U	mg/L
G215	Compliance	E002	08/10/2023	Cobalt, total	0.0008 J	mg/L
G215	Compliance	E002	08/10/2023	Dissolved Oxygen	0.710	mg/L
G215	Compliance	E002	08/10/2023	Fluoride, total	0.330 J+	mg/L
G215	Compliance	E002	08/10/2023	Lead, total	0.0006 U	mg/L
G215	Compliance	E002	08/10/2023	Lithium, total	0.00960	mg/L
G215	Compliance	E002	08/10/2023	Mercury, total	0.00008 J	mg/L
G215	Compliance	E002	08/10/2023	Molybdenum, total	0.00410	mg/L
G215	Compliance	E002	08/10/2023	Oxidation Reduction Potential	93.0	mV
G215	Compliance	E002	08/10/2023	pH (field)	7.0	SU
G215	Compliance	E002	08/10/2023	Radium 226 + Radium 228, total	0.65	pCi/L
G215	Compliance	E002	08/10/2023	Selenium, total	0.0006 U	mg/L
G215	Compliance	E002	08/10/2023	Specific Conductance @ 25C (field)	2,330	micromhos/cm
G215	Compliance	E002	08/10/2023	Sulfate, total	481	mg/L
G215	Compliance	E002	08/10/2023	Temperature	15.6	degrees C
G215	Compliance	E002	08/10/2023	Thallium, total	0.001 U	mg/L
G215	Compliance	E002	08/10/2023	Total Dissolved Solids	1,270	mg/L
G215	Compliance	E002	08/10/2023	Turbidity, field	8.30	NTU
G217	Compliance	E002	08/10/2023	Antimony, total	0.0006 U	mg/L
G217	Compliance	E002	08/10/2023	Arsenic, total	0.0004 U	mg/L
G217	Compliance	E002	08/10/2023	Barium, total	0.107	mg/L
G217	Compliance	E002	08/10/2023	Beryllium, total	0.0002 U	mg/L
G217	Compliance	E002	08/10/2023	Boron, total	0.025 UJ	mg/L
G217	Compliance	E002	08/10/2023	Cadmium, total	0.0002 U	mg/L
G217	Compliance	E002	08/10/2023	Calcium, total	175	mg/L
G217	Compliance	E002	08/10/2023	Chloride, total	109	mg/L
G217	Compliance	E002	08/10/2023	Chromium, total	0.0009 J	mg/L
G217	Compliance	E002	08/10/2023	Cobalt, total	0.0004 J	mg/L
G217	Compliance	E002	08/10/2023	Dissolved Oxygen	1.03	mg/L
G217	Compliance	E002	08/10/2023	Fluoride, total	0.380 J+	mg/L
G217	Compliance	E002	08/10/2023	Lead, total	0.0006 U	mg/L
G217	Compliance	E002	08/10/2023	Lithium, total	0.00360	mg/L
G217	Compliance	E002	08/10/2023	Mercury, total	0.00006 U	mg/L
G217	Compliance	E002	08/10/2023	Molybdenum, total	0.0006 U	mg/L
G217	Compliance	E002	08/10/2023	Oxidation Reduction Potential	77.0	mV
G217	Compliance	E002	08/10/2023	pH (field)	6.9	SU
G217	Compliance	E002	08/10/2023	Radium 226 + Radium 228, total	0.878	pCi/L
G217	Compliance	E002	08/10/2023	Selenium, total	0.0006 U	mg/L
G217	Compliance	E002	08/10/2023	Specific Conductance @ 25C (field)	1,970	micromhos/cm
G217	Compliance	E002	08/10/2023	Sulfate, total	394	mg/L
G217	Compliance	E002	08/10/2023	Temperature	15.6	degrees C
G217	Compliance	E002	08/10/2023	Thallium, total	0.001 U	mg/L
G217	Compliance	E002	08/10/2023	Total Dissolved Solids	1,100	mg/L
G217	Compliance	E002	08/10/2023	Turbidity, field	7.20	NTU
G218	Compliance	E002	08/10/2023	Antimony, total	0.0006 U	mg/L
G218	Compliance	E002	08/10/2023	Arsenic, total	0.00200	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G218	Compliance	E002	08/10/2023	Barium, total	0.0747	mg/L
G218	Compliance	E002	08/10/2023	Beryllium, total	0.0002 U	mg/L
G218	Compliance	E002	08/10/2023	Boron, total	0.025 UJ	mg/L
G218	Compliance	E002	08/10/2023	Cadmium, total	0.0002 U	mg/L
G218	Compliance	E002	08/10/2023	Calcium, total	179	mg/L
G218	Compliance	E002	08/10/2023	Chloride, total	116	mg/L
G218	Compliance	E002	08/10/2023	Chromium, total	0.0011 J	mg/L
G218	Compliance	E002	08/10/2023	Cobalt, total	0.0007 J	mg/L
G218	Compliance	E002	08/10/2023	Dissolved Oxygen	0.760	mg/L
G218	Compliance	E002	08/10/2023	Fluoride, total	0.320 J+	mg/L
G218	Compliance	E002	08/10/2023	Lead, total	0.0006 U	mg/L
G218	Compliance	E002	08/10/2023	Lithium, total	0.00460	mg/L
G218	Compliance	E002	08/10/2023	Mercury, total	0.00006 U	mg/L
G218	Compliance	E002	08/10/2023	Molybdenum, total	0.0006 U	mg/L
G218	Compliance	E002	08/10/2023	Oxidation Reduction Potential	70.0	mV
G218	Compliance	E002	08/10/2023	pH (field)	6.9	SU
G218	Compliance	E002	08/10/2023	Radium 226 + Radium 228, total	2.46	pCi/L
G218	Compliance	E002	08/10/2023	Selenium, total	0.0006 U	mg/L
G218	Compliance	E002	08/10/2023	Specific Conductance @ 25C (field)	2,000	micromhos/cm
G218	Compliance	E002	08/10/2023	Sulfate, total	424	mg/L
G218	Compliance	E002	08/10/2023	Temperature	15.2	degrees C
G218	Compliance	E002	08/10/2023	Thallium, total	0.001 U	mg/L
G218	Compliance	E002	08/10/2023	Total Dissolved Solids	1,140	mg/L
G218	Compliance	E002	08/10/2023	Turbidity, field	22.0	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
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G206	UA	E001	Antimony, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G206	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/09/23	19	71	CI around median	0.001	0.0110	Background	No Exceedance
G206	UA	E001	Barium, total	mg/L	11/18/15 - 06/09/23	19	3	CI around mean	0.0466	2.0	Standard	No Exceedance
G206	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G206	UA	E001	Boron, total	mg/L	11/18/15 - 06/09/23	26	78	CI around median	0.01	2	Standard	No Exceedance
G206	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G206	UA	E001	Chloride, total	mg/L	11/18/15 - 06/09/23	26	0	CB around linear reg	18.4	200	Standard	No Exceedance
G206	UA	E001	Chromium, total	mg/L	11/18/15 - 06/09/23	19	84	CI around median	0.004	0.1	Standard	No Exceedance
G206	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.002	0.006	Standard	No Exceedance
G206	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/09/23	27	5	CI around mean	0.378	4.0	Standard	No Exceedance
G206	UA	E001	Lead, total	mg/L	11/18/15 - 06/09/23	19	93	CI around median	0.001	0.0075	Standard	No Exceedance
G206	UA	E001	Lithium, total	mg/L	11/18/15 - 06/09/23	12	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G206	UA	E001	Mercury, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G206	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/09/23	19	62	CB around T-S line	-0.000347	0.1	Standard	No Exceedance
G206	UA	E001	pH (field)	SU	11/18/15 - 06/09/23	28	0	CI around median	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
G206	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/09/23	12	0	CI around mean	0.409	5	Standard	No Exceedance
G206	UA	E001	Selenium, total	mg/L	11/18/15 - 06/09/23	19	81	CI around median	0.001	0.05	Standard	No Exceedance
G206	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/09/23	26	0	CI around mean	121	400	Standard	No Exceedance
G206	UA	E001	Thallium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G206	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/09/23	26	0	CI around geomean	467	1,200	Standard	No Exceedance
G206D	DA	E001	Antimony, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G206D	DA	E001	Arsenic, total	mg/L	03/30/21 - 06/09/23	7	0	CI around geomean	0.00224	0.0110	Background	No Exceedance
G206D	DA	E001	Barium, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.0836	2.0	Standard	No Exceedance
G206D	DA	E001	Beryllium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G206D	DA	E001	Boron, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.11	2	Standard	No Exceedance
G206D	DA	E001	Cadmium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G206D	DA	E001	Chloride, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	27.9	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G206D	DA	E001	Chromium, total	mg/L	03/30/21 - 06/09/23	7	86	CI around median	0.004	0.1	Standard	No Exceedance
G206D	DA	E001	Cobalt, total	mg/L	03/30/21 - 06/09/23	7	86	CI around median	0.002	0.006	Standard	No Exceedance
G206D	DA	E001	Fluoride, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.581	4.0	Standard	No Exceedance
G206D	DA	E001	Lead, total	mg/L	03/30/21 - 06/09/23	7	71	CI around median	0.001	0.0075	Standard	No Exceedance
G206D	DA	E001	Lithium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G206D	DA	E001	Mercury, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G206D	DA	E001	Molybdenum, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.0187	0.1	Standard	No Exceedance
G206D	DA	E001	pH (field)	SU	03/30/21 - 06/09/23	7	0	CI around mean	7.0/7.5	6.5/9.0	Standard/Standard	No Exceedance
G206D	DA	E001	Radium 226 + Radium 228, total	pCi/L	03/30/21 - 06/09/23	8	0	CI around mean	0.0872	5	Standard	No Exceedance
G206D	DA	E001	Selenium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.05	Standard	No Exceedance
G206D	DA	E001	Sulfate, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	152	400	Standard	No Exceedance
G206D	DA	E001	Thallium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G206D	DA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	738	1,200	Standard	No Exceedance
G209	UA	E001	Antimony, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.003	0.006	Standard	No Exceedance
G209	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/09/23	19	45	CI around geomean	0.00114	0.0110	Background	No Exceedance
G209	UA	E001	Barium, total	mg/L	11/18/15 - 06/09/23	19	0	CI around mean	0.056	2.0	Standard	No Exceedance
G209	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.001	0.004	Standard	No Exceedance
G209	UA	E001	Boron, total	mg/L	11/18/15 - 06/09/23	26	57	CI around median	0.01	2	Standard	No Exceedance
G209	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/09/23	19	98	Most recent sample	0.001	0.005	Standard	No Exceedance
G209	UA	E001	Chloride, total	mg/L	11/18/15 - 06/09/23	26	0	CI around median	61	200	Standard	No Exceedance
G209	UA	E001	Chromium, total	mg/L	11/18/15 - 06/09/23	19	68	Most recent sample	0.004	0.1	Standard	No Exceedance
G209	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/09/23	19	87	Most recent sample	0.002	0.006	Standard	No Exceedance
G209	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/09/23	27	3	CI around mean	0.398	4.0	Standard	No Exceedance
G209	UA	E001	Lead, total	mg/L	11/18/15 - 06/09/23	19	86	CI around median	0.001	0.0075	Standard	No Exceedance
G209	UA	E001	Lithium, total	mg/L	11/18/15 - 06/09/23	12	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G209	UA	E001	Mercury, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.0002	0.002	Standard	No Exceedance
G209	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/09/23	19	10	CI around mean	0.00148	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G209	UA	E001	pH (field)	SU	11/18/15 - 06/09/23	30	0	CI around mean	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
G209	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/09/23	12	0	CI around mean	0.48	5	Standard	No Exceedance
G209	UA	E001	Selenium, total	mg/L	11/18/15 - 06/09/23	19	58	CI around median	0.001	0.05	Standard	No Exceedance
G209	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/09/23	26	0	CB around T-S line	212	400	Standard	No Exceedance
G209	UA	E001	Thallium, total	mg/L	11/18/15 - 06/09/23	19	94	Most recent sample	0.001	0.002	Standard	No Exceedance
G209	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/09/23	26	0	CB around linear reg	802	1,200	Standard	No Exceedance
