



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

January 30, 2024

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

Re: Vermilion North Ash Pond/Old East Ash Pond (IEPA ID: W1838000002-01, 03) 2023 Annual Consolidated Report

Dear Mr. LeCrone:

In accordance with 35 IAC § 845.550, Dynegy Midwest Generation, LLC (DMG) is submitting the annual consolidated report for the Vermilion North Ash Pond/Old East Ash Pond (IEPA ID: W1838000002-01, 03), as enclosed.

Sincerely,

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

Dianna Tickner
Sr. Director Decommissioning & Demolition

Enclosures

Annual Consolidated Report
Dynergy Midwest Generation, LLC
Vermilion Power Plant
North Ash Pond/Old East Ash Pond; W1838000002-01, 03

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

Section 1

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

Section 2

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

- A) Annual hazard potential classification certification
- B) Annual structural stability assessment certification
- C) Annual safety factor assessment certification
- D) Inflow design flood control system plan certification

Section 3

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

Section 1

Annual CCR Fugitive Dust Control Report

Annual CCR Fugitive Dust Control Report for Vermilion Power Plant

Prepared for:

**Owner/Operator:
Dynergy Midwest Generation, LLC
1500 Eastport Plaza Drive
Collinsville, IL 62234**

**Facility Address:
Vermilion Power Plant
10188 East 2150 North Rd
Oakwood, IL 61858
IEPA ID # W183800002 - 01,03,04**

**Report
Completed
January 2024**

**Vermilion Power Plant
ANNUAL CCR FUGITIVE DUST CONTROL REPORT**

Reporting Year: 2023

Completed by: *Shannon Lechner*
Name

Sr. Director, Decommissioning and Demolition
Title

This Annual CCR Fugitive Dust Control Report has been prepared for the Vermilion Power Plant in accordance with 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 Vermilion Power Plant CCR Fugitive Dust Control Plan (Plan), the following control measures were used to manage the CCR fugitive dust from becoming airborne at the facility during the reporting year:

Table: Control Measures for CCR Management in CCR Surface Impoundments

CCR Activity	CCR Fugitive Dust Control Measures	Applicability and Appropriateness of Control Measures
Management of CCR in the facility's CCR unit	Water dry CCR material disturbed during routine maintenance, as necessary.	Wetting CCR reduces the potential for CCR fugitive dust generation during handling of CCR during routine maintenance if handling is required.
	Water areas of exposed CCR in CCR surface impoundments, as necessary.	Water will be applied to areas of exposed CCR to maintain moisture content to minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions.
	Allow naturally occurring grass vegetation to develop in areas of exposed CCR in CCR surface impoundments, as necessary.	Vegetation provides a wind screen and/or cover to reduce wind entrainment of CCR.
	Apply chemical dust suppressant on areas of exposed CCR in CCR surface impoundments, as necessary.	Mixing an appropriate chemical dust suppressant with water and applying to areas of exposed CCR will minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions.

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. The Vermilion Power Plant ceased to operate in 2011.

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.

Section 2: Record of Citizen Complaints

In the event the owner or operator of the facility receives a citizen complaint involving a CCR fugitive dust event at the facility, relevant information about the complaint will be logged.

Information that will be recorded includes, as applicable:• Date/Time the complaint is received.

- Date/Time the complaint is received
- Date/Time and duration of the CCR fugitive dust event
- Description of the nature of the CCR fugitive dust event
- Name of the citizen entering the complaint (if provided)
- Address & phone number of citizen entering the complaint (if provided)
- Name of the personnel who took the complaint
- All actions taken to assess and resolve the complaint.

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

Section 2

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

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

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

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

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

ANNUAL INSPECTION BY A QUALIFIED PROFESSIONAL ENGINEER

35 IAC § 845.540

(b)(1) The CCR surface impoundment must be inspected on an annual basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR surface impoundment is consistent with recognized and generally accepted engineering standards. The inspection must, at a minimum, include:

- A) A review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections);
- B) A visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;
- C) A visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation;
- D) The annual hazard potential classification certification, if applicable (see Section 845.440);
- E) The annual structural stability assessment certification, if applicable (see Section 845.450);
- F) The annual safety factor assessment certification, if applicable (see Section 845.460); and
- G) The inflow design flood control system plan certification (see Section 845.510(c)).

SITE INFORMATION

Site Name / Address / Date of Inspection	Vermilion Power Station Vermilion County, Illinois 61858 10/11/2023
Operator Name / Address	Dynegy Midwest Generation, LLC 1500 Eastport Plaza Drive, Collinsville, IL 62234
CCR unit	North Ash Pond

INSPECTION REPORT 35 IAC § 845.540

(b)(1)(D) The annual hazard potential classification certification, if applicable (see Section 845.440).	Based on a review of the CCR unit's annual hazard potential classification, the unit is classified as a Class II CCR surface impoundment.
(b)(2)(A) Any changes in geometry of the structure since the previous annual inspection.	Based on a review of the CCR unit's records and visual observation during the on-site inspection, no changes in geometry of the structure have taken place since the previous annual inspection.
(b)(2)(B) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	There is currently no active instrumentation at the site
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 700 acre-feet
(b)(2)(E) The approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Approximately 500 acre-feet
(b)(2)(F) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Based on a review of the CCR unit's records and visual observation during the on-site inspection, there was no appearance of an actual or potential structural weakness of the CCR unit, nor an existing condition that is disrupting or would disrupt the operation and safety of the unit.

INSPECTION REPORT 35 IAC § 845.540

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

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

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



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

Site Name: Vermilion Power Station

CCR Unit: North Ash Pond

35 IAC § 845.540 (b)(2)(B)		
Instrument ID #	Type	Maximum recorded reading since previous annual inspection (ft)
No active instrumentation		

35 IAC § 845.540 (b)(2)(C)						
Since previous inspection:	Approximate Depth / Elevation					
	Elevation (ft)			Depth (ft)		
	Minimum	Present	Maximum	Minimum	Present	Maximum
Impounded Water		585			8	
CCR	580		600			20

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	Vermilion Power Station Vermilion County, Illinois 61858 10/11/2023
Operator Name / Address	Dynegy Midwest Generation, LLC 1500 Eastport Plaza Drive, Collinsville, IL 62234
CCR unit	Old East Ash Pond

INSPECTION REPORT 35 IAC § 845.540

(b)(1)(D) The annual hazard potential classification certification, if applicable (see Section 845.440).	Based on a review of the CCR unit's annual hazard potential classification, the unit is classified as a Class II CCR surface impoundment.
(b)(2)(A) Any changes in geometry of the structure since the previous annual inspection.	Based on a review of the CCR unit's records and visual observation during the on-site inspection, no changes in geometry of the structure have taken place since the previous annual inspection.
(b)(2)(B) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	There is currently no active instrumentation at the site
b)(2)(C) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;	See the attached.
b)(2)(D) The storage capacity of the impounding structure at the time of the inspection	Approximately 800 acre-feet.
(b)(2)(E) The approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Approximately 700 acre-feet
(b)(2)(F) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Based on a review of the CCR unit's records and visual observation during the on-site inspection, there was no appearance of an actual or potential structural weakness of the CCR unit, nor an existing condition that is disrupting or would disrupt the operation and safety of the unit.

INSPECTION REPORT 35 IAC § 845.540

(b)(2)(G) Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.	Based on a review of the CCR unit's records and visual observation during the on-site inspection, no other changes which may have affected the stability or operation of the CCR unit have taken place since the previous annual inspection.
(b)(1)(G) The inflow design flood control system plan certification (see Section 845.510(c))	Unit has no inflow or water impounded.

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.



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

Site Name: Vermilion Power Station

CCR Unit: Old East Ash Pond

35 IAC § 845.540 (b)(2)(B)		
Instrument ID #	Type	Maximum recorded reading since previous annual inspection (ft)
No active instrumentation		

35 IAC § 845.540 (b)(2)(C)						
Since previous inspection:	Approximate Depth / Elevation					
	Elevation (ft)			Depth (ft)		
	Minimum	Present	Maximum	Minimum	Present	Maximum
Impounded Water		0			0	
CCR	580		630			50

Section 3

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

Prepared for
Dynegy Midwest Generation, LLC

Date
January 31, 2024

Project No.
1940103649-014

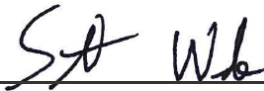
**2023 35 I.A.C. § 845 ANNUAL
GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS
IEPA ID NO. W1838000002-01 AND
W1838000002-03**

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

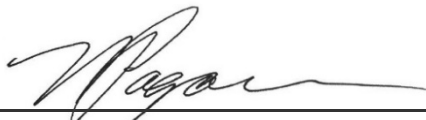
Project name **Vermilion Power Plant North Ash Pond and Old East Ash Pond**
Project no. **1940103649-014**
Recipient **Dynegy Midwest Generation, LLC**
Document type **Annual Groundwater Monitoring and Corrective Action Report**
Version **FINAL**
Date **January 31, 2024**
Prepared by **Scott S. Woods**
Checked by **Lauren D. Cook**
Approved by **Nikki M. Pagano, PE, 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 Groundwater Unit, Quarters 2-3, 2023

Figure 4 Potentiometric Surface Map, May 19, 2023

Figure 5 Potentiometric Surface Map, June 19, 2023

Figure 6 Potentiometric Surface Map, July 19, 2023

Figure 7 Potentiometric Surface Map, August 19, 2023

Figure 8 Potentiometric Surface Map, September 18, 2023

Figure 9 Potentiometric Surface Map, October 26, 2023

Figure 10 Potentiometric Surface Map, November 27, 2023

Figure 11 Potentiometric Surface Map, December 14, 2023

ATTACHMENTS

Attachment A Groundwater Elevation Data

Attachment B 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
CCA	compliance commitment agreement
CCR	coal combustion residuals
CMA	assessment of corrective measures
DMG	Dynegy Midwest Generation, LLC
E001	Quarter 2, 2023 sampling event
E002	Quarter 3, 2023 sampling event
E003	Quarter 4, 2023 sampling event
GWPS	groundwater protection standard
ID	identification
IEPA	Illinois Environmental Protection Agency
NAP/OEAP	North Ash Pond and Old East Ash Pond
No.	number
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SI	surface impoundment
SSI	statistically significant increase
TDS	total dissolved solids
VPP	Vermilion Power Plant

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 North Ash Pond and Old East Ash Pond (NAP/OEAP) located at Vermilion Power Plant (VPP) near Oakwood, Illinois. The NAP/OEAP is recognized by coal combustion residuals (CCR) unit identification (ID) number (No.) 910/911 and Illinois Environmental Protection Agency (IEPA) ID No. W1838000002-01 and W1838000002-03.

As required by 35 I.A.C. § 845, an operating permit application for the NAP/OEAP was submitted by Dynegy Midwest Generation (DMG), LLC to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. Consistent with compliance commitment agreements (CCAs) entered into between other facility owners and IEPA on December 28, 2022, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the NAP/OEAP 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 NAP/OEAP 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:

- Boron in 03R, 04, 05, 07R, 08R, 17, 36, 40, and 41
- Lithium in 04, 05, 07R, 08R, 36, and 40
- Molybdenum in 03R, 07R, 08R, 36
- Sulfate in 03R, 07R, 17, 36, and 40
- Total dissolved solids (TDS) in 07R, 17, 36, and 40

An Alternative Source Demonstration (ASD) was not completed for the GWPS exceedances listed above. Therefore, these exceedances will be addressed in accordance with 35 I.A.C. § 845.660. The assessment of corrective measures (CMA) was submitted on January 28, 2022 and is pending approval (Geosyntec Consultants, 2022; Gradient, 2022). 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

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.

compliance monitoring wells were also evaluated quarterly for statistical exceedances over background levels (**Attachment B**).

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of DMG, to provide the information required by 35 I.A.C. § 845.610(e) for the NAP/OEAP located at VPP near Oakwood, 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 11**).
- D. In addition to all the monitoring data obtained under 35 I.A.C. §§ 845.600-680, a summary including the number of groundwater samples that were collected for analysis for each background and [downgradient well] compliance monitoring wells, and the dates the samples were collected (**Section 3.1** and **Table A**).
- E. A narrative discussion of any statistically significant increases (SSIs) over background levels for the constituents listed in 35 I.A.C. § 845.600 (**Section 3.3** and **Attachment B**).
- F. Other information required to be included in the annual report as specified in 35 I.A.C. §§ 845.600-680.

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

- A. Specify whether groundwater monitoring data shows an SSI over background concentrations for one or more constituents listed in 35 I.A.C. § 845.600.
- B. Identify those constituents having an SSI over background concentrations and the names of the monitoring wells associated with the SSI(s).
- C. Specify whether there have been any exceedances of the GWPS for one or more constituents listed in 35 I.A.C. § 845.600.

- D. Identify those constituents with exceedances of the GWPS in 35 I.A.C. § 845.600 and the names of the monitoring wells associated with the exceedance.
- E. Provide the date when the assessment of corrective measures was initiated for the CCR SI.
- F. Provide the date when the assessment of corrective measures was completed for the CCR SI.
- G. Specify whether a remedy was selected under 35 I.A.C. § 845.670 during the current annual reporting period, and if so, the date of remedy selection.
- H. Specify whether remedial activities were initiated or are ongoing under 35 I.A.C. § 845.780 during the current annual reporting period.

This report provides the required information for the NAP/OEAP for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

An operating permit application for the NAP/OEAP was submitted by DMG to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. Consistent with the CCA entered into between other facility owners and IEPA, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the NAP/OEAP commenced in the second quarter of 2023. After the NAP/OEAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

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

As noted in the **Executive Summary** and **Section 3.2**, GWPS exceedances were determined for the NAP/OEAP 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 submitted January 28, 2022 and is pending approval. 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 2022

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 May through December 2023 are included in **Figures 4 through 11**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 2023⁴. 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, 2023a; Ramboll, 2023b); therefore, these reports are not attached to this annual report to avoid reproduction of lengthy data transmittals that have been previously provided in hardcopy. Analytical data received after December 31, 2023 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

³ Groundwater elevation data was not collected in April 2023.

⁴ 07R was unable to be sampled during the September 2023 sampling event due to an obstruction encountered above the screen interval and the presence of organic material clogging the sample tubing. 103 was not sampled during June 2023 sampling event.

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 ⁴	ASD Completion Date	Required CMA Initiation Date ⁵
E001	June 19 - 21, 2023	August 3, 2023	October 2, 2023	NA	NA
E002 ⁶	September 19 - 26, 2023	November 16, 2023	January 15, 2023	TBD	TBD
E003	November 27 - 29, 2023	January 9, 2024	TBD	TBD	TBD

Notes:

ASD: Alternative Source Demonstration

CMA: Corrective Measures Assessment

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: 21, 42, 43, 101, 103

³ The following compliance wells were sampled for each event: 02, 03R, 04, 05, 07R, 08R, 17, 20, 34, 36, 37, 38, 40, and 41

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 may be incorporated into the CMA on a case by case basis, as opposed to generating a new CMA.

⁶ 07R was unable to be sampled in Quarter 3 due to an obstruction encountered above the screen interval and the presence of organic material clogging the sample tubing.
 103 was unable to be sampled in Quarter 2 due to a pump malfunction.

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:

- Boron in 03R, 04, 05, 07R, 08R, 17, 36, 40, and 41
- Lithium in 04, 05, 07R, 08R, 36, and 40
- Molybdenum in 03R, 07R, 08R, 36
- Sulfate in 03R, 07R, 17, 36, and 40
- TDS in 07R, 17, 36, and 40

As allowed in 35 I.A.C. § 845.650(e), an ASD was evaluated for the determined exceedances of the GWPSs summarized above. An ASD has not been completed. The exceedances listed above will be addressed in accordance with 35 I.A.C. § 845.660. The CMA was submitted on January 28, 2022 and is pending approval. Because the CMA is in progress, a remedy was not selected under 35 I.A.C. § 845.670 and remedial activities were not 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 quarterly for statistical exceedances over background levels for the constituents listed in 35 I.A.C. § 845.600. **Attachment B** 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 NAP/OEAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

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. Pressure transducers were refurbished and redeployed in January 2024.

5. KEY ACTIVITIES PLANNED FOR 2023

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 NAP/OEAP. After the NAP/OEAP 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 was submitted on January 28, 2022 and is pending approval.

6. REFERENCES

Geosyntec Consultants, 2022. *Construction Permit Application*. Vermilion Power Plant, Old East Ash Pond Area, North Ash Pond Area, Oakwood, Illinois. Dynegy Midwest Generation, LLC. January 2022.

Gradient, 2022. Closure Alternative Analysis and Corrective Measures Assessment/Corrective Action Alternatives Analysis for the North Ash Pond/Old East Ash Pond (NAP/OEAP) and New East Ash Pond (NEAP). Vermilion Power Plant, Oakwood, Illinois. January 28, 2022.

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*. Vermilion Power Plant, North Ash Pond and Old East Ash Pond, Oakwood, Illinois. Dynegy Midwest Generation, LLC. October 25, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 2, North Ash Pond (NAP) and Old East Ash Pond (OEAP), Vermilion Power Plant, Oakwood, Illinois. October 2, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023b. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 3, North Ash Pond (NAP) and Old East Ash Pond (OEAP), Vermilion Power Plant, Oakwood, Illinois. January 15, 2023.