G212	UA	E001	Antimony, total	mg/L	11/18/15 - 06/07/23	19	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G212	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/07/23	19	83	CI around median	0.001	0.0110	Background	No Exceedance
G212	UA	E001	Barium, total	mg/L	11/18/15 - 06/07/23	19	0	CI around mean	0.0479	2.0	Standard	No Exceedance
G212	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.001	0.004	Standard	No Exceedance
G212	UA	E001	Boron, total	mg/L	11/18/15 - 06/07/23	26	82	CI around median	0.01	2	Standard	No Exceedance
G212	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/07/23	19	98	CI around median	0.001	0.005	Standard	No Exceedance
G212	UA	E001	Chloride, total	mg/L	11/18/15 - 06/07/23	26	0	CB around linear reg	42.2	200	Standard	No Exceedance
G212	UA	E001	Chromium, total	mg/L	11/18/15 - 06/07/23	19	84	Most recent sample	0.004	0.1	Standard	No Exceedance
G212	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/07/23	19	97	Most recent sample	0.002	0.006	Standard	No Exceedance
G212	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/07/23	26	13	CB around linear reg	0.156	4.0	Standard	No Exceedance
G212	UA	E001	Lead, total	mg/L	11/18/15 - 06/07/23	19	83	CI around median	0.001	0.0075	Standard	No Exceedance
G212	UA	E001	Lithium, total	mg/L	11/18/15 - 06/07/23	12	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G212	UA	E001	Mercury, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.0002	0.002	Standard	No Exceedance
G212	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/07/23	19	67	CI around median	0.001	0.1	Standard	No Exceedance
G212	UA	E001	pH (field)	SU	11/18/15 - 06/07/23	27	0	CI around mean	7.1/7.3	6.5/9.0	Standard/Standard	No Exceedance
G212	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/07/23	12	0	CI around mean	0.316	5	Standard	No Exceedance
G212	UA	E001	Selenium, total	mg/L	11/18/15 - 06/07/23	19	10	CB around linear reg	0.000213	0.05	Standard	No Exceedance
G212	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/07/23	26	0	CI around mean	52.9	400	Standard	No Exceedance
G212	UA	E001	Thallium, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.001	0.002	Standard	No Exceedance
G212	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/07/23	26	0	CI around mean	378	1,200	Standard	No Exceedance
G213	UA	E001	Antimony, total	mg/L	10/13/20 - 06/07/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
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 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G213	UA	E001	Arsenic, total	mg/L	10/13/20 - 06/07/23	11	68	CI around median	0.001	0.0110	Background	No Exceedance
G213	UA	E001	Barium, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	0.0444	2.0	Standard	No Exceedance
G213	UA	E001	Beryllium, total	mg/L	10/13/20 - 06/07/23	11	91	Most recent sample	0.001	0.004	Standard	No Exceedance
G213	UA	E001	Boron, total	mg/L	10/13/20 - 06/07/23	11	88	CI around median	0.01	2	Standard	No Exceedance
G213	UA	E001	Cadmium, total	mg/L	10/13/20 - 06/07/23	11	97	Most recent sample	0.001	0.005	Standard	No Exceedance
G213	UA	E001	Chloride, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	41.1	200	Standard	No Exceedance
G213	UA	E001	Chromium, total	mg/L	10/13/20 - 06/07/23	11	65	CI around median	0.004	0.1	Standard	No Exceedance
G213	UA	E001	Cobalt, total	mg/L	10/13/20 - 06/07/23	11	83	Most recent sample	0.002	0.006	Standard	No Exceedance
G213	UA	E001	Fluoride, total	mg/L	10/13/20 - 06/07/23	11	9	CI around mean	0.231	4.0	Standard	No Exceedance
G213	UA	E001	Lead, total	mg/L	10/13/20 - 06/07/23	11	71	CI around median	0.001	0.0075	Standard	No Exceedance
G213	UA	E001	Lithium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.02	0.04	Standard	No Exceedance
G213	UA	E001	Mercury, total	mg/L	10/13/20 - 06/07/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G213	UA	E001	Molybdenum, total	mg/L	10/13/20 - 06/07/23	11	85	Most recent sample	0.001	0.1	Standard	No Exceedance
G213	UA	E001	pH (field)	SU	10/13/20 - 06/07/23	11	0	CI around mean	6.9/7.3	6.5/9.0	Standard/Standard	No Exceedance
G213	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.399	5	Standard	No Exceedance
G213	UA	E001	Selenium, total	mg/L	10/13/20 - 06/07/23	11	17	CI around median	0.001	0.05	Standard	No Exceedance
G213	UA	E001	Sulfate, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	54.8	400	Standard	No Exceedance
G213	UA	E001	Thallium, total	mg/L	10/13/20 - 06/07/23	11	96	Most recent sample	0.001	0.002	Standard	No Exceedance
G213	UA	E001	Total Dissolved Solids	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	360	1,200	Standard	No Exceedance
G215	UA	E001	Antimony, total	mg/L	11/24/15 - 06/01/23	19	97	CI around median	0.003	0.006	Standard	No Exceedance
G215	UA	E001	Arsenic, total	mg/L	11/24/15 - 06/01/23	19	21	CI around geomean	0.00474	0.0110	Background	No Exceedance
G215	UA	E001	Barium, total	mg/L	11/24/15 - 06/01/23	19	0	CB around linear reg	0.0068	2.0	Standard	No Exceedance
G215	UA	E001	Beryllium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G215	UA	E001	Boron, total	mg/L	11/24/15 - 06/01/23	27	26	CB around linear reg	0.527	2	Standard	No Exceedance
G215	UA	E001	Cadmium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G215	UA	E001	Chloride, total	mg/L	11/24/15 - 06/01/23	27	0	CB around T-S line	69	200	Standard	No Exceedance
G215	UA	E001	Chromium, total	mg/L	11/24/15 - 06/01/23	19	90	Most recent sample	0.004	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G215	UA	E001	Cobalt, total	mg/L	11/24/15 - 06/01/23	19	94	CI around median	0.002	0.006	Standard	No Exceedance
G215	UA	E001	Fluoride, total	mg/L	11/24/15 - 06/01/23	27	15	CB around T-S line	0.216	4.0	Standard	No Exceedance
G215	UA	E001	Lead, total	mg/L	11/24/15 - 06/01/23	19	83	CI around median	0.001	0.0075	Standard	No Exceedance
G215	UA	E001	Lithium, total	mg/L	11/24/15 - 06/01/23	12	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G215	UA	E001	Mercury, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G215	UA	E001	Molybdenum, total	mg/L	11/24/15 - 06/01/23	19	95	CI around median	0.001	0.1	Standard	No Exceedance
G215	UA	E001	pH (field)	SU	11/24/15 - 06/01/23	28	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
G215	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 06/01/23	12	0	CI around mean	0.415	5	Standard	No Exceedance
G215	UA	E001	Selenium, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.001	0.05	Standard	No Exceedance
G215	UA	E001	Sulfate, total	mg/L	11/24/15 - 06/01/23	27	0	CB around linear reg	468	400	Standard	Exceedance
G215	UA	E001	Thallium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G215	UA	E001	Total Dissolved Solids	mg/L	11/24/15 - 06/01/23	27	0	CB around linear reg	1,150	1,200	Standard	No Exceedance
G217	UA	E001	Antimony, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G217	UA	E001	Arsenic, total	mg/L	10/14/20 - 06/08/23	11	82	CI around median	0.001	0.0110	Background	No Exceedance
G217	UA	E001	Barium, total	mg/L	10/14/20 - 06/08/23	11	0	CI around mean	0.0926	2.0	Standard	No Exceedance
G217	UA	E001	Beryllium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G217	UA	E001	Boron, total	mg/L	10/14/20 - 06/08/23	11	74	CI around median	0.01	2	Standard	No Exceedance
G217	UA	E001	Cadmium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G217	UA	E001	Chloride, total	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	95.2	200	Standard	No Exceedance
G217	UA	E001	Chromium, total	mg/L	10/14/20 - 06/08/23	11	68	Most recent sample	0.004	0.1	Standard	No Exceedance
G217	UA	E001	Cobalt, total	mg/L	10/14/20 - 06/08/23	11	86	Most recent sample	0.002	0.006	Standard	No Exceedance
G217	UA	E001	Fluoride, total	mg/L	10/14/20 - 06/08/23	11	14	CI around geomean	0.225	4.0	Standard	No Exceedance
G217	UA	E001	Lead, total	mg/L	10/14/20 - 06/08/23	11	88	CI around median	0.001	0.0075	Standard	No Exceedance
G217	UA	E001	Lithium, total	mg/L	02/15/23 - 06/08/23	2	100	Most recent sample	0.02	0.04	Standard	No Exceedance
G217	UA	E001	Mercury, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G217	UA	E001	Molybdenum, total	mg/L	10/14/20 - 06/08/23	11	85	Most recent sample	0.001	0.1	Standard	No Exceedance
G217	UA	E001	pH (field)	SU	10/14/20 - 06/08/23	11	0	CI around mean	6.8/7.0	6.5/9.0	Standard/Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G217	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/08/23	2	0	Most recent sample	0.574	5	Standard	No Exceedance
G217	UA	E001	Selenium, total	mg/L	10/14/20 - 06/08/23	11	73	Most recent sample	0.001	0.05	Standard	No Exceedance
G217	UA	E001	Sulfate, total	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	323	400	Standard	No Exceedance
G217	UA	E001	Thallium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G217	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	943	1,200	Standard	No Exceedance
G218	UA	E001	Antimony, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G218	UA	E001	Arsenic, total	mg/L	11/24/15 - 06/01/23	19	24	CI around geomean	0.00126	0.0110	Background	No Exceedance
G218	UA	E001	Barium, total	mg/L	11/24/15 - 06/01/23	19	0	CB around linear reg	0.093	2.0	Standard	No Exceedance
G218	UA	E001	Beryllium, total	mg/L	11/24/15 - 06/01/23	19	97	CI around median	0.001	0.004	Standard	No Exceedance
G218	UA	E001	Boron, total	mg/L	11/24/15 - 06/01/23	26	78	CI around median	0.01	2	Standard	No Exceedance
G218	UA	E001	Cadmium, total	mg/L	11/24/15 - 06/01/23	19	98	CI around median	0.001	0.005	Standard	No Exceedance
G218	UA	E001	Chloride, total	mg/L	11/24/15 - 06/01/23	26	0	CI around median	83	200	Standard	No Exceedance
G218	UA	E001	Chromium, total	mg/L	11/24/15 - 06/01/23	19	81	CI around median	0.004	0.1	Standard	No Exceedance
G218	UA	E001	Cobalt, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.002	0.006	Standard	No Exceedance
G218	UA	E001	Fluoride, total	mg/L	11/24/15 - 06/01/23	27	13	CI around mean	0.283	4.0	Standard	No Exceedance
G218	UA	E001	Lead, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.001	0.0075	Standard	No Exceedance
G218	UA	E001	Lithium, total	mg/L	11/24/15 - 06/01/23	12	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G218	UA	E001	Mercury, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G218	UA	E001	Molybdenum, total	mg/L	11/24/15 - 06/01/23	19	86	CI around median	0.001	0.1	Standard	No Exceedance
G218	UA	E001	pH (field)	SU	11/24/15 - 06/01/23	28	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
G218	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 06/01/23	12	0	CI around mean	0.628	5	Standard	No Exceedance
G218	UA	E001	Selenium, total	mg/L	11/24/15 - 06/01/23	19	84	CI around median	0.001	0.05	Standard	No Exceedance
G218	UA	E001	Sulfate, total	mg/L	11/24/15 - 06/01/23	26	0	CB around linear reg	281	400	Standard	No Exceedance
G218	UA	E001	Thallium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G218	UA	E001	Total Dissolved Solids	mg/L	11/24/15 - 06/01/23	27	0	CB around T-S line	756	1,200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023