TABLES

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
21	Background	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
21	Background	E001	06/20/2023	Arsenic, total	0.0625	mg/L
21	Background	E001	06/20/2023	Barium, total	0.118	mg/L
21	Background	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
21	Background	E001	06/20/2023	Boron, total	0.859	mg/L
21	Background	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
21	Background	E001	06/20/2023	Calcium, total	63.2	mg/L
21	Background	E001	06/20/2023	Chloride, total	2.00	mg/L
21	Background	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
21	Background	E001	06/20/2023	Cobalt, total	0.0001 U	mg/L
21	Background	E001	06/20/2023	Dissolved Oxygen	1.04	mg/L
21	Background	E001	06/20/2023	Fluoride, total	1.16	mg/L
21	Background	E001	06/20/2023	Lead, total	0.004 U	mg/L
21	Background	E001	06/20/2023	Lithium, total	0.0022 J	mg/L
21	Background	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
21	Background	E001	06/20/2023	Molybdenum, total	0.0038 J	mg/L
21	Background	E001	06/20/2023	Oxidation Reduction Potential	-67.0	mV
21	Background	E001	06/20/2023	pH (field)	7.0	SU
21	Background	E001	06/20/2023	Radium 226 + Radium 228, total	0.465 <0	pCi/L
21	Background	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
21	Background	E001	06/20/2023	Specific Conductance @ 25C (field)	715	micromhos/cm
21	Background	E001	06/20/2023	Sulfate, total	14.0 J+	mg/L
21	Background	E001	06/20/2023	Temperature	13.1	degrees C
21	Background	E001	06/20/2023	Thallium, total	0.001 U	mg/L
21	Background	E001	06/20/2023	Total Dissolved Solids	375	mg/L
21	Background	E001	06/20/2023	Turbidity, field	6.20	NTU
42	Background	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
42	Background	E001	06/20/2023	Arsenic, total	0.0277	mg/L
42	Background	E001	06/20/2023	Barium, total	0.142	mg/L
42	Background	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
42	Background	E001	06/20/2023	Boron, total	0.808	mg/L
42	Background	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
42	Background	E001	06/20/2023	Calcium, total	111	mg/L
42	Background	E001	06/20/2023	Chloride, total	14.0	mg/L
42	Background	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
42	Background	E001	06/20/2023	Cobalt, total	0.0002 J	mg/L
42	Background	E001	06/20/2023	Dissolved Oxygen	0.660	mg/L
42	Background	E001	06/20/2023	Fluoride, total	0.540	mg/L
42	Background	E001	06/20/2023	Lead, total	0.004 U	mg/L
42	Background	E001	06/20/2023	Lithium, total	0.00460	mg/L
42	Background	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
42	Background	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
42	Background	E001	06/20/2023	Oxidation Reduction Potential	-122	mV
42	Background	E001	06/20/2023	pH (field)	7.3	SU
42	Background	E001	06/20/2023	Radium 226 + Radium 228, total	0.501 J+	pCi/L
42	Background	E001	06/20/2023	Selenium, total	0.0006 U	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
42	Background	E001	06/20/2023	Specific Conductance @ 25C (field)	1,060	micromhos/cm
42	Background	E001	06/20/2023	Sulfate, total	127	mg/L
42	Background	E001	06/20/2023	Temperature	11.9	degrees C
42	Background	E001	06/20/2023	Thallium, total	0.001 U	mg/L
42	Background	E001	06/20/2023	Total Dissolved Solids	595	mg/L
42	Background	E001	06/20/2023	Turbidity, field	8.60	NTU
43	Background	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
43	Background	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
43	Background	E001	06/20/2023	Barium, total	0.470	mg/L
43	Background	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
43	Background	E001	06/20/2023	Boron, total	1.13	mg/L
43	Background	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
43	Background	E001	06/20/2023	Calcium, total	72.8	mg/L
43	Background	E001	06/20/2023	Chloride, total	73.0	mg/L
43	Background	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
43	Background	E001	06/20/2023	Cobalt, total	0.0001 J	mg/L
43	Background	E001	06/20/2023	Dissolved Oxygen	0.400	mg/L
43	Background	E001	06/20/2023	Fluoride, total	0.530	mg/L
43	Background	E001	06/20/2023	Lead, total	0.004 U	mg/L
43	Background	E001	06/20/2023	Lithium, total	0.00860	mg/L
43	Background	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
43	Background	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
43	Background	E001	06/20/2023	Oxidation Reduction Potential	-124	mV
43	Background	E001	06/20/2023	pH (field)	7.2	SU
43	Background	E001	06/20/2023	Radium 226 + Radium 228, total	0.631 J+	pCi/L
43	Background	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
43	Background	E001	06/20/2023	Specific Conductance @ 25C (field)	1,120	micromhos/cm
43	Background	E001	06/20/2023	Sulfate, total	11.0 J+	mg/L
43	Background	E001	06/20/2023	Temperature	13.1	degrees C
43	Background	E001	06/20/2023	Thallium, total	0.001 U	mg/L
43	Background	E001	06/20/2023	Total Dissolved Solids	505	mg/L
43	Background	E001	06/20/2023	Turbidity, field	6.80	NTU
101	Background	E001	06/20/2023	Dissolved Oxygen	6.59	mg/L
101	Background	E001	06/20/2023	Oxidation Reduction Potential	19.0	mV
101	Background	E001	06/20/2023	pH (field)	7.1	SU
101	Background	E001	06/20/2023	Specific Conductance @ 25C (field)	848	micromhos/cm
101	Background	E001	06/20/2023	Temperature	21.9	degrees C
101	Background	E001	06/20/2023	Turbidity, field	2.60	NTU
02	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
02	Compliance	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
02	Compliance	E001	06/20/2023	Barium, total	0.182	mg/L
02	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
02	Compliance	E001	06/20/2023	Boron, total	0.295	mg/L
02	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
02	Compliance	E001	06/20/2023	Calcium, total	85.5	mg/L
02	Compliance	E001	06/20/2023	Chloride, total	42.0	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
02	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
02	Compliance	E001	06/20/2023	Cobalt, total	0.0001 U	mg/L
02	Compliance	E001	06/20/2023	Dissolved Oxygen	0.850	mg/L
02	Compliance	E001	06/20/2023	Fluoride, total	0.570	mg/L
02	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
02	Compliance	E001	06/20/2023	Lithium, total	0.00370	mg/L
02	Compliance	E001	06/20/2023	Mercury, total	0.00006 J	mg/L
02	Compliance	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
02	Compliance	E001	06/20/2023	Oxidation Reduction Potential	-64.0	mV
02	Compliance	E001	06/20/2023	pH (field)	7.8	SU
02	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	0.685 <0	pCi/L
02	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
02	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	945	micromhos/cm
02	Compliance	E001	06/20/2023	Sulfate, total	24.0 J+	mg/L
02	Compliance	E001	06/20/2023	Temperature	13.6	degrees C
02	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
02	Compliance	E001	06/20/2023	Total Dissolved Solids	504	mg/L
02	Compliance	E001	06/20/2023	Turbidity, field	3.80	NTU
03R	Compliance	E001	06/21/2023	Antimony, total	0.0006 J	mg/L
03R	Compliance	E001	06/21/2023	Arsenic, total	0.0161	mg/L
03R	Compliance	E001	06/21/2023	Barium, total	0.319	mg/L
03R	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L
03R	Compliance	E001	06/21/2023	Boron, total	26.7	mg/L
03R	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
03R	Compliance	E001	06/21/2023	Calcium, total	168	mg/L
03R	Compliance	E001	06/21/2023	Chloride, total	27.0	mg/L
03R	Compliance	E001	06/21/2023	Chromium, total	0.0046 J	mg/L
03R	Compliance	E001	06/21/2023	Cobalt, total	0.00120	mg/L
03R	Compliance	E001	06/21/2023	Dissolved Oxygen	0.700	mg/L
03R	Compliance	E001	06/21/2023	Fluoride, total	0.460	mg/L
03R	Compliance	E001	06/21/2023	Lead, total	0.004 U	mg/L
03R	Compliance	E001	06/21/2023	Lithium, total	0.00370	mg/L
03R	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
03R	Compliance	E001	06/21/2023	Molybdenum, total	0.322	mg/L
03R	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-30.0	mV
03R	Compliance	E001	06/21/2023	pH (field)	7.1	SU
03R	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	1.19 J+	pCi/L
03R	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
03R	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	1,620	micromhos/cm
03R	Compliance	E001	06/21/2023	Sulfate, total	552	mg/L
03R	Compliance	E001	06/21/2023	Temperature	13.2	degrees C
03R	Compliance	E001	06/21/2023	Thallium, total	0.001 U	mg/L
03R	Compliance	E001	06/21/2023	Total Dissolved Solids	1,080	mg/L
03R	Compliance	E001	06/21/2023	Turbidity, field	34.0	NTU
04	Compliance	E001	06/21/2023	Antimony, total	0.0004 U	mg/L
04	Compliance	E001	06/21/2023	Arsenic, total	0.0109	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
04	Compliance	E001	06/21/2023	Barium, total	0.270	mg/L
04	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L
04	Compliance	E001	06/21/2023	Boron, total	10.3	mg/L
04	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
04	Compliance	E001	06/21/2023	Calcium, total	76.3	mg/L
04	Compliance	E001	06/21/2023	Chloride, total	12.0	mg/L
04	Compliance	E001	06/21/2023	Chromium, total	0.0028 U	mg/L
04	Compliance	E001	06/21/2023	Cobalt, total	0.0009 J	mg/L
04	Compliance	E001	06/21/2023	Dissolved Oxygen	0.620	mg/L
04	Compliance	E001	06/21/2023	Fluoride, total	0.330	mg/L
04	Compliance	E001	06/21/2023	Lead, total	0.004 U	mg/L
04	Compliance	E001	06/21/2023	Lithium, total	0.0498	mg/L
04	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
04	Compliance	E001	06/21/2023	Molybdenum, total	0.0316	mg/L
04	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-93.0	mV
04	Compliance	E001	06/21/2023	pH (field)	7.4	SU
04	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	2.11 J+	pCi/L
04	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
04	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	720	micromhos/cm
04	Compliance	E001	06/21/2023	Sulfate, total	62.0	mg/L
04	Compliance	E001	06/21/2023	Temperature	13.0	degrees C
04	Compliance	E001	06/21/2023	Thallium, total	0.001 U	mg/L
04	Compliance	E001	06/21/2023	Total Dissolved Solids	410	mg/L
04	Compliance	E001	06/21/2023	Turbidity, field	4.90	NTU
05	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
05	Compliance	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
05	Compliance	E001	06/20/2023	Barium, total	0.0233	mg/L
05	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
05	Compliance	E001	06/20/2023	Boron, total	20.4	mg/L
05	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
05	Compliance	E001	06/20/2023	Calcium, total	93.2	mg/L
05	Compliance	E001	06/20/2023	Chloride, total	7.00	mg/L
05	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
05	Compliance	E001	06/20/2023	Cobalt, total	0.0006 J	mg/L
05	Compliance	E001	06/20/2023	Dissolved Oxygen	0.540	mg/L
05	Compliance	E001	06/20/2023	Fluoride, total	0.700	mg/L
05	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
05	Compliance	E001	06/20/2023	Lithium, total	0.0902	mg/L
05	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
05	Compliance	E001	06/20/2023	Molybdenum, total	0.0396	mg/L
05	Compliance	E001	06/20/2023	Oxidation Reduction Potential	25.0	mV
05	Compliance	E001	06/20/2023	pH (field)	7.4	SU
05	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	1.29 J+	pCi/L
05	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
05	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	726	micromhos/cm
05	Compliance	E001	06/20/2023	Sulfate, total	206	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
05	Compliance	E001	06/20/2023	Temperature	13.2	degrees C
05	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
05	Compliance	E001	06/20/2023	Total Dissolved Solids	506	mg/L
05	Compliance	E001	06/20/2023	Turbidity, field	4.10	NTU
07R	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
07R	Compliance	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
07R	Compliance	E001	06/20/2023	Barium, total	0.0238	mg/L
07R	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
07R	Compliance	E001	06/20/2023	Boron, total	46.8	mg/L
07R	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
07R	Compliance	E001	06/20/2023	Calcium, total	705	mg/L
07R	Compliance	E001	06/20/2023	Chloride, total	4.00	mg/L
07R	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
07R	Compliance	E001	06/20/2023	Cobalt, total	0.0002 J	mg/L
07R	Compliance	E001	06/20/2023	Dissolved Oxygen	1.60	mg/L
07R	Compliance	E001	06/20/2023	Fluoride, total	0.150	mg/L
07R	Compliance	E001	06/20/2023	Lead, total	0.00870	mg/L
07R	Compliance	E001	06/20/2023	Lithium, total	0.598	mg/L
07R	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
07R	Compliance	E001	06/20/2023	Molybdenum, total	0.483	mg/L
07R	Compliance	E001	06/20/2023	Oxidation Reduction Potential	78.0	mV
07R	Compliance	E001	06/20/2023	pH (field)	7.8	SU
07R	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	1.76 J+	pCi/L
07R	Compliance	E001	06/20/2023	Selenium, total	0.00220	mg/L
07R	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	3,020	micromhos/cm
07R	Compliance	E001	06/20/2023	Sulfate, total	1,650	mg/L
07R	Compliance	E001	06/20/2023	Temperature	14.6	degrees C
07R	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
07R	Compliance	E001	06/20/2023	Total Dissolved Solids	2,890	mg/L
07R	Compliance	E001	06/20/2023	Turbidity, field	1.90	NTU
08R	Compliance	E001	06/21/2023	Antimony, total	0.0004 U	mg/L
08R	Compliance	E001	06/21/2023	Arsenic, total	0.0318	mg/L
08R	Compliance	E001	06/21/2023	Barium, total	0.0492	mg/L
08R	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L
08R	Compliance	E001	06/21/2023	Boron, total	35.2	mg/L
08R	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
08R	Compliance	E001	06/21/2023	Calcium, total	267	mg/L
08R	Compliance	E001	06/21/2023	Chloride, total	6.00	mg/L
08R	Compliance	E001	06/21/2023	Chromium, total	0.0028 U	mg/L
08R	Compliance	E001	06/21/2023	Cobalt, total	0.0001 U	mg/L
08R	Compliance	E001	06/21/2023	Dissolved Oxygen	0.740	mg/L
08R	Compliance	E001	06/21/2023	Fluoride, total	0.06 J	mg/L
08R	Compliance	E001	06/21/2023	Lead, total	0.0059 J	mg/L
08R	Compliance	E001	06/21/2023	Lithium, total	0.347	mg/L
08R	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
08R	Compliance	E001	06/21/2023	Molybdenum, total	0.301	mg/L