845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Notes:

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

DA = Deep Aquifer

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)

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G206	UA	E002	Antimony, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.006	Standard	No Exceedance
G206	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/14/23	20	70	CI around median	0.001	0.0110	Background	No Exceedance
G206	UA	E002	Barium, total	mg/L	11/18/15 - 08/14/23	20	3	CI around mean	0.0471	2.0	Standard	No Exceedance
G206	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G206	UA	E002	Boron, total	mg/L	11/18/15 - 08/14/23	27	78	CI around median	0.01	2	Standard	No Exceedance
G206	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G206	UA	E002	Chloride, total	mg/L	11/18/15 - 08/14/23	27	0	CB around linear reg	18.6	200	Standard	No Exceedance
G206	UA	E002	Chromium, total	mg/L	11/18/15 - 08/14/23	20	84	CB around T-S line	0.0039	0.1	Standard	No Exceedance
G206	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/14/23	20	97	CI around median	0.002	0.006	Standard	No Exceedance
G206	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/14/23	28	5	CI around mean	0.38	4.0	Standard	No Exceedance
G206	UA	E002	Lead, total	mg/L	11/18/15 - 08/14/23	20	93	CI around median	0.001	0.0075	Standard	No Exceedance
G206	UA	E002	Lithium, total	mg/L	11/18/15 - 08/14/23	13	100	All ND - Last	0.003	0.04	Standard	No Exceedance
G206	UA	E002	Mercury, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G206	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/14/23	20	64	CI around median	0.001	0.1	Standard	No Exceedance
G206	UA	E002	pH (field)	SU	11/18/15 - 08/14/23	29	0	CI around median	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
G206	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/14/23	13	0	CI around mean	0.432	5	Standard	No Exceedance
G206	UA	E002	Selenium, total	mg/L	11/18/15 - 08/14/23	20	81	CI around median	0.001	0.05	Standard	No Exceedance
G206	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/14/23	27	0	CI around mean	122	400	Standard	No Exceedance
G206	UA	E002	Thallium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.002	0.002	Standard	No Exceedance
G206	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/14/23	27	0	CB around T-S line	469	1,200	Standard	No Exceedance
G206D	DA	E002	Antimony, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.006	Standard	No Exceedance
G206D	DA	E002	Arsenic, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.00165	0.0110	Background	No Exceedance
G206D	DA	E002	Barium, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.0874	2.0	Standard	No Exceedance
G206D	DA	E002	Beryllium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G206D	DA	E002	Boron, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.112	2	Standard	No Exceedance
G206D	DA	E002	Cadmium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G206D	DA	E002	Chloride, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	2.9	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G206D	DA	E002	Chromium, total	mg/L	03/30/21 - 08/14/23	8	88	CI around median	0.0015	0.1	Standard	No Exceedance
G206D	DA	E002	Cobalt, total	mg/L	03/30/21 - 08/14/23	8	88	CI around median	0.001	0.006	Standard	No Exceedance
G206D	DA	E002	Fluoride, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.619	4.0	Standard	No Exceedance
G206D	DA	E002	Lead, total	mg/L	03/30/21 - 08/14/23	8	75	CI around median	0.001	0.0075	Standard	No Exceedance
G206D	DA	E002	Lithium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.003	0.04	Standard	No Exceedance
G206D	DA	E002	Mercury, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G206D	DA	E002	Molybdenum, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	0.0116	0.1	Standard	No Exceedance
G206D	DA	E002	pH (field)	SU	03/30/21 - 08/14/23	8	0	CI around mean	7.0/7.4	6.5/9.0	Standard/Standard	No Exceedance
G206D	DA	E002	Radium 226 + Radium 228, total	pCi/L	03/30/21 - 08/14/23	9	0	CI around mean	0.164	5	Standard	No Exceedance
G206D	DA	E002	Selenium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.05	Standard	No Exceedance
G206D	DA	E002	Sulfate, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	-148	400	Standard	No Exceedance
G206D	DA	E002	Thallium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
G206D	DA	E002	Total Dissolved Solids	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	476	1,200	Standard	No Exceedance
G209	UA	E002	Antimony, total	mg/L	11/18/15 - 08/14/23	20	97	CI around median	0.003	0.006	Standard	No Exceedance
G209	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/14/23	20	44	CI around geomean	0.00113	0.0110	Background	No Exceedance
G209	UA	E002	Barium, total	mg/L	11/18/15 - 08/14/23	20	0	CI around mean	0.0566	2.0	Standard	No Exceedance
G209	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/14/23	20	97	Most recent sample	0.001	0.004	Standard	No Exceedance
G209	UA	E002	Boron, total	mg/L	11/18/15 - 08/14/23	27	58	CI around median	0.01	2	Standard	No Exceedance
G209	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/14/23	20	98	Most recent sample	0.001	0.005	Standard	No Exceedance
G209	UA	E002	Chloride, total	mg/L	11/18/15 - 08/14/23	27	0	CI around median	60	200	Standard	No Exceedance
G209	UA	E002	Chromium, total	mg/L	11/18/15 - 08/14/23	20	69	CI around median	0.004	0.1	Standard	No Exceedance
G209	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/14/23	20	88	CI around median	0.002	0.006	Standard	No Exceedance
G209	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/14/23	28	2	CI around mean	0.4	4.0	Standard	No Exceedance
G209	UA	E002	Lead, total	mg/L	11/18/15 - 08/14/23	20	86	CI around median	0.001	0.0075	Standard	No Exceedance
G209	UA	E002	Lithium, total	mg/L	11/18/15 - 08/14/23	13	92	CI around median	0.01	0.04	Standard	No Exceedance
G209	UA	E002	Mercury, total	mg/L	11/18/15 - 08/14/23	20	97	Most recent sample	0.0002	0.002	Standard	No Exceedance
G209	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/14/23	20	9	CI around mean	0.00153	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G209	UA	E002	pH (field)	SU	11/18/15 - 08/14/23	31	0	CI around mean	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
G209	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/14/23	13	0	CI around mean	0.483	5	Standard	No Exceedance
G209	UA	E002	Selenium, total	mg/L	11/18/15 - 08/14/23	20	59	CI around median	0.001	0.05	Standard	No Exceedance
G209	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/14/23	27	0	CB around T-S line	207	400	Standard	No Exceedance
G209	UA	E002	Thallium, total	mg/L	11/18/15 - 08/14/23	20	94	CI around median	0.001	0.002	Standard	No Exceedance
G209	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/14/23	27	0	CB around linear reg	809	1,200	Standard	No Exceedance
G212	UA	E002	Antimony, total	mg/L	11/18/15 - 08/10/23	20	100	All ND - Last	0.001	0.006	Standard	No Exceedance
G212	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.001	0.0110	Background	No Exceedance
G212	UA	E002	Barium, total	mg/L	11/18/15 - 08/10/23	20	0	CI around mean	0.0482	2.0	Standard	No Exceedance
G212	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.001	0.004	Standard	No Exceedance
G212	UA	E002	Boron, total	mg/L	11/18/15 - 08/10/23	27	82	CI around median	0.01	2	Standard	No Exceedance
G212	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/10/23	20	98	CI around median	0.001	0.005	Standard	No Exceedance
G212	UA	E002	Chloride, total	mg/L	11/18/15 - 08/10/23	27	0	CB around linear reg	42.6	200	Standard	No Exceedance
G212	UA	E002	Chromium, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.004	0.1	Standard	No Exceedance
G212	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.002	0.006	Standard	No Exceedance
G212	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/10/23	27	13	CI around mean	0.276	4.0	Standard	No Exceedance
G212	UA	E002	Lead, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.001	0.0075	Standard	No Exceedance
G212	UA	E002	Lithium, total	mg/L	11/18/15 - 08/10/23	13	100	All ND - Last	0.003	0.04	Standard	No Exceedance
G212	UA	E002	Mercury, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.0002	0.002	Standard	No Exceedance
G212	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/10/23	20	68	CI around median	0.001	0.1	Standard	No Exceedance
G212	UA	E002	pH (field)	SU	11/18/15 - 08/10/23	28	0	CI around mean	7.1/7.3	6.5/9.0	Standard/Standard	No Exceedance
G212	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/10/23	13	0	CI around mean	0.34	5	Standard	No Exceedance
G212	UA	E002	Selenium, total	mg/L	11/18/15 - 08/10/23	20	12	CB around linear reg	0.000121	0.05	Standard	No Exceedance
G212	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/10/23	27	0	CI around mean	53	400	Standard	No Exceedance
G212	UA	E002	Thallium, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.001	0.002	Standard	No Exceedance
G212	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/10/23	27	0	CI around mean	380	1,200	Standard	No Exceedance
G213	UA	E002	Antimony, total	mg/L	10/13/20 - 08/10/23	12	100	All ND - Last	0.001	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G213	UA	E002	Arsenic, total	mg/L	10/13/20 - 08/10/23	12	69	CI around median	0.001	0.0110	Background	No Exceedance
G213	UA	E002	Barium, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	0.0452	2.0	Standard	No Exceedance
G213	UA	E002	Beryllium, total	mg/L	10/13/20 - 08/10/23	12	92	Most recent sample	0.001	0.004	Standard	No Exceedance
G213	UA	E002	Boron, total	mg/L	10/13/20 - 08/10/23	12	89	CI around median	0.01	2	Standard	No Exceedance
G213	UA	E002	Cadmium, total	mg/L	10/13/20 - 08/10/23	12	97	Most recent sample	0.001	0.005	Standard	No Exceedance
G213	UA	E002	Chloride, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	41.4	200	Standard	No Exceedance
G213	UA	E002	Chromium, total	mg/L	10/13/20 - 08/10/23	12	62	CI around median	0.004	0.1	Standard	No Exceedance
G213	UA	E002	Cobalt, total	mg/L	10/13/20 - 08/10/23	12	83	CI around median	0.002	0.006	Standard	No Exceedance
G213	UA	E002	Fluoride, total	mg/L	10/13/20 - 08/10/23	12	8	CI around mean	0.241	4.0	Standard	No Exceedance
G213	UA	E002	Lead, total	mg/L	10/13/20 - 08/10/23	12	71	CI around median	0.001	0.0075	Standard	No Exceedance
G213	UA	E002	Lithium, total	mg/L	02/15/23 - 08/10/23	3	67	Most recent sample	0.0034	0.04	Standard	No Exceedance
G213	UA	E002	Mercury, total	mg/L	10/13/20 - 08/10/23	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G213	UA	E002	Molybdenum, total	mg/L	10/13/20 - 08/10/23	12	86	CI around median	0.001	0.1	Standard	No Exceedance
G213	UA	E002	pH (field)	SU	10/13/20 - 08/10/23	12	0	CI around mean	6.9/7.3	6.5/9.0	Standard/Standard	No Exceedance
G213	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 08/10/23	3	0	Most recent sample	0.568	5	Standard	No Exceedance
G213	UA	E002	Selenium, total	mg/L	10/13/20 - 08/10/23	12	21	CI around median	0.001	0.05	Standard	No Exceedance
G213	UA	E002	Sulfate, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	54.5	400	Standard	No Exceedance
G213	UA	E002	Thallium, total	mg/L	10/13/20 - 08/10/23	12	96	CI around median	0.001	0.002	Standard	No Exceedance
G213	UA	E002	Total Dissolved Solids	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	364	1,200	Standard	No Exceedance
G215	UA	E002	Antimony, total	mg/L	11/24/15 - 08/10/23	20	97	CI around median	0.003	0.006	Standard	No Exceedance
G215	UA	E002	Arsenic, total	mg/L	11/24/15 - 08/10/23	20	21	CI around geomean	0.00446	0.0110	Background	No Exceedance
G215	UA	E002	Barium, total	mg/L	11/24/15 - 08/10/23	20	0	CB around linear reg	0.00689	2.0	Standard	No Exceedance
G215	UA	E002	Beryllium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G215	UA	E002	Boron, total	mg/L	11/24/15 - 08/10/23	28	26	CB around linear reg	0.557	2	Standard	No Exceedance
G215	UA	E002	Cadmium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G215	UA	E002	Chloride, total	mg/L	11/24/15 - 08/10/23	28	0	CB around T-S line	79.9	200	Standard	No Exceedance
G215	UA	E002	Chromium, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.004	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G215	UA	E002	Cobalt, total	mg/L	11/24/15 - 08/10/23	20	94	CI around median	0.002	0.006	Standard	No Exceedance
G215	UA	E002	Fluoride, total	mg/L	11/24/15 - 08/10/23	28	15	CB around linear reg	0.136	4.0	Standard	No Exceedance
G215	UA	E002	Lead, total	mg/L	11/24/15 - 08/10/23	20	84	CI around median	0.001	0.0075	Standard	No Exceedance
G215	UA	E002	Lithium, total	mg/L	11/24/15 - 08/10/23	13	92	CI around median	0.01	0.04	Standard	No Exceedance
G215	UA	E002	Mercury, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G215	UA	E002	Molybdenum, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.1	Standard	No Exceedance
G215	UA	E002	pH (field)	SU	11/24/15 - 08/10/23	30	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
G215	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 08/10/23	13	0	CI around mean	0.438	5	Standard	No Exceedance
G215	UA	E002	Selenium, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.05	Standard	No Exceedance
G215	UA	E002	Sulfate, total	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	474	400	Standard	Exceedance
G215	UA	E002	Thallium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.002	0.002	Standard	No Exceedance
G215	UA	E002	Total Dissolved Solids	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	1,170	1,200	Standard	No Exceedance
G217	UA	E002	Antimony, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.006	Standard	No Exceedance
G217	UA	E002	Arsenic, total	mg/L	10/14/20 - 08/10/23	12	83	CI around median	0.001	0.0110	Background	No Exceedance
G217	UA	E002	Barium, total	mg/L	10/14/20 - 08/10/23	12	0	CI around mean	0.0937	2.0	Standard	No Exceedance
G217	UA	E002	Beryllium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G217	UA	E002	Boron, total	mg/L	10/14/20 - 08/10/23	12	74	CI around median	0.01	2	Standard	No Exceedance
G217	UA	E002	Cadmium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G217	UA	E002	Chloride, total	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	97.8	200	Standard	No Exceedance
G217	UA	E002	Chromium, total	mg/L	10/14/20 - 08/10/23	12	70	CI around median	0.004	0.1	Standard	No Exceedance
G217	UA	E002	Cobalt, total	mg/L	10/14/20 - 08/10/23	12	87	CI around median	0.002	0.006	Standard	No Exceedance
G217	UA	E002	Fluoride, total	mg/L	10/14/20 - 08/10/23	12	13	CI around geomean	0.238	4.0	Standard	No Exceedance
G217	UA	E002	Lead, total	mg/L	10/14/20 - 08/10/23	12	89	CI around median	0.001	0.0075	Standard	No Exceedance
G217	UA	E002	Lithium, total	mg/L	02/15/23 - 08/10/23	3	67	Most recent sample	0.0036	0.04	Standard	No Exceedance
G217	UA	E002	Mercury, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G217	UA	E002	Molybdenum, total	mg/L	10/14/20 - 08/10/23	12	86	CI around median	0.001	0.1	Standard	No Exceedance
G217	UA	E002	pH (field)	SU	10/14/20 - 08/10/23	12	0	CI around mean	6.8/7.0	6.5/9.0	Standard/Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G217	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 08/10/23	3	0	Most recent sample	0.878	5	Standard	No Exceedance
G217	UA	E002	Selenium, total	mg/L	10/14/20 - 08/10/23	12	74	Most recent sample	0.001	0.05	Standard	No Exceedance
G217	UA	E002	Sulfate, total	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	342	400	Standard	No Exceedance
G217	UA	E002	Thallium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.002	0.002	Standard	No Exceedance
G217	UA	E002	Total Dissolved Solids	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	987	1,200	Standard	No Exceedance
G218	UA	E002	Antimony, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.006	Standard	No Exceedance
G218	UA	E002	Arsenic, total	mg/L	11/24/15 - 08/10/23	20	23	CI around geomean	0.00129	0.0110	Background	No Exceedance
G218	UA	E002	Barium, total	mg/L	11/24/15 - 08/10/23	20	0	CB around linear reg	0.0867	2.0	Standard	No Exceedance
G218	UA	E002	Beryllium, total	mg/L	11/24/15 - 08/10/23	20	97	CI around median	0.001	0.004	Standard	No Exceedance
G218	UA	E002	Boron, total	mg/L	11/24/15 - 08/10/23	27	78	CI around median	0.01	2	Standard	No Exceedance
G218	UA	E002	Cadmium, total	mg/L	11/24/15 - 08/10/23	20	98	CI around median	0.001	0.005	Standard	No Exceedance
G218	UA	E002	Chloride, total	mg/L	11/24/15 - 08/10/23	27	0	CI around median	83	200	Standard	No Exceedance
G218	UA	E002	Chromium, total	mg/L	11/24/15 - 08/10/23	20	81	CI around median	0.004	0.1	Standard	No Exceedance
G218	UA	E002	Cobalt, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.002	0.006	Standard	No Exceedance
G218	UA	E002	Fluoride, total	mg/L	11/24/15 - 08/10/23	28	12	CI around mean	0.284	4.0	Standard	No Exceedance
G218	UA	E002	Lead, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.0075	Standard	No Exceedance
G218	UA	E002	Lithium, total	mg/L	11/24/15 - 08/10/23	13	92	CI around median	0.01	0.04	Standard	No Exceedance
G218	UA	E002	Mercury, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G218	UA	E002	Molybdenum, total	mg/L	11/24/15 - 08/10/23	20	86	CI around median	0.001	0.1	Standard	No Exceedance
G218	UA	E002	pH (field)	SU	11/24/15 - 08/10/23	29	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
G218	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 08/10/23	13	0	CI around mean	0.6	5	Standard	No Exceedance
G218	UA	E002	Selenium, total	mg/L	11/24/15 - 08/10/23	20	84	CI around median	0.001	0.05	Standard	No Exceedance
G218	UA	E002	Sulfate, total	mg/L	11/24/15 - 08/10/23	27	0	CB around linear reg	295	400	Standard	No Exceedance
G218	UA	E002	Thallium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.002	0.002	Standard	No Exceedance
G218	UA	E002	Total Dissolved Solids	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	855	1,200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023

845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Notes:

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

DA = Deep Aquifer

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

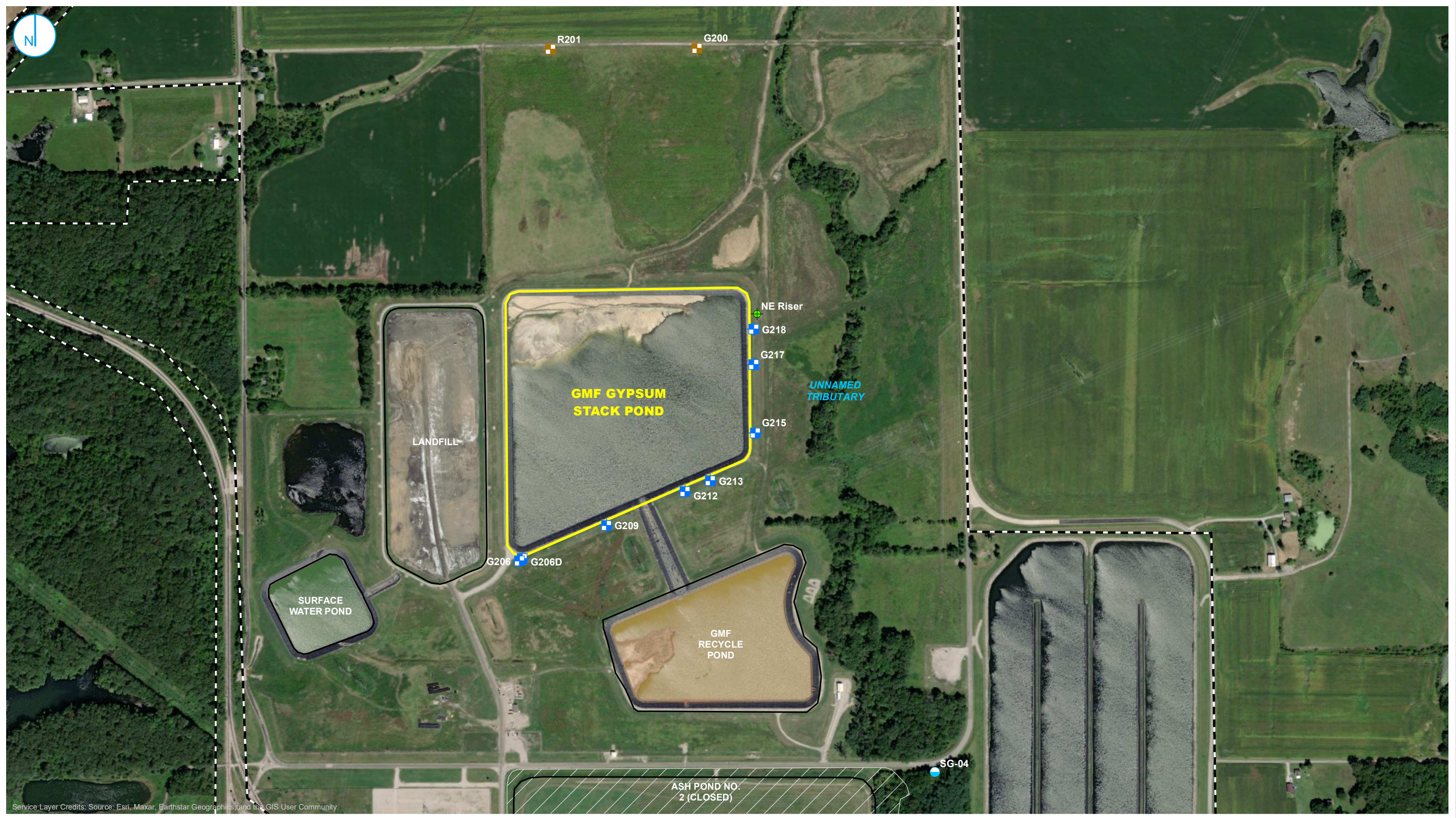
GWPS Source:

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

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

FIGURES

PROJECT: 169000XXXX | DATED: 1/11/2023 | DESIGNER: galammc
 Y:\Mapping\Projects\222285\MXD\GMP\Coffeen\GMF_GSP_103\Figure 2-1_Expanded Part 257 GW Monitoring Well Network.mxd



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- + LEACHATE WELL
- STAFF GAGE, RIVER
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

0 250 500 Feet

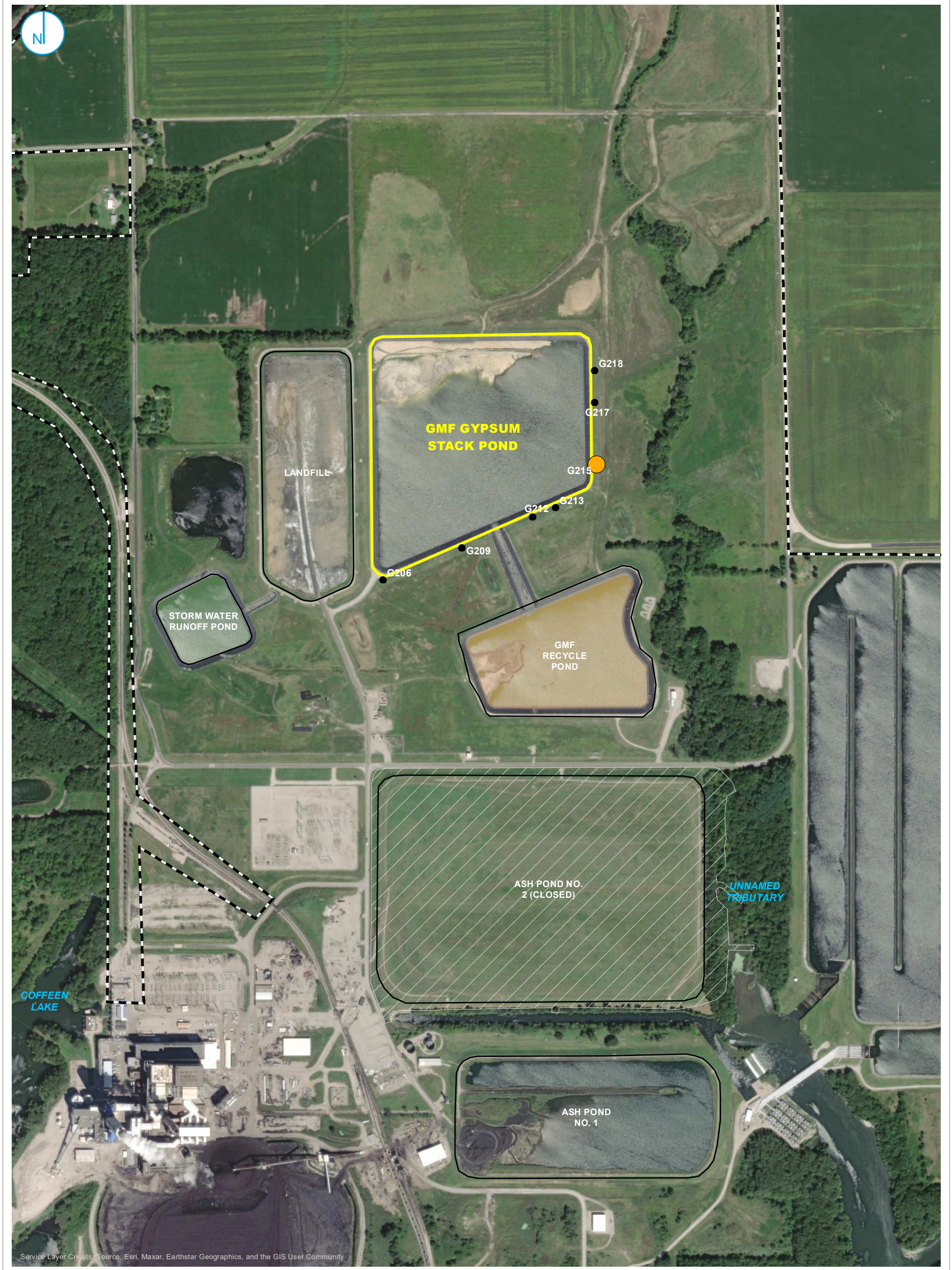
MONITORING WELL LOCATION MAP

2023 ANNUAL GROUNDWATER MONITORING AND
 CORRECTIVE ACTION REPORT
 GMF GYPSUM STACK POND
 COFFEEN POWER PLANT
 COFFEEN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.





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

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

**GWPS EXCEEDANCE MAP
UPPERMOST AQUIFER
QUARTERS 2-3, 2023**

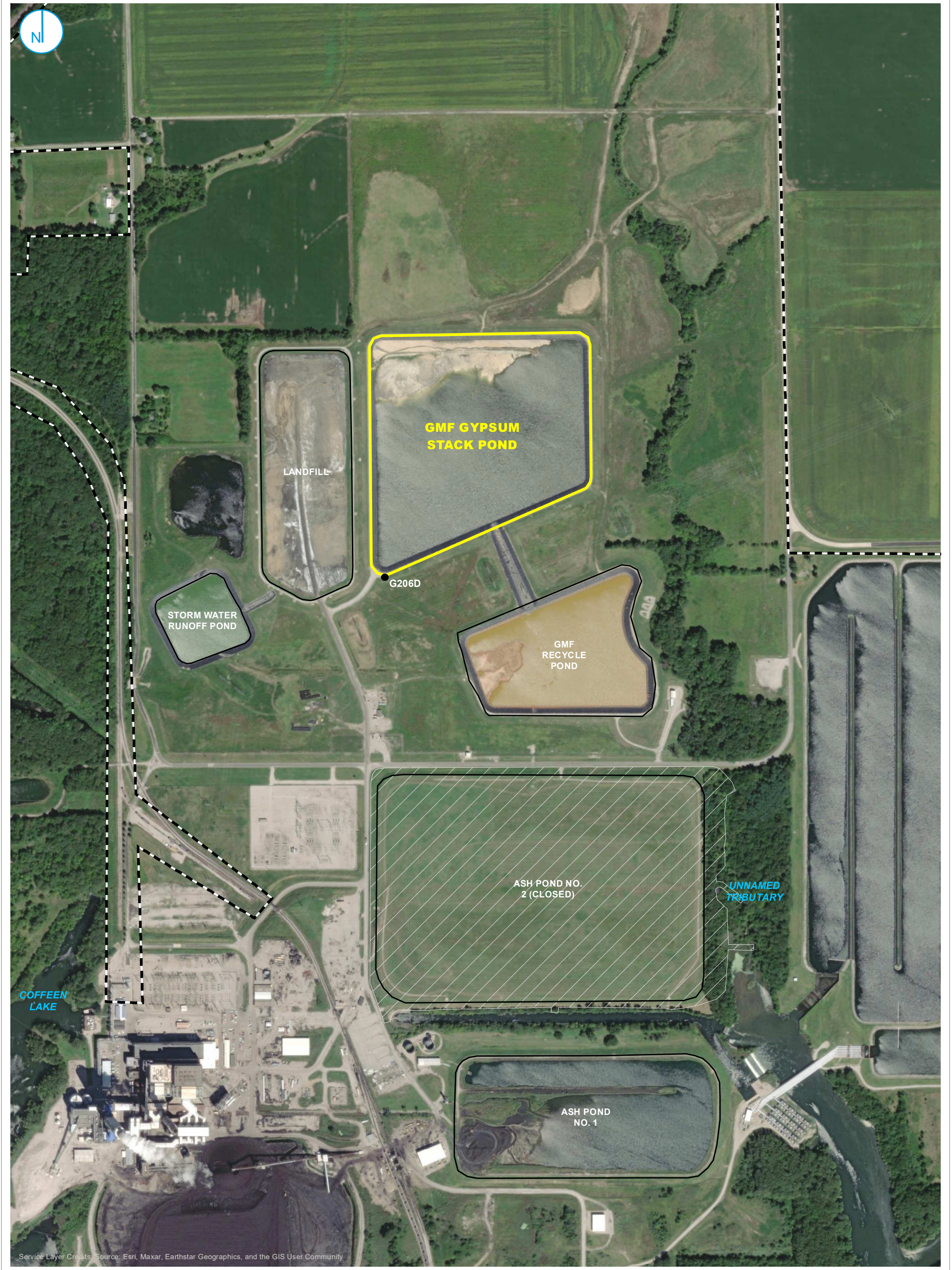
FIGURE 2

0 275 550
Feet

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS**

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





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

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

**GWPS EXCEEDANCE MAP
DEEP AQUIFER
QUARTERS 2-3, 2023**

FIGURE 3

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS**

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



0 275 550
Feet



Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- SOURCE SAMPLE LOCATION
- LEACHATE WELL
- STAFF GAGE; RIVER
- STAFF GAGE, CCR UNIT

- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

POTENTIOMETRIC SURFACE MAP APRIL 30, 2023

2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



0 325 650
Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- LEACHATE WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY
- SITE FEATURE

**POTENTIOMETRIC SURFACE MAP
MAY 30, 2023**

FIGURE 5

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS**

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



0 325 650
Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- LEACHATE WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-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)