TABLE 1.
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845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
08R	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-25.0	mV
08R	Compliance	E001	06/21/2023	pH (field)	7.9	SU
08R	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	0.608 J+	pCi/L
08R	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
08R	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	1,550	micromhos/cm
08R	Compliance	E001	06/21/2023	Sulfate, total	731	mg/L
08R	Compliance	E001	06/21/2023	Temperature	12.9	degrees C
08R	Compliance	E001	06/21/2023	Thallium, total	0.001 U	mg/L
08R	Compliance	E001	06/21/2023	Total Dissolved Solids	1,350	mg/L
08R	Compliance	E001	06/21/2023	Turbidity, field	3.80	NTU
17	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
17	Compliance	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
17	Compliance	E001	06/20/2023	Barium, total	0.0265	mg/L
17	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
17	Compliance	E001	06/20/2023	Boron, total	7.40	mg/L
17	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
17	Compliance	E001	06/20/2023	Calcium, total	315	mg/L
17	Compliance	E001	06/20/2023	Chloride, total	27.0	mg/L
17	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
17	Compliance	E001	06/20/2023	Cobalt, total	0.00140	mg/L
17	Compliance	E001	06/20/2023	Dissolved Oxygen	0.540	mg/L
17	Compliance	E001	06/20/2023	Fluoride, total	0.200	mg/L
17	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
17	Compliance	E001	06/20/2023	Lithium, total	0.0217	mg/L
17	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
17	Compliance	E001	06/20/2023	Molybdenum, total	0.0066 J	mg/L
17	Compliance	E001	06/20/2023	Oxidation Reduction Potential	-41.0	mV
17	Compliance	E001	06/20/2023	pH (field)	6.8	SU
17	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	0.567 J+	pCi/L
17	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
17	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	2,020	micromhos/cm
17	Compliance	E001	06/20/2023	Sulfate, total	862 J-	mg/L
17	Compliance	E001	06/20/2023	Temperature	13.7	degrees C
17	Compliance	E001	06/20/2023	Thallium, total	0.0011 J	mg/L
17	Compliance	E001	06/20/2023	Total Dissolved Solids	1,220	mg/L
17	Compliance	E001	06/20/2023	Turbidity, field	7.20	NTU
20	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
20	Compliance	E001	06/20/2023	Arsenic, total	0.0087 U	mg/L
20	Compliance	E001	06/20/2023	Barium, total	0.0202	mg/L
20	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
20	Compliance	E001	06/20/2023	Boron, total	1.29	mg/L
20	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
20	Compliance	E001	06/20/2023	Calcium, total	95.8	mg/L
20	Compliance	E001	06/20/2023	Chloride, total	4.00 J	mg/L
20	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
20	Compliance	E001	06/20/2023	Cobalt, total	0.0005 J	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
20	Compliance	E001	06/20/2023	Dissolved Oxygen	0.620	mg/L
20	Compliance	E001	06/20/2023	Fluoride, total	0.09 J	mg/L
20	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
20	Compliance	E001	06/20/2023	Lithium, total	0.0206	mg/L
20	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
20	Compliance	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
20	Compliance	E001	06/20/2023	Oxidation Reduction Potential	-39.0	mV
20	Compliance	E001	06/20/2023	pH (field)	7.0	SU
20	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	1.56 J+	pCi/L
20	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
20	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	662	micromhos/cm
20	Compliance	E001	06/20/2023	Sulfate, total	71.0	mg/L
20	Compliance	E001	06/20/2023	Temperature	13.3	degrees C
20	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
20	Compliance	E001	06/20/2023	Total Dissolved Solids	416	mg/L
20	Compliance	E001	06/20/2023	Turbidity, field	4.20	NTU
34	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
34	Compliance	E001	06/20/2023	Arsenic, total	0.0241	mg/L
34	Compliance	E001	06/20/2023	Barium, total	0.165	mg/L
34	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
34	Compliance	E001	06/20/2023	Boron, total	0.489	mg/L
34	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
34	Compliance	E001	06/20/2023	Calcium, total	66.9	mg/L
34	Compliance	E001	06/20/2023	Chloride, total	32.0	mg/L
34	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
34	Compliance	E001	06/20/2023	Cobalt, total	0.0008 J	mg/L
34	Compliance	E001	06/20/2023	Dissolved Oxygen	0.360	mg/L
34	Compliance	E001	06/20/2023	Fluoride, total	0.690	mg/L
34	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
34	Compliance	E001	06/20/2023	Lithium, total	0.0024 J	mg/L
34	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
34	Compliance	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
34	Compliance	E001	06/20/2023	Oxidation Reduction Potential	-106	mV
34	Compliance	E001	06/20/2023	pH (field)	7.1	SU
34	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	0.987 J+	pCi/L
34	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
34	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	916	micromhos/cm
34	Compliance	E001	06/20/2023	Sulfate, total	10 UJ	mg/L
34	Compliance	E001	06/20/2023	Temperature	13.0	degrees C
34	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
34	Compliance	E001	06/20/2023	Total Dissolved Solids	475	mg/L
34	Compliance	E001	06/20/2023	Turbidity, field	89.0	NTU
36	Compliance	E001	06/21/2023	Antimony, total	0.0004 U	mg/L
36	Compliance	E001	06/21/2023	Arsenic, total	0.0087 U	mg/L
36	Compliance	E001	06/21/2023	Barium, total	0.110	mg/L
36	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L