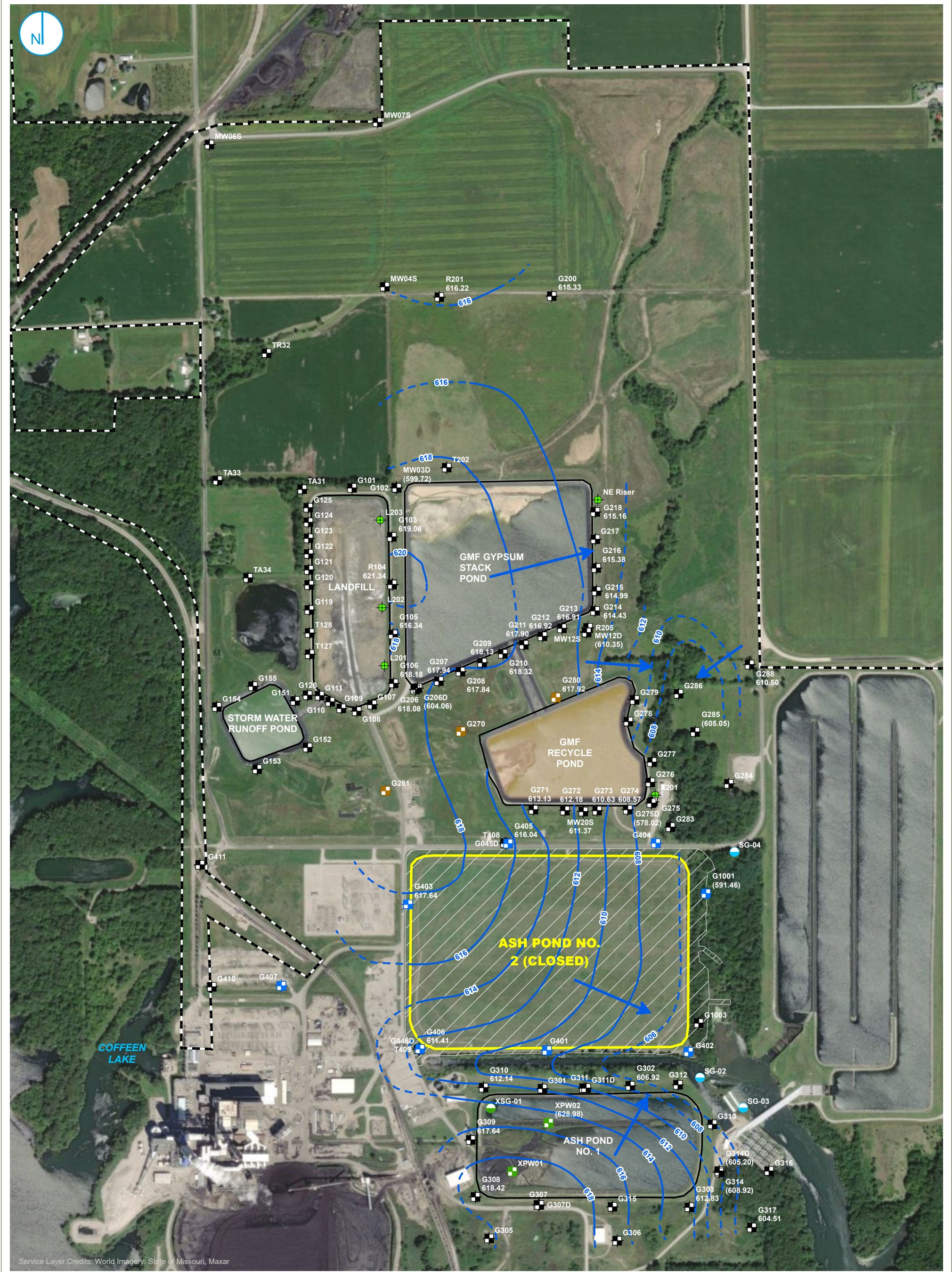
POTENTIOMETRIC SURFACE MAP JULY 8, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT GMF GYPSUM STACK POND COFFEEN POWER PLANT COFFEEN, ILLINOIS

FIGURE 7

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- LEACHATE WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-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)

0 325 650
 Feet

**POTENTIOMETRIC SURFACE MAP
 SEPTEMBER 25, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 ASH POND NO. 2
 COFFEEN POWER PLANT
 COFFEEN, ILLINOIS**

FIGURE 9

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.





Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND WELL
- MONITORING WELL
- PORE WATER WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER
- LEACHATE WELL

- GROUNDWATER ELEVATION CONTOUR (2- FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
OCTOBER 24 AND 25, 2023**

FIGURE 10

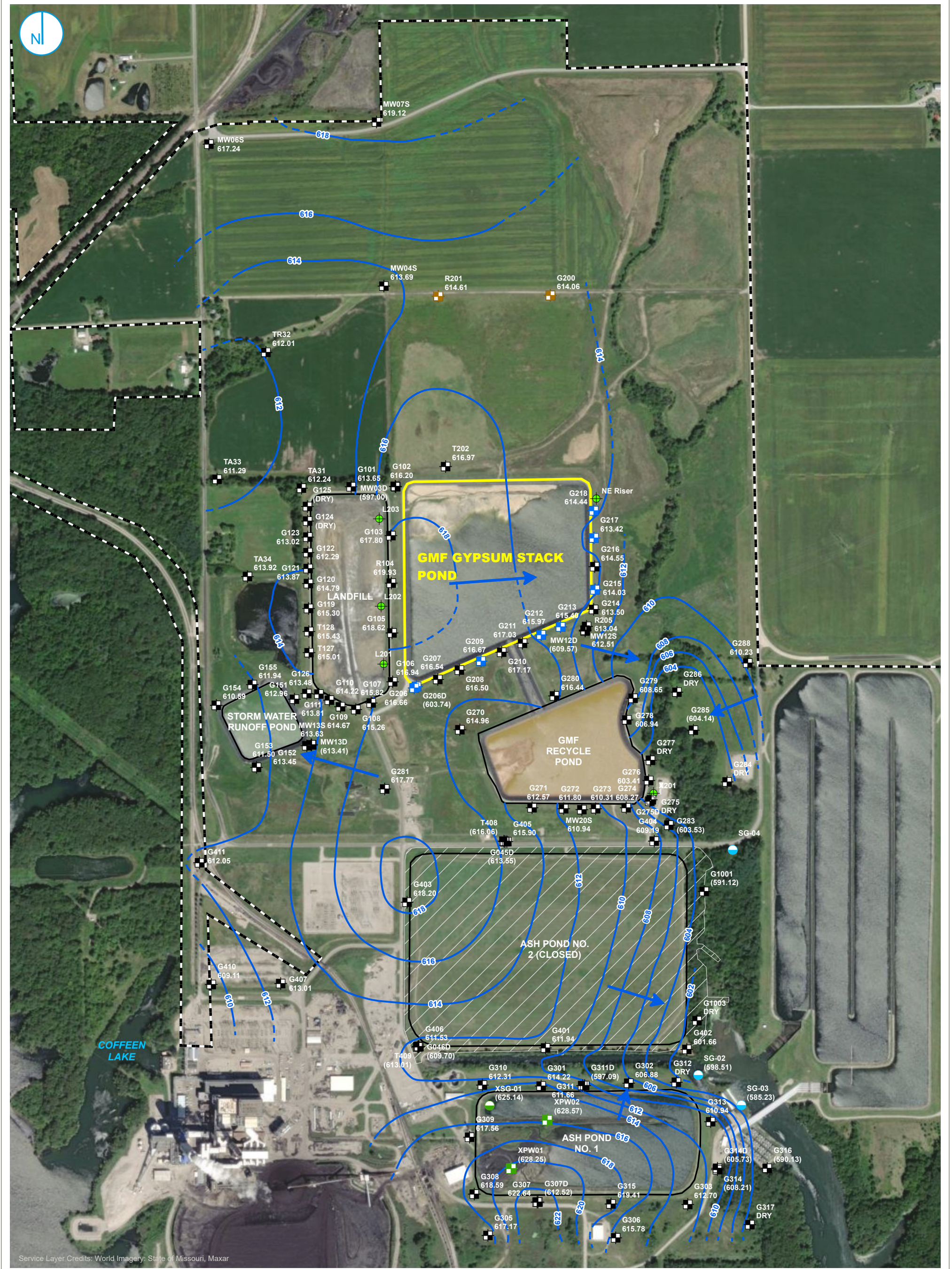
**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS**

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



0 325 650 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- LEACHATE WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-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)

0 320 640 Feet

**POTENTIOMETRIC SURFACE MAP
NOVEMBER 13, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
GMF GYPSUM STACK POND
COFFEEN POWER PLANT
COFFEEN, ILLINOIS**

FIGURE 11

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





Service Layer Credits: World Imagery, State of Missouri, Maxar

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- LEACHATE WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-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)

0 325 650
 Feet

**POTENTIOMETRIC SURFACE MAP
 DECEMBER 18, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 GMF GYPSUM STACK POND
 COFFEEN POWER PLANT
 COFFEEN, ILLINOIS**

FIGURE 12

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENTS

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

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

COFFEEN POWER PLANT

GMF GYPSUM STACK POND

COFFEEN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
G200	Background	UA	04/30/2023	4.51	621.42
G200	Background	UA	05/30/2023	5.89	620.04
G200	Background	UA	06/08/2023	6.44	619.49
G200	Background	UA	08/08/2023	9.21	616.73
G200	Background	UA	09/25/2023	10.61	615.33
G200	Background	UA	10/25/2023	11.51	614.43
G200	Background	UA	11/13/2023	11.88	614.06
G200	Background	UA	12/18/2023	11.48	614.46
G206	Compliance	UA	04/30/2023	10.27	622.54
G206	Compliance	UA	05/30/2023	11.17	621.64
G206	Compliance	UA	07/08/2023	12.13	620.69
G206	Compliance	UA	08/08/2023	13.89	618.93
G206	Compliance	UA	09/25/2023	14.74	618.08
G206	Compliance	UA	10/25/2023	15.71	617.11
G206	Compliance	UA	11/13/2023	16.16	616.66
G206	Compliance	UA	12/18/2023	15.85	616.97
G206D	Compliance	DA	04/30/2023	30.53	603.60
G206D	Compliance	DA	05/30/2023	30.22	603.91
G206D	Compliance	DA	07/08/2023	30.10	604.04
G206D	Compliance	DA	08/08/2023	30.04	604.10
G206D	Compliance	DA	09/25/2023	30.08	604.06
G206D	Compliance	DA	10/25/2023	30.34	603.80
G206D	Compliance	DA	11/13/2023	30.40	603.74
G206D	Compliance	DA	12/18/2023	30.32	603.82
G209	Compliance	UA	04/30/2023	10.25	622.65
G209	Compliance	UA	05/30/2023	11.07	621.83
G209	Compliance	UA	07/08/2023	11.82	621.08
G209	Compliance	UA	08/08/2023	13.79	619.12
G209	Compliance	UA	09/25/2023	14.78	618.13
G209	Compliance	UA	10/25/2023	15.60	617.31
G209	Compliance	UA	11/13/2023	16.24	616.67
G209	Compliance	UA	12/18/2023	16.04	616.87
G212	Compliance	UA	04/30/2023	10.89	621.99
G212	Compliance	UA	05/30/2023	11.64	621.24
G212	Compliance	UA	06/08/2023	12.80	620.08
G212	Compliance	UA	07/08/2023	13.48	619.41
G212	Compliance	UA	08/08/2023	14.61	618.28
G212	Compliance	UA	09/25/2023	15.97	616.92
G212	Compliance	UA	10/25/2023	16.46	616.43
G212	Compliance	UA	11/13/2023	16.92	615.97
G212	Compliance	UA	12/18/2023	17.00	615.89
G213	Compliance	UA	04/30/2023	11.04	621.76
G213	Compliance	UA	05/30/2023	11.96	620.84
G213	Compliance	UA	06/08/2023	12.80	620.00
G213	Compliance	UA	07/08/2023	13.50	619.31
G213	Compliance	UA	08/08/2023	15.05	617.76

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
G213	Compliance	UA	09/25/2023	15.90	616.91
G213	Compliance	UA	10/25/2023	16.81	616.00
G213	Compliance	UA	11/13/2023	17.41	615.40
G213	Compliance	UA	12/18/2023	17.34	615.47
G215	Compliance	UA	04/30/2023	14.03	619.02
G215	Compliance	UA	05/30/2023	14.76	618.29
G215	Compliance	UA	06/08/2023	15.46	617.59
G215	Compliance	UA	07/08/2023	16.06	616.99
G215	Compliance	UA	08/08/2023	17.22	615.84
G215	Compliance	UA	09/25/2023	18.06	614.99
G215	Compliance	UA	10/25/2023	18.41	614.65
G215	Compliance	UA	11/13/2023	19.03	614.03
G215	Compliance	UA	12/18/2023	18.75	614.31
G217	Compliance	UA	08/08/2023	18.29	614.81
G217	Compliance	UA	10/25/2023	19.51	613.59
G217	Compliance	UA	11/13/2023	19.68	613.42
G217	Compliance	UA	12/18/2023	19.33	613.77
G218	Compliance	UA	04/30/2023	12.98	620.12
G218	Compliance	UA	05/30/2023	13.72	619.38
G218	Compliance	UA	06/08/2023	15.11	618.00
G218	Compliance	UA	07/08/2023	15.80	617.31
G218	Compliance	UA	08/08/2023	16.98	616.13
G218	Compliance	UA	09/25/2023	17.95	615.16
G218	Compliance	UA	10/25/2023	18.48	614.63
G218	Compliance	UA	11/13/2023	18.67	614.44
G218	Compliance	UA	12/18/2023	18.38	614.73
R201	Background	UA	04/30/2023	3.95	622.38
R201	Background	UA	05/30/2023	5.31	621.02
R201	Background	UA	06/08/2023	6.13	620.21
R201	Background	UA	07/08/2023	6.75	619.59
R201	Background	UA	08/08/2023	11.61	614.73
R201	Background	UA	09/25/2023	10.12	616.22
R201	Background	UA	10/24/2023	11.20	615.14
R201	Background	UA	11/13/2023	11.73	614.61
R201	Background	UA	12/18/2023	11.37	614.97
SG-04	Water Level	SW	05/30/2023	6.41	593.11

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

NAVD88 = North American Vertical Datum of 1988

Monitored Unit Abbreviations:

DA = deep aquifer

S = source water

SW = surface water

UA = uppermost aquifer

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**ATTACHMENT B
CORRECTIVE MEASURES ASSESSMENT EXTENSION
REQUEST AND IEPA APPROVAL LETTER**



Illinois Power Generating Company
134 Cips Lane
Coffeen, IL 62017

January 15, 2024

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

Re: GMF Gypsum Stack Pond (IEPA ID No. W1350150004-03), Corrective Measures Assessment Schedule Extension Demonstration

Dear Mr. LeCrone:

In accordance with 35 I.A.C. § 845.660(a)(2), Illinois Power Generating Company (IPGC) is submitting a schedule extension demonstration for completing the Corrective Measures Assessment (CMA) for the GMF Gypsum Stack Pond (IEPA ID No.: W157810004-03) at the Coffeen Power Plant, as enclosed.

Sincerely,

A handwritten signature in blue ink that reads "Dianna Tickner".

Dianna Tickner, P.E., PMP
Senior Director, Decommissioning & Demolition

Enclosures

INTRODUCTION AND BACKGROUND

Exceedances of the groundwater protection standards (GWPS) listed in Title 35 of the Illinois Administrative Code (35 I.A.C.) §845.600 have been detected at the Gypsum Management Facility (GMF) Gypsum Stack Pond (GMF GSP, Illinois Environmental Protection Agency [IEPA] Identification [ID] Number [No.]: W1350150004-03) at the Coffeen Power Plant (CPP). The GPWS exceedances are documented in the Quarter 2, 2023 groundwater monitoring report that was prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) and submitted to IEPA on October 16, 2023 [1].

In accordance with 35 I.A.C. § 845.660, Illinois Power Generating Company (IPGC) initiated a Corrective Measures Assessment (CMA) on January 14, 2024, which was within 90 days of the exceedance detection. Upon reviewing site-specific conditions, circumstances, and information gathered to-date, IPGC has determined, in accordance with 35 I.A.C. § 845.660(a)(2), that an additional 60 days will be required to complete the CMA. This extension of the CMA deadline would result in the CMA for the GMF GSP being submitted to IEPA on or before June 12, 2024.

DEMONSTRATION

As discussed below, there are three site-specific conditions or circumstances at the GMF GSP that justify the need for a 60-day extension of the default CMA deadline.

Circumstance 1: Additional Sampling and Laboratory Analysis

The reliability of monitored natural attenuation (MNA) to attain groundwater protection standards (GWPS) is currently under evaluation for the GMF GSP. IPGC is in the process of performing additional groundwater sampling and performing laboratory testing of MNA-relevant parameters. The results of this sampling and analytical testing will be utilized to evaluate the reliability, including the potential for reversibility, of MNA relative to other types of corrective measures.

Circumstance 2: Consideration of CMA Development for Other Coal Combustion Residuals (CCR) Surface Impoundments (SIs) at the CPP

A total of four CCR SIs are present at the CPP. Exceedances of the GWPS were identified at the same time for all four of the SI [1], [2], [3], [4]. This will require CMAs to be initiated for all four SIs by the same date and submitted to IEPA by the same date. The other SIs at the CPP include:

- Ash Pond No. 1 (AP1), IEPA ID No. W0578010004-01;
- Ash Pond No. 2 (AP2), IEPA ID No. W0578010004-02; and
- GMF Recycle Pond (GMF RP), IEPA ID No. W0578010004-04.

Additional time will be required to prepare four CMAs simultaneously under the same initiation and submittal schedules. Furthermore, the SIs are in close proximity to each other (*e.g.*, within 300 to 500 feet), resulting in additional time being required to evaluate corrective action alternatives that can be implemented for each SI while avoiding negative impacts to corrective action that may be implemented for the other SIs present at the CPP.

Circumstance 3: Potential Constraints due to Proposed SI Closures

The evaluation of the performance and reliability of corrective measures for the GMF GSP will be complicated by physical challenges and constraints around effectively implementing corrective measures at the site. These challenges, which are related to proposed closures for three SIs at CPP, include, but are not limited to:

- Closure of the GMF GSP, in accordance with the closure plan and construction permit application submitted to IEPA on July 28, 2022 [5], will be an ongoing construction project that may affect the implementation of corrective action.
 - Closure will include a consolidate-and-cap approach where CCR are removed from a 24-acre area inside the GMF GSP and placed into a consolidated 13-acre area.
 - Closure will include moving approximately 130,000 cubic yards (CY) of CCR obtained from within the GMF GSP and constructing a final cover system. This is expected to occur over a period of approximately 2 to 3 years [5].
- Closures for the GMF GSP [5], GMF RP [6], and AP1 [7] are expected to be completed at the same time, resulting in three closure construction projects occurring simultaneously at the CPP.

These factors will require additional effort to evaluate the physical location and dimensions of any proposed corrective action which limits impacts to the three proposed closure construction projects.

REFERENCES

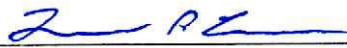
- [1] Ramboll Americas Engineering Solutions, Inc., "35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, Quarter 2, 2023, GMF Gypsum Stack Pond, Coffeen Power Plant," October 16, 2023.
- [2] Ramboll Americas Engineering Solutions, Inc., "35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, Quarter 2, 2023, GMF Recycle Pond, Coffeen Power Plant," October 16, 2023.
- [3] Ramboll Americas Engineering Solutions, Inc., "35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, Quarter 2, 2023, Ash Pond No. 1, Coffeen Power Plant," October 16, 2023.
- [4] Ramboll Americas Engineering Solutions, Inc., "35 IAC § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, Quarter 2, 2023, Ash Pond No. 2, Coffeen Power Plant," October 16, 2023.
- [5] WSP Golder, "Part 845 Construction Permit Application for the Gypsum Management Facility Gypsum Stack Pond, Coffeen Power Plant," July 28, 2022.
- [6] WSP Golder, "Part 845 Construction Permit Application for the Gypsum Management Facility Recycle Pond, Coffeen Power Plant," July 28, 2022.
- [7] WSP Golder, "Part 845 Construction Permit Application for Ash Pond No. 1, Coffeen Power Plant," July 28, 2022.

Corrective Measures Assessment Schedule Extension Request; 35 I.A.C. § 845.660(a)(2)
Illinois Power Generating Company; Coffeen Power Plant
GMF Gypsum Stack Pond; IEPA ID: W1350150004-03

CERTIFICATION STATEMENT

CCR Unit: Illinois Power Generating Company - IPGC; Coffeen Power Plant, GMF Gypsum Stack Pond
IEPA ID No.: W1350150004-03

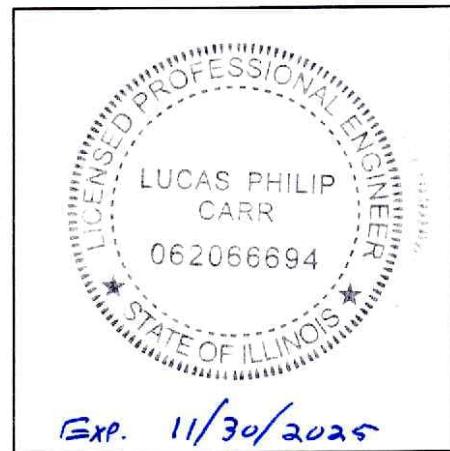
I, Lucas P. Carr, being a Registered Professional Engineer in good standing with the state of Illinois, do hereby certify, to the best of my knowledge, information, and belief that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above referenced CCR unit, that the 60-day extension demonstration for the Corrective Measures Assessment has been prepared in accordance with 35 I.A.C. § 845.600(a)(2) and is accurate.



Lucas P. Carr, P.E.
Senior Managing Consultant



Date





ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217-782-1020

January 17, 2024

Dianna Tickner
Electric Energy, Inc.
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Re: Coffeen Power Plant Ash Pond No.1, Ash Pond No. 2, GMF Gypsum Stack Pond, and
GMF Recycle Pond; W1350150004-01, W1350150004-02, W1350150004-03,
W1350150004-04
Corrective Measures Assessment Schedule Extension Request

Dear Mrs. Tickner:

The purpose of this correspondence is to notify you that the Illinois Environmental Protection Agency (Illinois EPA) approves of the extension requests submitted on January 15, 2024, for completing the Corrective Measures Assessment (CMA).

If you have any questions, please contact: **Heather Mullenax** Illinois EPA, Bureau of Water, Groundwater Section DPWS #13, P.O. Box 19276, Springfield, Illinois 62794-9276. If you have any questions concerning the investigation described above, please call 217-782-1020.

Sincerely,

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control
Illinois Environmental Protection Agency

Cc: Heather Mullenax
Keegan MacDonna
Phil Morris
Records Files 06M - W1350150004

ATTACHMENT C 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
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G206	UA	E001	Antimony, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.003	0.003
G206	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/09/23	19	71	CI around median	0.001	0.0110
G206	UA	E001	Barium, total	mg/L	11/18/15 - 06/09/23	19	3	CI around mean	0.0466	0.130
G206	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.001
G206	UA	E001	Boron, total	mg/L	11/18/15 - 06/09/23	26	78	CI around median	0.01	0.110
G206	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.001
G206	UA	E001	Chloride, total	mg/L	11/18/15 - 06/09/23	26	0	CB around linear reg	18.4	94.9
G206	UA	E001	Chromium, total	mg/L	11/18/15 - 06/09/23	19	84	CI around median	0.004	0.00960
G206	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.002	0.00370
G206	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/09/23	27	5	CI around mean	0.378	0.552
G206	UA	E001	Lead, total	mg/L	11/18/15 - 06/09/23	19	93	CI around median	0.001	0.00590
G206	UA	E001	Lithium, total	mg/L	11/18/15 - 06/09/23	12	100	All ND - Last	0.02	0.02
G206	UA	E001	Mercury, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.0002	0.00110
G206	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/09/23	19	62	CB around T-S line	-0.000347	0.0440
G206	UA	E001	pH (field)	SU	11/18/15 - 06/09/23	28	0	CI around median	7.0/7.2	6.8/7.4
G206	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/09/23	12	0	CI around mean	0.409	1.48
G206	UA	E001	Selenium, total	mg/L	11/18/15 - 06/09/23	19	81	CI around median	0.001	0.00350
G206	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/09/23	26	0	CI around mean	121	387
G206	UA	E001	Thallium, total	mg/L	11/18/15 - 06/09/23	19	100	All ND - Last	0.001	0.001
G206	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/09/23	26	0	CI around geomean	467	975
G206D	DA	E001	Antimony, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.003	0.003
G206D	DA	E001	Arsenic, total	mg/L	03/30/21 - 06/09/23	7	0	CI around geomean	0.00224	0.0110
G206D	DA	E001	Barium, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.0836	0.130
G206D	DA	E001	Beryllium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.001
G206D	DA	E001	Boron, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.11	0.110
G206D	DA	E001	Cadmium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.001
G206D	DA	E001	Chloride, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	27.9	94.9

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G206D	DA	E001	Chromium, total	mg/L	03/30/21 - 06/09/23	7	86	CI around median	0.004	0.00960
G206D	DA	E001	Cobalt, total	mg/L	03/30/21 - 06/09/23	7	86	CI around median	0.002	0.00370
G206D	DA	E001	Fluoride, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.581	0.552
G206D	DA	E001	Lead, total	mg/L	03/30/21 - 06/09/23	7	71	CI around median	0.001	0.00590
G206D	DA	E001	Lithium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.02	0.02
G206D	DA	E001	Mercury, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.0002	0.00110
G206D	DA	E001	Molybdenum, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	0.0187	0.0440
G206D	DA	E001	pH (field)	SU	03/30/21 - 06/09/23	7	0	CI around mean	7.0/7.5	6.8/7.4
G206D	DA	E001	Radium 226 + Radium 228, total	pCi/L	03/30/21 - 06/09/23	8	0	CI around mean	0.0872	1.48
G206D	DA	E001	Selenium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.00350
G206D	DA	E001	Sulfate, total	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	152	387
G206D	DA	E001	Thallium, total	mg/L	03/30/21 - 06/09/23	7	100	All ND - Last	0.001	0.001
G206D	DA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/09/23	7	0	CI around mean	738	975
G209	UA	E001	Antimony, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.003	0.003
G209	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/09/23	19	45	CI around geomean	0.00114	0.0110
G209	UA	E001	Barium, total	mg/L	11/18/15 - 06/09/23	19	0	CI around mean	0.056	0.130
G209	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.001	0.001
G209	UA	E001	Boron, total	mg/L	11/18/15 - 06/09/23	26	57	CI around median	0.01	0.110
G209	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/09/23	19	98	Most recent sample	0.001	0.001
G209	UA	E001	Chloride, total	mg/L	11/18/15 - 06/09/23	26	0	CI around median	61	94.9
G209	UA	E001	Chromium, total	mg/L	11/18/15 - 06/09/23	19	68	Most recent sample	0.004	0.00960
G209	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/09/23	19	87	Most recent sample	0.002	0.00370
G209	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/09/23	27	3	CI around mean	0.398	0.552
G209	UA	E001	Lead, total	mg/L	11/18/15 - 06/09/23	19	86	CI around median	0.001	0.00590
G209	UA	E001	Lithium, total	mg/L	11/18/15 - 06/09/23	12	100	All ND - Last	0.02	0.02
G209	UA	E001	Mercury, total	mg/L	11/18/15 - 06/09/23	19	97	Most recent sample	0.0002	0.00110
G209	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/09/23	19	10	CI around mean	0.00148	0.0440