TABLE 1.
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845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
36	Compliance	E001	06/21/2023	Boron, total	14.1	mg/L
36	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
36	Compliance	E001	06/21/2023	Calcium, total	362	mg/L
36	Compliance	E001	06/21/2023	Chloride, total	17.0	mg/L
36	Compliance	E001	06/21/2023	Chromium, total	0.0028 U	mg/L
36	Compliance	E001	06/21/2023	Cobalt, total	0.0004 J	mg/L
36	Compliance	E001	06/21/2023	Dissolved Oxygen	0.420	mg/L
36	Compliance	E001	06/21/2023	Fluoride, total	0.270	mg/L
36	Compliance	E001	06/21/2023	Lead, total	0.004 U	mg/L
36	Compliance	E001	06/21/2023	Lithium, total	0.223	mg/L
36	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
36	Compliance	E001	06/21/2023	Molybdenum, total	0.173	mg/L
36	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-66.0	mV
36	Compliance	E001	06/21/2023	pH (field)	7.1	SU
36	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	2.09 J+	pCi/L
36	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
36	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	2,030	micromhos/cm
36	Compliance	E001	06/21/2023	Sulfate, total	1,000	mg/L
36	Compliance	E001	06/21/2023	Temperature	12.6	degrees C
36	Compliance	E001	06/21/2023	Thallium, total	0.0013 J	mg/L
36	Compliance	E001	06/21/2023	Total Dissolved Solids	1,550	mg/L
36	Compliance	E001	06/21/2023	Turbidity, field	7.90	NTU
37	Compliance	E001	06/21/2023	Antimony, total	0.0004 U	mg/L
37	Compliance	E001	06/21/2023	Arsenic, total	0.0374	mg/L
37	Compliance	E001	06/21/2023	Barium, total	0.321	mg/L
37	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L
37	Compliance	E001	06/21/2023	Boron, total	1.74	mg/L
37	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
37	Compliance	E001	06/21/2023	Calcium, total	116	mg/L
37	Compliance	E001	06/21/2023	Chloride, total	39.0	mg/L
37	Compliance	E001	06/21/2023	Chromium, total	0.0028 U	mg/L
37	Compliance	E001	06/21/2023	Cobalt, total	0.0004 J	mg/L
37	Compliance	E001	06/21/2023	Dissolved Oxygen	0.540	mg/L
37	Compliance	E001	06/21/2023	Fluoride, total	0.600	mg/L
37	Compliance	E001	06/21/2023	Lead, total	0.004 U	mg/L
37	Compliance	E001	06/21/2023	Lithium, total	0.0015 U	mg/L
37	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
37	Compliance	E001	06/21/2023	Molybdenum, total	0.0037 U	mg/L
37	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-52.0	mV
37	Compliance	E001	06/21/2023	pH (field)	6.8	SU
37	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	1.66 J+	pCi/L
37	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
37	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	1,470	micromhos/cm
37	Compliance	E001	06/21/2023	Sulfate, total	311	mg/L
37	Compliance	E001	06/21/2023	Temperature	13.7	degrees C
37	Compliance	E001	06/21/2023	Thallium, total	0.001 U	mg/L

TABLE 1.
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845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
37	Compliance	E001	06/21/2023	Total Dissolved Solids	745	mg/L
37	Compliance	E001	06/21/2023	Turbidity, field	5.70	NTU
38	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
38	Compliance	E001	06/20/2023	Arsenic, total	0.0254	mg/L
38	Compliance	E001	06/20/2023	Barium, total	0.215	mg/L
38	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
38	Compliance	E001	06/20/2023	Boron, total	0.447	mg/L
38	Compliance	E001	06/20/2023	Cadmium, total	0.0005 U	mg/L
38	Compliance	E001	06/20/2023	Calcium, total	77.0	mg/L
38	Compliance	E001	06/20/2023	Chloride, total	18.0	mg/L
38	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
38	Compliance	E001	06/20/2023	Cobalt, total	0.0002 J	mg/L
38	Compliance	E001	06/20/2023	Dissolved Oxygen	0.440	mg/L
38	Compliance	E001	06/20/2023	Fluoride, total	0.380	mg/L
38	Compliance	E001	06/20/2023	Lead, total	0.004 U	mg/L
38	Compliance	E001	06/20/2023	Lithium, total	0.0016 J	mg/L
38	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
38	Compliance	E001	06/20/2023	Molybdenum, total	0.0037 U	mg/L
38	Compliance	E001	06/20/2023	Oxidation Reduction Potential	-98.0	mV
38	Compliance	E001	06/20/2023	pH (field)	7.0	SU
38	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	1.55 J+	pCi/L
38	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
38	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	981	micromhos/cm
38	Compliance	E001	06/20/2023	Sulfate, total	10 UJ	mg/L
38	Compliance	E001	06/20/2023	Temperature	12.3	degrees C
38	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
38	Compliance	E001	06/20/2023	Total Dissolved Solids	445	mg/L
38	Compliance	E001	06/20/2023	Turbidity, field	5.80	NTU
40	Compliance	E001	06/20/2023	Antimony, total	0.0004 U	mg/L
40	Compliance	E001	06/20/2023	Arsenic, total	0.0164	mg/L
40	Compliance	E001	06/20/2023	Barium, total	0.0274	mg/L
40	Compliance	E001	06/20/2023	Beryllium, total	0.0002 U	mg/L
40	Compliance	E001	06/20/2023	Boron, total	23.7	mg/L
40	Compliance	E001	06/20/2023	Cadmium, total	0.00360	mg/L
40	Compliance	E001	06/20/2023	Calcium, total	691	mg/L
40	Compliance	E001	06/20/2023	Chloride, total	12.0	mg/L
40	Compliance	E001	06/20/2023	Chromium, total	0.0028 U	mg/L
40	Compliance	E001	06/20/2023	Cobalt, total	0.00520	mg/L
40	Compliance	E001	06/20/2023	Dissolved Oxygen	0.510	mg/L
40	Compliance	E001	06/20/2023	Fluoride, total	0.100	mg/L
40	Compliance	E001	06/20/2023	Lead, total	0.02 U	mg/L
40	Compliance	E001	06/20/2023	Lithium, total	0.734	mg/L
40	Compliance	E001	06/20/2023	Mercury, total	0.00006 U	mg/L
40	Compliance	E001	06/20/2023	Molybdenum, total	0.0816	mg/L
40	Compliance	E001	06/20/2023	Oxidation Reduction Potential	43.0	mV
40	Compliance	E001	06/20/2023	pH (field)	6.5	SU

TABLE 1.
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 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
40	Compliance	E001	06/20/2023	Radium 226 + Radium 228, total	1.34 J+	pCi/L
40	Compliance	E001	06/20/2023	Selenium, total	0.0006 U	mg/L
40	Compliance	E001	06/20/2023	Specific Conductance @ 25C (field)	4,440	micromhos/cm
40	Compliance	E001	06/20/2023	Sulfate, total	3,180	mg/L
40	Compliance	E001	06/20/2023	Temperature	14.0	degrees C
40	Compliance	E001	06/20/2023	Thallium, total	0.001 U	mg/L
40	Compliance	E001	06/20/2023	Total Dissolved Solids	4,590	mg/L
40	Compliance	E001	06/20/2023	Turbidity, field	28.0	NTU
41	Compliance	E001	06/21/2023	Antimony, total	0.0004 U	mg/L
41	Compliance	E001	06/21/2023	Arsenic, total	0.0141	mg/L
41	Compliance	E001	06/21/2023	Barium, total	0.234	mg/L
41	Compliance	E001	06/21/2023	Beryllium, total	0.0002 U	mg/L
41	Compliance	E001	06/21/2023	Boron, total	3.40	mg/L
41	Compliance	E001	06/21/2023	Cadmium, total	0.0005 U	mg/L
41	Compliance	E001	06/21/2023	Calcium, total	83.6	mg/L
41	Compliance	E001	06/21/2023	Chloride, total	51.0	mg/L
41	Compliance	E001	06/21/2023	Chromium, total	0.0028 U	mg/L
41	Compliance	E001	06/21/2023	Cobalt, total	0.0004 J	mg/L
41	Compliance	E001	06/21/2023	Dissolved Oxygen	0.370	mg/L
41	Compliance	E001	06/21/2023	Fluoride, total	0.440	mg/L
41	Compliance	E001	06/21/2023	Lead, total	0.004 U	mg/L
41	Compliance	E001	06/21/2023	Lithium, total	0.0015 U	mg/L
41	Compliance	E001	06/21/2023	Mercury, total	0.00006 U	mg/L
41	Compliance	E001	06/21/2023	Molybdenum, total	0.0037 U	mg/L
41	Compliance	E001	06/21/2023	Oxidation Reduction Potential	-86.0	mV
41	Compliance	E001	06/21/2023	pH (field)	7.0	SU
41	Compliance	E001	06/21/2023	Radium 226 + Radium 228, total	1.26 J+	pCi/L
41	Compliance	E001	06/21/2023	Selenium, total	0.0006 U	mg/L
41	Compliance	E001	06/21/2023	Specific Conductance @ 25C (field)	1,210	micromhos/cm
41	Compliance	E001	06/21/2023	Sulfate, total	7 J	mg/L
41	Compliance	E001	06/21/2023	Temperature	12.6	degrees C
41	Compliance	E001	06/21/2023	Thallium, total	0.001 U	mg/L
41	Compliance	E001	06/21/2023	Total Dissolved Solids	590	mg/L
41	Compliance	E001	06/21/2023	Turbidity, field	8.10	NTU