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G209	UA	E001	pH (field)	SU	11/18/15 - 06/09/23	30	0	CI around mean	7.0/7.2	6.8/7.4
G209	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/09/23	12	0	CI around mean	0.48	1.48
G209	UA	E001	Selenium, total	mg/L	11/18/15 - 06/09/23	19	58	CI around median	0.001	0.00350
G209	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/09/23	26	0	CB around T-S line	212	387
G209	UA	E001	Thallium, total	mg/L	11/18/15 - 06/09/23	19	94	Most recent sample	0.001	0.001
G209	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/09/23	26	0	CB around linear reg	802	975
G212	UA	E001	Antimony, total	mg/L	11/18/15 - 06/07/23	19	100	All ND - Last	0.003	0.003
G212	UA	E001	Arsenic, total	mg/L	11/18/15 - 06/07/23	19	83	CI around median	0.001	0.0110
G212	UA	E001	Barium, total	mg/L	11/18/15 - 06/07/23	19	0	CI around mean	0.0479	0.130
G212	UA	E001	Beryllium, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.001	0.001
G212	UA	E001	Boron, total	mg/L	11/18/15 - 06/07/23	26	82	CI around median	0.01	0.110
G212	UA	E001	Cadmium, total	mg/L	11/18/15 - 06/07/23	19	98	CI around median	0.001	0.001
G212	UA	E001	Chloride, total	mg/L	11/18/15 - 06/07/23	26	0	CB around linear reg	42.2	94.9
G212	UA	E001	Chromium, total	mg/L	11/18/15 - 06/07/23	19	84	Most recent sample	0.004	0.00960
G212	UA	E001	Cobalt, total	mg/L	11/18/15 - 06/07/23	19	97	Most recent sample	0.002	0.00370
G212	UA	E001	Fluoride, total	mg/L	11/18/15 - 06/07/23	26	13	CB around linear reg	0.156	0.552
G212	UA	E001	Lead, total	mg/L	11/18/15 - 06/07/23	19	83	CI around median	0.001	0.00590
G212	UA	E001	Lithium, total	mg/L	11/18/15 - 06/07/23	12	100	All ND - Last	0.02	0.02
G212	UA	E001	Mercury, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.0002	0.00110
G212	UA	E001	Molybdenum, total	mg/L	11/18/15 - 06/07/23	19	67	CI around median	0.001	0.0440
G212	UA	E001	pH (field)	SU	11/18/15 - 06/07/23	27	0	CI around mean	7.1/7.3	6.8/7.4
G212	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 06/07/23	12	0	CI around mean	0.316	1.48
G212	UA	E001	Selenium, total	mg/L	11/18/15 - 06/07/23	19	10	CB around linear reg	0.000213	0.00350
G212	UA	E001	Sulfate, total	mg/L	11/18/15 - 06/07/23	26	0	CI around mean	52.9	387
G212	UA	E001	Thallium, total	mg/L	11/18/15 - 06/07/23	19	97	CI around median	0.001	0.001
G212	UA	E001	Total Dissolved Solids	mg/L	11/18/15 - 06/07/23	26	0	CI around mean	378	975
G213	UA	E001	Antimony, total	mg/L	10/13/20 - 06/07/23	11	100	All ND - Last	0.003	0.003

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G213	UA	E001	Arsenic, total	mg/L	10/13/20 - 06/07/23	11	68	CI around median	0.001	0.0110
G213	UA	E001	Barium, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	0.0444	0.130
G213	UA	E001	Beryllium, total	mg/L	10/13/20 - 06/07/23	11	91	Most recent sample	0.001	0.001
G213	UA	E001	Boron, total	mg/L	10/13/20 - 06/07/23	11	88	CI around median	0.01	0.110
G213	UA	E001	Cadmium, total	mg/L	10/13/20 - 06/07/23	11	97	Most recent sample	0.001	0.001
G213	UA	E001	Chloride, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	41.1	94.9
G213	UA	E001	Chromium, total	mg/L	10/13/20 - 06/07/23	11	65	CI around median	0.004	0.00960
G213	UA	E001	Cobalt, total	mg/L	10/13/20 - 06/07/23	11	83	Most recent sample	0.002	0.00370
G213	UA	E001	Fluoride, total	mg/L	10/13/20 - 06/07/23	11	9	CI around mean	0.231	0.552
G213	UA	E001	Lead, total	mg/L	10/13/20 - 06/07/23	11	71	CI around median	0.001	0.00590
G213	UA	E001	Lithium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.02	0.02
G213	UA	E001	Mercury, total	mg/L	10/13/20 - 06/07/23	11	100	All ND - Last	0.0002	0.00110
G213	UA	E001	Molybdenum, total	mg/L	10/13/20 - 06/07/23	11	85	Most recent sample	0.001	0.0440
G213	UA	E001	pH (field)	SU	10/13/20 - 06/07/23	11	0	CI around mean	6.9/7.3	6.8/7.4
G213	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.399	1.48
G213	UA	E001	Selenium, total	mg/L	10/13/20 - 06/07/23	11	17	CI around median	0.001	0.00350
G213	UA	E001	Sulfate, total	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	54.8	387
G213	UA	E001	Thallium, total	mg/L	10/13/20 - 06/07/23	11	96	Most recent sample	0.001	0.001
G213	UA	E001	Total Dissolved Solids	mg/L	10/13/20 - 06/07/23	11	0	CI around mean	360	975
G215	UA	E001	Antimony, total	mg/L	11/24/15 - 06/01/23	19	97	CI around median	0.003	0.003
G215	UA	E001	Arsenic, total	mg/L	11/24/15 - 06/01/23	19	21	CI around geomean	0.00474	0.0110
G215	UA	E001	Barium, total	mg/L	11/24/15 - 06/01/23	19	0	CB around linear reg	0.0068	0.130
G215	UA	E001	Beryllium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.001
G215	UA	E001	Boron, total	mg/L	11/24/15 - 06/01/23	27	26	CB around linear reg	0.527	0.110
G215	UA	E001	Cadmium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.001
G215	UA	E001	Chloride, total	mg/L	11/24/15 - 06/01/23	27	0	CB around T-S line	69	94.9
G215	UA	E001	Chromium, total	mg/L	11/24/15 - 06/01/23	19	90	Most recent sample	0.004	0.00960

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G215	UA	E001	Cobalt, total	mg/L	11/24/15 - 06/01/23	19	94	CI around median	0.002	0.00370
G215	UA	E001	Fluoride, total	mg/L	11/24/15 - 06/01/23	27	15	CB around T-S line	0.216	0.552
G215	UA	E001	Lead, total	mg/L	11/24/15 - 06/01/23	19	83	CI around median	0.001	0.00590
G215	UA	E001	Lithium, total	mg/L	11/24/15 - 06/01/23	12	100	All ND - Last	0.02	0.02
G215	UA	E001	Mercury, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.0002	0.00110
G215	UA	E001	Molybdenum, total	mg/L	11/24/15 - 06/01/23	19	95	CI around median	0.001	0.0440
G215	UA	E001	pH (field)	SU	11/24/15 - 06/01/23	28	0	CI around mean	6.9/7.1	6.8/7.4
G215	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 06/01/23	12	0	CI around mean	0.415	1.48
G215	UA	E001	Selenium, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.001	0.00350
G215	UA	E001	Sulfate, total	mg/L	11/24/15 - 06/01/23	27	0	CB around linear reg	468	387
G215	UA	E001	Thallium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.001
G215	UA	E001	Total Dissolved Solids	mg/L	11/24/15 - 06/01/23	27	0	CB around linear reg	1,150	975
G217	UA	E001	Antimony, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.003	0.003
G217	UA	E001	Arsenic, total	mg/L	10/14/20 - 06/08/23	11	82	CI around median	0.001	0.0110
G217	UA	E001	Barium, total	mg/L	10/14/20 - 06/08/23	11	0	CI around mean	0.0926	0.130
G217	UA	E001	Beryllium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.001
G217	UA	E001	Boron, total	mg/L	10/14/20 - 06/08/23	11	74	CI around median	0.01	0.110
G217	UA	E001	Cadmium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.001
G217	UA	E001	Chloride, total	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	95.2	94.9
G217	UA	E001	Chromium, total	mg/L	10/14/20 - 06/08/23	11	68	Most recent sample	0.004	0.00960
G217	UA	E001	Cobalt, total	mg/L	10/14/20 - 06/08/23	11	86	Most recent sample	0.002	0.00370
G217	UA	E001	Fluoride, total	mg/L	10/14/20 - 06/08/23	11	14	CI around geomean	0.225	0.552
G217	UA	E001	Lead, total	mg/L	10/14/20 - 06/08/23	11	88	CI around median	0.001	0.00590
G217	UA	E001	Lithium, total	mg/L	02/15/23 - 06/08/23	2	100	Most recent sample	0.02	0.02
G217	UA	E001	Mercury, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.0002	0.00110
G217	UA	E001	Molybdenum, total	mg/L	10/14/20 - 06/08/23	11	85	Most recent sample	0.001	0.0440
G217	UA	E001	pH (field)	SU	10/14/20 - 06/08/23	11	0	CI around mean	6.8/7.0	6.8/7.4

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GMF GYPSUM STACK POND
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G217	UA	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/08/23	2	0	Most recent sample	0.574	1.48
G217	UA	E001	Selenium, total	mg/L	10/14/20 - 06/08/23	11	73	Most recent sample	0.001	0.00350
G217	UA	E001	Sulfate, total	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	323	387
G217	UA	E001	Thallium, total	mg/L	10/14/20 - 06/08/23	11	100	All ND - Last	0.001	0.001
G217	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 06/08/23	11	0	CB around linear reg	943	975
G218	UA	E001	Antimony, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.003	0.003
G218	UA	E001	Arsenic, total	mg/L	11/24/15 - 06/01/23	19	24	CI around geomean	0.00126	0.0110
G218	UA	E001	Barium, total	mg/L	11/24/15 - 06/01/23	19	0	CB around linear reg	0.093	0.130
G218	UA	E001	Beryllium, total	mg/L	11/24/15 - 06/01/23	19	97	CI around median	0.001	0.001
G218	UA	E001	Boron, total	mg/L	11/24/15 - 06/01/23	26	78	CI around median	0.01	0.110
G218	UA	E001	Cadmium, total	mg/L	11/24/15 - 06/01/23	19	98	CI around median	0.001	0.001
G218	UA	E001	Chloride, total	mg/L	11/24/15 - 06/01/23	26	0	CI around median	83	94.9
G218	UA	E001	Chromium, total	mg/L	11/24/15 - 06/01/23	19	81	CI around median	0.004	0.00960
G218	UA	E001	Cobalt, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.002	0.00370
G218	UA	E001	Fluoride, total	mg/L	11/24/15 - 06/01/23	27	13	CI around mean	0.283	0.552
G218	UA	E001	Lead, total	mg/L	11/24/15 - 06/01/23	19	90	CI around median	0.001	0.00590
G218	UA	E001	Lithium, total	mg/L	11/24/15 - 06/01/23	12	100	All ND - Last	0.02	0.02
G218	UA	E001	Mercury, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.0002	0.00110
G218	UA	E001	Molybdenum, total	mg/L	11/24/15 - 06/01/23	19	86	CI around median	0.001	0.0440
G218	UA	E001	pH (field)	SU	11/24/15 - 06/01/23	28	0	CI around mean	6.9/7.1	6.8/7.4
G218	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 06/01/23	12	0	CI around mean	0.628	1.48
G218	UA	E001	Selenium, total	mg/L	11/24/15 - 06/01/23	19	84	CI around median	0.001	0.00350
G218	UA	E001	Sulfate, total	mg/L	11/24/15 - 06/01/23	26	0	CB around linear reg	281	387
G218	UA	E001	Thallium, total	mg/L	11/24/15 - 06/01/23	19	100	All ND - Last	0.001	0.001
G218	UA	E001	Total Dissolved Solids	mg/L	11/24/15 - 06/01/23	27	0	CB around T-S line	756	975

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COFFEEN, IL

Notes:

Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value

HSU = hydrostratigraphic unit:

DA = Deep Aquifer

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

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G206	UA	E002	Antimony, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.003
G206	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/14/23	20	70	CI around median	0.001	0.0110
G206	UA	E002	Barium, total	mg/L	11/18/15 - 08/14/23	20	3	CI around mean	0.0471	0.130
G206	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.001
G206	UA	E002	Boron, total	mg/L	11/18/15 - 08/14/23	27	78	CI around median	0.01	0.110
G206	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.001	0.001
G206	UA	E002	Chloride, total	mg/L	11/18/15 - 08/14/23	27	0	CB around linear reg	18.6	94.9
G206	UA	E002	Chromium, total	mg/L	11/18/15 - 08/14/23	20	84	CB around T-S line	0.0039	0.00960
G206	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/14/23	20	97	CI around median	0.002	0.00370
G206	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/14/23	28	5	CI around mean	0.38	0.552
G206	UA	E002	Lead, total	mg/L	11/18/15 - 08/14/23	20	93	CI around median	0.001	0.00590
G206	UA	E002	Lithium, total	mg/L	11/18/15 - 08/14/23	13	100	All ND - Last	0.003	0.02
G206	UA	E002	Mercury, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.0002	0.00110
G206	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/14/23	20	64	CI around median	0.001	0.0440
G206	UA	E002	pH (field)	SU	11/18/15 - 08/14/23	29	0	CI around median	7.0/7.2	6.8/7.4
G206	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/14/23	13	0	CI around mean	0.432	1.48
G206	UA	E002	Selenium, total	mg/L	11/18/15 - 08/14/23	20	81	CI around median	0.001	0.00350
G206	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/14/23	27	0	CI around mean	122	387
G206	UA	E002	Thallium, total	mg/L	11/18/15 - 08/14/23	20	100	All ND - Last	0.002	0.001
G206	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/14/23	27	0	CB around T-S line	469	975
G206D	DA	E002	Antimony, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.003
G206D	DA	E002	Arsenic, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.00165	0.0110
G206D	DA	E002	Barium, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.0874	0.130
G206D	DA	E002	Beryllium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.001
G206D	DA	E002	Boron, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.112	0.110
G206D	DA	E002	Cadmium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.001
G206D	DA	E002	Chloride, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	2.9	94.9