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

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VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Notes:

C = Celsius

cm = centimeter

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

SU = Standard Units

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

J- = The result is an estimated quantity, but the result may be biased low.

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

U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
21	Background	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
21	Background	E002	09/20/2023	Arsenic, total	0.0500	mg/L
21	Background	E002	09/20/2023	Barium, total	0.110	mg/L
21	Background	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
21	Background	E002	09/20/2023	Boron, total	0.870	mg/L
21	Background	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
21	Background	E002	09/20/2023	Calcium, total	54.0	mg/L
21	Background	E002	09/20/2023	Chloride, total	1.60 J+	mg/L
21	Background	E002	09/20/2023	Chromium, total	0.0011 U	mg/L
21	Background	E002	09/20/2023	Cobalt, total	0.0004 U	mg/L
21	Background	E002	09/20/2023	Dissolved Oxygen	0.380	mg/L
21	Background	E002	09/20/2023	Fluoride, total	1.00	mg/L
21	Background	E002	09/20/2023	Lead, total	0.00019 U	mg/L
21	Background	E002	09/20/2023	Lithium, total	0.002 U	mg/L
21	Background	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
21	Background	E002	09/20/2023	Molybdenum, total	0.0039 J	mg/L
21	Background	E002	09/20/2023	Oxidation Reduction Potential	-116	mV
21	Background	E002	09/20/2023	pH (field)	7.4	SU
21	Background	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
21	Background	E002	09/20/2023	Specific Conductance @ 25C (field)	704	micromhos/cm
21	Background	E002	09/20/2023	Sulfate, total	3.00	mg/L
21	Background	E002	09/20/2023	Temperature	13.4	degrees C
21	Background	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
21	Background	E002	09/20/2023	Total Dissolved Solids	330	mg/L
21	Background	E002	09/20/2023	Turbidity, field	7.94	NTU
42	Background	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
42	Background	E002	09/21/2023	Arsenic, total	0.0230	mg/L
42	Background	E002	09/21/2023	Barium, total	0.140	mg/L
42	Background	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
42	Background	E002	09/21/2023	Boron, total	0.650	mg/L
42	Background	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
42	Background	E002	09/21/2023	Calcium, total	81.0	mg/L
42	Background	E002	09/21/2023	Chloride, total	16.0	mg/L
42	Background	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
42	Background	E002	09/21/2023	Cobalt, total	0.0004 U	mg/L
42	Background	E002	09/21/2023	Dissolved Oxygen	0.730	mg/L
42	Background	E002	09/21/2023	Fluoride, total	0.54 J	mg/L
42	Background	E002	09/21/2023	Lead, total	0.00019 U	mg/L
42	Background	E002	09/21/2023	Lithium, total	0.0044 J	mg/L
42	Background	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
42	Background	E002	09/21/2023	Molybdenum, total	0.0025 U	mg/L
42	Background	E002	09/21/2023	Oxidation Reduction Potential	-124	mV
42	Background	E002	09/21/2023	pH (field)	7.4	SU
42	Background	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
42	Background	E002	09/21/2023	Specific Conductance @ 25C (field)	1,015	micromhos/cm
42	Background	E002	09/21/2023	Sulfate, total	52.0	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
42	Background	E002	09/21/2023	Temperature	11.7	degrees C
42	Background	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
42	Background	E002	09/21/2023	Total Dissolved Solids	570	mg/L
42	Background	E002	09/21/2023	Turbidity, field	5.72	NTU
43	Background	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
43	Background	E002	09/21/2023	Arsenic, total	0.00910	mg/L
43	Background	E002	09/21/2023	Barium, total	0.470	mg/L
43	Background	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
43	Background	E002	09/21/2023	Boron, total	1.10	mg/L
43	Background	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
43	Background	E002	09/21/2023	Calcium, total	61.0	mg/L
43	Background	E002	09/21/2023	Chloride, total	71.0	mg/L
43	Background	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
43	Background	E002	09/21/2023	Cobalt, total	0.0004 U	mg/L
43	Background	E002	09/21/2023	Dissolved Oxygen	0.300	mg/L
43	Background	E002	09/21/2023	Fluoride, total	0.52 J	mg/L
43	Background	E002	09/21/2023	Lead, total	0.0005 UJ	mg/L
43	Background	E002	09/21/2023	Lithium, total	0.00920	mg/L
43	Background	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
43	Background	E002	09/21/2023	Molybdenum, total	0.0025 U	mg/L
43	Background	E002	09/21/2023	Oxidation Reduction Potential	-128	mV
43	Background	E002	09/21/2023	pH (field)	7.4	SU
43	Background	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
43	Background	E002	09/21/2023	Specific Conductance @ 25C (field)	1,159	micromhos/cm
43	Background	E002	09/21/2023	Sulfate, total	1.90	mg/L
43	Background	E002	09/21/2023	Temperature	12.6	degrees C
43	Background	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
43	Background	E002	09/21/2023	Total Dissolved Solids	620	mg/L
43	Background	E002	09/21/2023	Turbidity, field	7.43	NTU
101	Background	E002	09/25/2023	Antimony, total	0.0013 U	mg/L
101	Background	E002	09/25/2023	Arsenic, total	0.0510	mg/L
101	Background	E002	09/25/2023	Barium, total	0.130	mg/L
101	Background	E002	09/25/2023	Beryllium, total	0.00053 U	mg/L
101	Background	E002	09/25/2023	Boron, total	2.10	mg/L
101	Background	E002	09/25/2023	Cadmium, total	0.00017 U	mg/L
101	Background	E002	09/25/2023	Chloride, total	10.0	mg/L
101	Background	E002	09/25/2023	Chromium, total	0.0024 J	mg/L
101	Background	E002	09/25/2023	Cobalt, total	0.00069 J	mg/L
101	Background	E002	09/25/2023	Dissolved Oxygen	0.330	mg/L
101	Background	E002	09/25/2023	Fluoride, total	0.82 J	mg/L
101	Background	E002	09/25/2023	Lead, total	0.000720 J+	mg/L
101	Background	E002	09/25/2023	Lithium, total	0.0041 J	mg/L
101	Background	E002	09/25/2023	Mercury, total	0.000079 U	mg/L
101	Background	E002	09/25/2023	Molybdenum, total	0.0025 U	mg/L
101	Background	E002	09/25/2023	Oxidation Reduction Potential	-140	mV
101	Background	E002	09/25/2023	pH (field)	7.3	SU

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
101	Background	E002	09/25/2023	Selenium, total	0.00098 U	mg/L
101	Background	E002	09/25/2023	Specific Conductance @ 25C (field)	737	micromhos/cm
101	Background	E002	09/25/2023	Sulfate, total	7.50	mg/L
101	Background	E002	09/25/2023	Temperature	18.9	degrees C
101	Background	E002	09/25/2023	Thallium, total	0.00057 U	mg/L
101	Background	E002	09/25/2023	Total Dissolved Solids	490	mg/L
103	Background	E002	09/26/2023	Antimony, total	0.0013 U	mg/L
103	Background	E002	09/26/2023	Arsenic, total	0.00220 J+	mg/L
103	Background	E002	09/26/2023	Barium, total	0.0250	mg/L
103	Background	E002	09/26/2023	Beryllium, total	0.00053 U	mg/L
103	Background	E002	09/26/2023	Boron, total	0.400	mg/L
103	Background	E002	09/26/2023	Cadmium, total	0.00017 U	mg/L
103	Background	E002	09/26/2023	Chloride, total	8.00	mg/L
103	Background	E002	09/26/2023	Chromium, total	0.0011 U	mg/L
103	Background	E002	09/26/2023	Cobalt, total	0.00140	mg/L
103	Background	E002	09/26/2023	Dissolved Oxygen	4.75	mg/L
103	Background	E002	09/26/2023	Fluoride, total	0.54 J	mg/L
103	Background	E002	09/26/2023	Lead, total	0.0005 UJ	mg/L
103	Background	E002	09/26/2023	Lithium, total	0.0760	mg/L
103	Background	E002	09/26/2023	Mercury, total	0.000079 U	mg/L
103	Background	E002	09/26/2023	Molybdenum, total	0.00650	mg/L
103	Background	E002	09/26/2023	Oxidation Reduction Potential	85.1	mV
103	Background	E002	09/26/2023	pH (field)	7.0	SU
103	Background	E002	09/26/2023	Selenium, total	0.00098 U	mg/L
103	Background	E002	09/26/2023	Specific Conductance @ 25C (field)	2,328	micromhos/cm
103	Background	E002	09/26/2023	Sulfate, total	1,100	mg/L
103	Background	E002	09/26/2023	Temperature	18.0	degrees C
103	Background	E002	09/26/2023	Thallium, total	0.00057 U	mg/L
103	Background	E002	09/26/2023	Total Dissolved Solids	2,100	mg/L
103	Background	E002	09/26/2023	Turbidity, field	37.4	NTU
02	Compliance	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
02	Compliance	E002	09/20/2023	Arsenic, total	0.00740	mg/L
02	Compliance	E002	09/20/2023	Barium, total	0.190	mg/L
02	Compliance	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
02	Compliance	E002	09/20/2023	Boron, total	0.300 J+	mg/L
02	Compliance	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
02	Compliance	E002	09/20/2023	Calcium, total	79.0	mg/L
02	Compliance	E002	09/20/2023	Chloride, total	48.0	mg/L
02	Compliance	E002	09/20/2023	Chromium, total	0.0011 U	mg/L
02	Compliance	E002	09/20/2023	Cobalt, total	0.0004 U	mg/L
02	Compliance	E002	09/20/2023	Dissolved Oxygen	0.0900	mg/L
02	Compliance	E002	09/20/2023	Fluoride, total	0.67 J	mg/L
02	Compliance	E002	09/20/2023	Lead, total	0.00019 U	mg/L
02	Compliance	E002	09/20/2023	Lithium, total	0.0036 J	mg/L
02	Compliance	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
02	Compliance	E002	09/20/2023	Molybdenum, total	0.0025 U	mg/L

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

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 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
02	Compliance	E002	09/20/2023	Oxidation Reduction Potential	-148	mV
02	Compliance	E002	09/20/2023	pH (field)	7.6	SU
02	Compliance	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
02	Compliance	E002	09/20/2023	Specific Conductance @ 25C (field)	780	micromhos/cm
02	Compliance	E002	09/20/2023	Sulfate, total	30.0 J	mg/L
02	Compliance	E002	09/20/2023	Temperature	15.2	degrees C
02	Compliance	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
02	Compliance	E002	09/20/2023	Total Dissolved Solids	570	mg/L
02	Compliance	E002	09/20/2023	Turbidity, field	7.24	NTU
03R	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
03R	Compliance	E002	09/21/2023	Arsenic, total	0.00490	mg/L
03R	Compliance	E002	09/21/2023	Barium, total	0.290	mg/L
03R	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
03R	Compliance	E002	09/21/2023	Boron, total	26.0	mg/L
03R	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
03R	Compliance	E002	09/21/2023	Calcium, total	140	mg/L
03R	Compliance	E002	09/21/2023	Chloride, total	24.0	mg/L
03R	Compliance	E002	09/21/2023	Chromium, total	0.018 J	mg/L
03R	Compliance	E002	09/21/2023	Cobalt, total	0.00052 J	mg/L
03R	Compliance	E002	09/21/2023	Dissolved Oxygen	0.150	mg/L
03R	Compliance	E002	09/21/2023	Fluoride, total	0.44 J	mg/L
03R	Compliance	E002	09/21/2023	Lead, total	0.000510 J+	mg/L
03R	Compliance	E002	09/21/2023	Lithium, total	0.0038 J	mg/L
03R	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
03R	Compliance	E002	09/21/2023	Molybdenum, total	0.320	mg/L
03R	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-110	mV
03R	Compliance	E002	09/21/2023	pH (field)	7.4	SU
03R	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
03R	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	1,613	micromhos/cm
03R	Compliance	E002	09/21/2023	Sulfate, total	540	mg/L
03R	Compliance	E002	09/21/2023	Temperature	13.1	degrees C
03R	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
03R	Compliance	E002	09/21/2023	Total Dissolved Solids	1,200	mg/L
03R	Compliance	E002	09/21/2023	Turbidity, field	22.5	NTU
04	Compliance	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
04	Compliance	E002	09/20/2023	Arsenic, total	0.00610	mg/L
04	Compliance	E002	09/20/2023	Barium, total	0.210	mg/L
04	Compliance	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
04	Compliance	E002	09/20/2023	Boron, total	10.0	mg/L
04	Compliance	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
04	Compliance	E002	09/20/2023	Calcium, total	60.0	mg/L
04	Compliance	E002	09/20/2023	Chloride, total	9.40	mg/L
04	Compliance	E002	09/20/2023	Chromium, total	0.0057 U	mg/L
04	Compliance	E002	09/20/2023	Cobalt, total	0.00059 J	mg/L
04	Compliance	E002	09/20/2023	Dissolved Oxygen	0.710	mg/L
04	Compliance	E002	09/20/2023	Fluoride, total	0.39 J	mg/L

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

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 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
04	Compliance	E002	09/20/2023	Lead, total	0.00019 U	mg/L
04	Compliance	E002	09/20/2023	Lithium, total	0.0490	mg/L
04	Compliance	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
04	Compliance	E002	09/20/2023	Molybdenum, total	0.0380	mg/L
04	Compliance	E002	09/20/2023	Oxidation Reduction Potential	-139	mV
04	Compliance	E002	09/20/2023	pH (field)	7.6	SU
04	Compliance	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
04	Compliance	E002	09/20/2023	Specific Conductance @ 25C (field)	196	micromhos/cm
04	Compliance	E002	09/20/2023	Sulfate, total	21.0	mg/L
04	Compliance	E002	09/20/2023	Temperature	15.6	degrees C
04	Compliance	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
04	Compliance	E002	09/20/2023	Total Dissolved Solids	330	mg/L
04	Compliance	E002	09/20/2023	Turbidity, field	0.980	NTU
05	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
05	Compliance	E002	09/21/2023	Arsenic, total	0.001 UJ	mg/L
05	Compliance	E002	09/21/2023	Barium, total	0.0230	mg/L
05	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
05	Compliance	E002	09/21/2023	Boron, total	20.0	mg/L
05	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
05	Compliance	E002	09/21/2023	Calcium, total	88.0	mg/L
05	Compliance	E002	09/21/2023	Chloride, total	7.20	mg/L
05	Compliance	E002	09/21/2023	Chromium, total	0.014 J	mg/L
05	Compliance	E002	09/21/2023	Cobalt, total	0.00140	mg/L
05	Compliance	E002	09/21/2023	Dissolved Oxygen	0.0100	mg/L
05	Compliance	E002	09/21/2023	Fluoride, total	0.68 J	mg/L
05	Compliance	E002	09/21/2023	Lead, total	0.0005 UJ	mg/L
05	Compliance	E002	09/21/2023	Lithium, total	0.0890	mg/L
05	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
05	Compliance	E002	09/21/2023	Molybdenum, total	0.0400	mg/L
05	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-15.1	mV
05	Compliance	E002	09/21/2023	pH (field)	7.5	SU
05	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
05	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	725	micromhos/cm
05	Compliance	E002	09/21/2023	Sulfate, total	240	mg/L
05	Compliance	E002	09/21/2023	Temperature	14.9	degrees C
05	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
05	Compliance	E002	09/21/2023	Total Dissolved Solids	610	mg/L
05	Compliance	E002	09/21/2023	Turbidity, field	19.1	NTU
08R	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
08R	Compliance	E002	09/21/2023	Arsenic, total	0.0370	mg/L
08R	Compliance	E002	09/21/2023	Barium, total	0.0520	mg/L
08R	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
08R	Compliance	E002	09/21/2023	Boron, total	36.0	mg/L
08R	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
08R	Compliance	E002	09/21/2023	Calcium, total	270	mg/L
08R	Compliance	E002	09/21/2023	Chloride, total	6.10	mg/L