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 GMF GYPSUM STACK POND
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G206D	DA	E002	Chromium, total	mg/L	03/30/21 - 08/14/23	8	88	CI around median	0.0015	0.00960
G206D	DA	E002	Cobalt, total	mg/L	03/30/21 - 08/14/23	8	88	CI around median	0.001	0.00370
G206D	DA	E002	Fluoride, total	mg/L	03/30/21 - 08/14/23	8	0	CI around mean	0.619	0.552
G206D	DA	E002	Lead, total	mg/L	03/30/21 - 08/14/23	8	75	CI around median	0.001	0.00590
G206D	DA	E002	Lithium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.003	0.02
G206D	DA	E002	Mercury, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.0002	0.00110
G206D	DA	E002	Molybdenum, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	0.0116	0.0440
G206D	DA	E002	pH (field)	SU	03/30/21 - 08/14/23	8	0	CI around mean	7.0/7.4	6.8/7.4
G206D	DA	E002	Radium 226 + Radium 228, total	pCi/L	03/30/21 - 08/14/23	9	0	CI around mean	0.164	1.48
G206D	DA	E002	Selenium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.001	0.00350
G206D	DA	E002	Sulfate, total	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	-148	387
G206D	DA	E002	Thallium, total	mg/L	03/30/21 - 08/14/23	8	100	All ND - Last	0.002	0.001
G206D	DA	E002	Total Dissolved Solids	mg/L	03/30/21 - 08/14/23	8	0	CB around linear reg	476	975
G209	UA	E002	Antimony, total	mg/L	11/18/15 - 08/14/23	20	97	CI around median	0.003	0.003
G209	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/14/23	20	44	CI around geomean	0.00113	0.0110
G209	UA	E002	Barium, total	mg/L	11/18/15 - 08/14/23	20	0	CI around mean	0.0566	0.130
G209	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/14/23	20	97	Most recent sample	0.001	0.001
G209	UA	E002	Boron, total	mg/L	11/18/15 - 08/14/23	27	58	CI around median	0.01	0.110
G209	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/14/23	20	98	Most recent sample	0.001	0.001
G209	UA	E002	Chloride, total	mg/L	11/18/15 - 08/14/23	27	0	CI around median	60	94.9
G209	UA	E002	Chromium, total	mg/L	11/18/15 - 08/14/23	20	69	CI around median	0.004	0.00960
G209	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/14/23	20	88	CI around median	0.002	0.00370
G209	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/14/23	28	2	CI around mean	0.4	0.552
G209	UA	E002	Lead, total	mg/L	11/18/15 - 08/14/23	20	86	CI around median	0.001	0.00590
G209	UA	E002	Lithium, total	mg/L	11/18/15 - 08/14/23	13	92	CI around median	0.01	0.02
G209	UA	E002	Mercury, total	mg/L	11/18/15 - 08/14/23	20	97	Most recent sample	0.0002	0.00110
G209	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/14/23	20	9	CI around mean	0.00153	0.0440

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COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G209	UA	E002	pH (field)	SU	11/18/15 - 08/14/23	31	0	CI around mean	7.0/7.2	6.8/7.4
G209	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/14/23	13	0	CI around mean	0.483	1.48
G209	UA	E002	Selenium, total	mg/L	11/18/15 - 08/14/23	20	59	CI around median	0.001	0.00350
G209	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/14/23	27	0	CB around T-S line	207	387
G209	UA	E002	Thallium, total	mg/L	11/18/15 - 08/14/23	20	94	CI around median	0.001	0.001
G209	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/14/23	27	0	CB around linear reg	809	975
G212	UA	E002	Antimony, total	mg/L	11/18/15 - 08/10/23	20	100	All ND - Last	0.001	0.003
G212	UA	E002	Arsenic, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.001	0.0110
G212	UA	E002	Barium, total	mg/L	11/18/15 - 08/10/23	20	0	CI around mean	0.0482	0.130
G212	UA	E002	Beryllium, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.001	0.001
G212	UA	E002	Boron, total	mg/L	11/18/15 - 08/10/23	27	82	CI around median	0.01	0.110
G212	UA	E002	Cadmium, total	mg/L	11/18/15 - 08/10/23	20	98	CI around median	0.001	0.001
G212	UA	E002	Chloride, total	mg/L	11/18/15 - 08/10/23	27	0	CB around linear reg	42.6	94.9
G212	UA	E002	Chromium, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.004	0.00960
G212	UA	E002	Cobalt, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.002	0.00370
G212	UA	E002	Fluoride, total	mg/L	11/18/15 - 08/10/23	27	13	CI around mean	0.276	0.552
G212	UA	E002	Lead, total	mg/L	11/18/15 - 08/10/23	20	84	CI around median	0.001	0.00590
G212	UA	E002	Lithium, total	mg/L	11/18/15 - 08/10/23	13	100	All ND - Last	0.003	0.02
G212	UA	E002	Mercury, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.0002	0.00110
G212	UA	E002	Molybdenum, total	mg/L	11/18/15 - 08/10/23	20	68	CI around median	0.001	0.0440
G212	UA	E002	pH (field)	SU	11/18/15 - 08/10/23	28	0	CI around mean	7.1/7.3	6.8/7.4
G212	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/18/15 - 08/10/23	13	0	CI around mean	0.34	1.48
G212	UA	E002	Selenium, total	mg/L	11/18/15 - 08/10/23	20	12	CB around linear reg	0.000121	0.00350
G212	UA	E002	Sulfate, total	mg/L	11/18/15 - 08/10/23	27	0	CI around mean	53	387
G212	UA	E002	Thallium, total	mg/L	11/18/15 - 08/10/23	20	97	CI around median	0.001	0.001
G212	UA	E002	Total Dissolved Solids	mg/L	11/18/15 - 08/10/23	27	0	CI around mean	380	975
G213	UA	E002	Antimony, total	mg/L	10/13/20 - 08/10/23	12	100	All ND - Last	0.001	0.003

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G213	UA	E002	Arsenic, total	mg/L	10/13/20 - 08/10/23	12	69	CI around median	0.001	0.0110
G213	UA	E002	Barium, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	0.0452	0.130
G213	UA	E002	Beryllium, total	mg/L	10/13/20 - 08/10/23	12	92	Most recent sample	0.001	0.001
G213	UA	E002	Boron, total	mg/L	10/13/20 - 08/10/23	12	89	CI around median	0.01	0.110
G213	UA	E002	Cadmium, total	mg/L	10/13/20 - 08/10/23	12	97	Most recent sample	0.001	0.001
G213	UA	E002	Chloride, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	41.4	94.9
G213	UA	E002	Chromium, total	mg/L	10/13/20 - 08/10/23	12	62	CI around median	0.004	0.00960
G213	UA	E002	Cobalt, total	mg/L	10/13/20 - 08/10/23	12	83	CI around median	0.002	0.00370
G213	UA	E002	Fluoride, total	mg/L	10/13/20 - 08/10/23	12	8	CI around mean	0.241	0.552
G213	UA	E002	Lead, total	mg/L	10/13/20 - 08/10/23	12	71	CI around median	0.001	0.00590
G213	UA	E002	Lithium, total	mg/L	02/15/23 - 08/10/23	3	67	Most recent sample	0.0034	0.02
G213	UA	E002	Mercury, total	mg/L	10/13/20 - 08/10/23	12	100	All ND - Last	0.0002	0.00110
G213	UA	E002	Molybdenum, total	mg/L	10/13/20 - 08/10/23	12	86	CI around median	0.001	0.0440
G213	UA	E002	pH (field)	SU	10/13/20 - 08/10/23	12	0	CI around mean	6.9/7.3	6.8/7.4
G213	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 08/10/23	3	0	Most recent sample	0.568	1.48
G213	UA	E002	Selenium, total	mg/L	10/13/20 - 08/10/23	12	21	CI around median	0.001	0.00350
G213	UA	E002	Sulfate, total	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	54.5	387
G213	UA	E002	Thallium, total	mg/L	10/13/20 - 08/10/23	12	96	CI around median	0.001	0.001
G213	UA	E002	Total Dissolved Solids	mg/L	10/13/20 - 08/10/23	12	0	CI around mean	364	975
G215	UA	E002	Antimony, total	mg/L	11/24/15 - 08/10/23	20	97	CI around median	0.003	0.003
G215	UA	E002	Arsenic, total	mg/L	11/24/15 - 08/10/23	20	21	CI around geomean	0.00446	0.0110
G215	UA	E002	Barium, total	mg/L	11/24/15 - 08/10/23	20	0	CB around linear reg	0.00689	0.130
G215	UA	E002	Beryllium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.001
G215	UA	E002	Boron, total	mg/L	11/24/15 - 08/10/23	28	26	CB around linear reg	0.557	0.110
G215	UA	E002	Cadmium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.001
G215	UA	E002	Chloride, total	mg/L	11/24/15 - 08/10/23	28	0	CB around T-S line	79.9	94.9
G215	UA	E002	Chromium, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.004	0.00960

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G215	UA	E002	Cobalt, total	mg/L	11/24/15 - 08/10/23	20	94	CI around median	0.002	0.00370
G215	UA	E002	Fluoride, total	mg/L	11/24/15 - 08/10/23	28	15	CB around linear reg	0.136	0.552
G215	UA	E002	Lead, total	mg/L	11/24/15 - 08/10/23	20	84	CI around median	0.001	0.00590
G215	UA	E002	Lithium, total	mg/L	11/24/15 - 08/10/23	13	92	CI around median	0.01	0.02
G215	UA	E002	Mercury, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.0002	0.00110
G215	UA	E002	Molybdenum, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.0440
G215	UA	E002	pH (field)	SU	11/24/15 - 08/10/23	30	0	CI around mean	6.9/7.1	6.8/7.4
G215	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 08/10/23	13	0	CI around mean	0.438	1.48
G215	UA	E002	Selenium, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.00350
G215	UA	E002	Sulfate, total	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	474	387
G215	UA	E002	Thallium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.002	0.001
G215	UA	E002	Total Dissolved Solids	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	1,170	975
G217	UA	E002	Antimony, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.003
G217	UA	E002	Arsenic, total	mg/L	10/14/20 - 08/10/23	12	83	CI around median	0.001	0.0110
G217	UA	E002	Barium, total	mg/L	10/14/20 - 08/10/23	12	0	CI around mean	0.0937	0.130
G217	UA	E002	Beryllium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.001
G217	UA	E002	Boron, total	mg/L	10/14/20 - 08/10/23	12	74	CI around median	0.01	0.110
G217	UA	E002	Cadmium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.001	0.001
G217	UA	E002	Chloride, total	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	97.8	94.9
G217	UA	E002	Chromium, total	mg/L	10/14/20 - 08/10/23	12	70	CI around median	0.004	0.00960
G217	UA	E002	Cobalt, total	mg/L	10/14/20 - 08/10/23	12	87	CI around median	0.002	0.00370
G217	UA	E002	Fluoride, total	mg/L	10/14/20 - 08/10/23	12	13	CI around geomean	0.238	0.552
G217	UA	E002	Lead, total	mg/L	10/14/20 - 08/10/23	12	89	CI around median	0.001	0.00590
G217	UA	E002	Lithium, total	mg/L	02/15/23 - 08/10/23	3	67	Most recent sample	0.0036	0.02
G217	UA	E002	Mercury, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.0002	0.00110
G217	UA	E002	Molybdenum, total	mg/L	10/14/20 - 08/10/23	12	86	CI around median	0.001	0.0440
G217	UA	E002	pH (field)	SU	10/14/20 - 08/10/23	12	0	CI around mean	6.8/7.0	6.8/7.4

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COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G217	UA	E002	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 08/10/23	3	0	Most recent sample	0.878	1.48
G217	UA	E002	Selenium, total	mg/L	10/14/20 - 08/10/23	12	74	Most recent sample	0.001	0.00350
G217	UA	E002	Sulfate, total	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	342	387
G217	UA	E002	Thallium, total	mg/L	10/14/20 - 08/10/23	12	100	All ND - Last	0.002	0.001
G217	UA	E002	Total Dissolved Solids	mg/L	10/14/20 - 08/10/23	12	0	CB around linear reg	987	975
G218	UA	E002	Antimony, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.001	0.003
G218	UA	E002	Arsenic, total	mg/L	11/24/15 - 08/10/23	20	23	CI around geomean	0.00129	0.0110
G218	UA	E002	Barium, total	mg/L	11/24/15 - 08/10/23	20	0	CB around linear reg	0.0867	0.130
G218	UA	E002	Beryllium, total	mg/L	11/24/15 - 08/10/23	20	97	CI around median	0.001	0.001
G218	UA	E002	Boron, total	mg/L	11/24/15 - 08/10/23	27	78	CI around median	0.01	0.110
G218	UA	E002	Cadmium, total	mg/L	11/24/15 - 08/10/23	20	98	CI around median	0.001	0.001
G218	UA	E002	Chloride, total	mg/L	11/24/15 - 08/10/23	27	0	CI around median	83	94.9
G218	UA	E002	Chromium, total	mg/L	11/24/15 - 08/10/23	20	81	CI around median	0.004	0.00960
G218	UA	E002	Cobalt, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.002	0.00370
G218	UA	E002	Fluoride, total	mg/L	11/24/15 - 08/10/23	28	12	CI around mean	0.284	0.552
G218	UA	E002	Lead, total	mg/L	11/24/15 - 08/10/23	20	91	CI around median	0.001	0.00590
G218	UA	E002	Lithium, total	mg/L	11/24/15 - 08/10/23	13	92	CI around median	0.01	0.02
G218	UA	E002	Mercury, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.0002	0.00110
G218	UA	E002	Molybdenum, total	mg/L	11/24/15 - 08/10/23	20	86	CI around median	0.001	0.0440
G218	UA	E002	pH (field)	SU	11/24/15 - 08/10/23	29	0	CI around mean	6.9/7.1	6.8/7.4
G218	UA	E002	Radium 226 + Radium 228, total	pCi/L	11/24/15 - 08/10/23	13	0	CI around mean	0.6	1.48
G218	UA	E002	Selenium, total	mg/L	11/24/15 - 08/10/23	20	84	CI around median	0.001	0.00350
G218	UA	E002	Sulfate, total	mg/L	11/24/15 - 08/10/23	27	0	CB around linear reg	295	387
G218	UA	E002	Thallium, total	mg/L	11/24/15 - 08/10/23	20	100	All ND - Last	0.002	0.001
G218	UA	E002	Total Dissolved Solids	mg/L	11/24/15 - 08/10/23	28	0	CB around linear reg	855	975

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COFFEEN, IL

Notes:

Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value

HSU = hydrostratigraphic unit:

DA = Deep Aquifer

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