TABLE 1.
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 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
08R	Compliance	E002	09/21/2023	Chromium, total	0.011 U	mg/L
08R	Compliance	E002	09/21/2023	Cobalt, total	0.00049 J	mg/L
08R	Compliance	E002	09/21/2023	Dissolved Oxygen	0.350	mg/L
08R	Compliance	E002	09/21/2023	Fluoride, total	0.19 U	mg/L
08R	Compliance	E002	09/21/2023	Lead, total	0.0005 UJ	mg/L
08R	Compliance	E002	09/21/2023	Lithium, total	0.370	mg/L
08R	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
08R	Compliance	E002	09/21/2023	Molybdenum, total	0.270	mg/L
08R	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-118	mV
08R	Compliance	E002	09/21/2023	pH (field)	8.0	SU
08R	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
08R	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	1,686	micromhos/cm
08R	Compliance	E002	09/21/2023	Sulfate, total	830	mg/L
08R	Compliance	E002	09/21/2023	Temperature	15.0	degrees C
08R	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
08R	Compliance	E002	09/21/2023	Total Dissolved Solids	1,500	mg/L
08R	Compliance	E002	09/21/2023	Turbidity, field	35.5	NTU
17	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
17	Compliance	E002	09/21/2023	Arsenic, total	0.00380	mg/L
17	Compliance	E002	09/21/2023	Barium, total	0.0290	mg/L
17	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
17	Compliance	E002	09/21/2023	Boron, total	5.00	mg/L
17	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
17	Compliance	E002	09/21/2023	Calcium, total	270	mg/L
17	Compliance	E002	09/21/2023	Chloride, total	33.0	mg/L
17	Compliance	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
17	Compliance	E002	09/21/2023	Cobalt, total	0.00095 J	mg/L
17	Compliance	E002	09/21/2023	Dissolved Oxygen	1.57	mg/L
17	Compliance	E002	09/21/2023	Fluoride, total	0.28 J	mg/L
17	Compliance	E002	09/21/2023	Lead, total	0.00019 U	mg/L
17	Compliance	E002	09/21/2023	Lithium, total	0.0170	mg/L
17	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
17	Compliance	E002	09/21/2023	Molybdenum, total	0.0035 J	mg/L
17	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-70.5	mV
17	Compliance	E002	09/21/2023	pH (field)	7.1	SU
17	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
17	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	2,171	micromhos/cm
17	Compliance	E002	09/21/2023	Sulfate, total	990	mg/L
17	Compliance	E002	09/21/2023	Temperature	14.8	degrees C
17	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
17	Compliance	E002	09/21/2023	Total Dissolved Solids	1,900	mg/L
17	Compliance	E002	09/21/2023	Turbidity, field	8.34	NTU
20	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
20	Compliance	E002	09/21/2023	Arsenic, total	0.00160 J+	mg/L
20	Compliance	E002	09/21/2023	Barium, total	0.0210	mg/L
20	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
20	Compliance	E002	09/21/2023	Boron, total	1.60	mg/L
20	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
20	Compliance	E002	09/21/2023	Calcium, total	91.0	mg/L
20	Compliance	E002	09/21/2023	Chloride, total	4.30	mg/L
20	Compliance	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
20	Compliance	E002	09/21/2023	Cobalt, total	0.00089 J	mg/L
20	Compliance	E002	09/21/2023	Dissolved Oxygen	0.0300	mg/L
20	Compliance	E002	09/21/2023	Fluoride, total	0.23 J	mg/L
20	Compliance	E002	09/21/2023	Lead, total	0.00019 U	mg/L
20	Compliance	E002	09/21/2023	Lithium, total	0.0260	mg/L
20	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
20	Compliance	E002	09/21/2023	Molybdenum, total	0.0025 U	mg/L
20	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-17.3	mV
20	Compliance	E002	09/21/2023	pH (field)	7.0	SU
20	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
20	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	730	micromhos/cm
20	Compliance	E002	09/21/2023	Sulfate, total	87.0	mg/L
20	Compliance	E002	09/21/2023	Temperature	14.1	degrees C
20	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
20	Compliance	E002	09/21/2023	Total Dissolved Solids	440	mg/L
20	Compliance	E002	09/21/2023	Turbidity, field	6.86	NTU
34	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
34	Compliance	E002	09/21/2023	Arsenic, total	0.0240	mg/L
34	Compliance	E002	09/21/2023	Barium, total	0.150	mg/L
34	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
34	Compliance	E002	09/21/2023	Boron, total	0.480	mg/L
34	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
34	Compliance	E002	09/21/2023	Calcium, total	61.0	mg/L
34	Compliance	E002	09/21/2023	Chloride, total	33.0	mg/L
34	Compliance	E002	09/21/2023	Chromium, total	0.0016 J	mg/L
34	Compliance	E002	09/21/2023	Cobalt, total	0.0004 U	mg/L
34	Compliance	E002	09/21/2023	Dissolved Oxygen	0	mg/L
34	Compliance	E002	09/21/2023	Fluoride, total	0.65 J	mg/L
34	Compliance	E002	09/21/2023	Lead, total	0.000670 J+	mg/L
34	Compliance	E002	09/21/2023	Lithium, total	0.0025 J	mg/L
34	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
34	Compliance	E002	09/21/2023	Molybdenum, total	0.0025 U	mg/L
34	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-137	mV
34	Compliance	E002	09/21/2023	pH (field)	7.0	SU
34	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
34	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	859	micromhos/cm
34	Compliance	E002	09/21/2023	Sulfate, total	0.21 U	mg/L
34	Compliance	E002	09/21/2023	Temperature	12.6	degrees C
34	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
34	Compliance	E002	09/21/2023	Total Dissolved Solids	480	mg/L
34	Compliance	E002	09/21/2023	Turbidity, field	45.1	NTU

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
36	Compliance	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
36	Compliance	E002	09/20/2023	Arsenic, total	0.00380	mg/L
36	Compliance	E002	09/20/2023	Barium, total	0.0880	mg/L
36	Compliance	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
36	Compliance	E002	09/20/2023	Boron, total	15.0	mg/L
36	Compliance	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
36	Compliance	E002	09/20/2023	Calcium, total	310	mg/L
36	Compliance	E002	09/20/2023	Chloride, total	17.0	mg/L
36	Compliance	E002	09/20/2023	Chromium, total	0.011 U	mg/L
36	Compliance	E002	09/20/2023	Cobalt, total	0.00072 J	mg/L
36	Compliance	E002	09/20/2023	Dissolved Oxygen	0.0200	mg/L
36	Compliance	E002	09/20/2023	Fluoride, total	0.31 J	mg/L
36	Compliance	E002	09/20/2023	Lead, total	0.00019 U	mg/L
36	Compliance	E002	09/20/2023	Lithium, total	0.220	mg/L
36	Compliance	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
36	Compliance	E002	09/20/2023	Molybdenum, total	0.180	mg/L
36	Compliance	E002	09/20/2023	Oxidation Reduction Potential	-110	mV
36	Compliance	E002	09/20/2023	pH (field)	7.1	SU
36	Compliance	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
36	Compliance	E002	09/20/2023	Specific Conductance @ 25C (field)	1,977	micromhos/cm
36	Compliance	E002	09/20/2023	Sulfate, total	1,000	mg/L
36	Compliance	E002	09/20/2023	Temperature	14.7	degrees C
36	Compliance	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
36	Compliance	E002	09/20/2023	Total Dissolved Solids	1,700	mg/L
36	Compliance	E002	09/20/2023	Turbidity, field	3.49	NTU
37	Compliance	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
37	Compliance	E002	09/20/2023	Arsenic, total	0.0340	mg/L
37	Compliance	E002	09/20/2023	Barium, total	0.310	mg/L
37	Compliance	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
37	Compliance	E002	09/20/2023	Boron, total	1.70	mg/L
37	Compliance	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
37	Compliance	E002	09/20/2023	Calcium, total	110	mg/L
37	Compliance	E002	09/20/2023	Chloride, total	43.0	mg/L
37	Compliance	E002	09/20/2023	Chromium, total	0.0011 J	mg/L
37	Compliance	E002	09/20/2023	Cobalt, total	0.0004 U	mg/L
37	Compliance	E002	09/20/2023	Dissolved Oxygen	0.340	mg/L
37	Compliance	E002	09/20/2023	Fluoride, total	0.54 J	mg/L
37	Compliance	E002	09/20/2023	Lead, total	0.0005 UJ	mg/L
37	Compliance	E002	09/20/2023	Lithium, total	0.0025 J	mg/L
37	Compliance	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
37	Compliance	E002	09/20/2023	Molybdenum, total	0.0025 U	mg/L
37	Compliance	E002	09/20/2023	Oxidation Reduction Potential	-120	mV
37	Compliance	E002	09/20/2023	pH (field)	6.9	SU
37	Compliance	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
37	Compliance	E002	09/20/2023	Specific Conductance @ 25C (field)	1,320	micromhos/cm
37	Compliance	E002	09/20/2023	Sulfate, total	310	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
37	Compliance	E002	09/20/2023	Temperature	14.9	degrees C
37	Compliance	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
37	Compliance	E002	09/20/2023	Total Dissolved Solids	900	mg/L
37	Compliance	E002	09/20/2023	Turbidity, field	11.2	NTU
38	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
38	Compliance	E002	09/21/2023	Arsenic, total	0.0280	mg/L
38	Compliance	E002	09/21/2023	Barium, total	0.190	mg/L
38	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
38	Compliance	E002	09/21/2023	Boron, total	0.420	mg/L
38	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
38	Compliance	E002	09/21/2023	Calcium, total	64.0	mg/L
38	Compliance	E002	09/21/2023	Chloride, total	17.0	mg/L
38	Compliance	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
38	Compliance	E002	09/21/2023	Cobalt, total	0.00041 J	mg/L
38	Compliance	E002	09/21/2023	Dissolved Oxygen	0.0300	mg/L
38	Compliance	E002	09/21/2023	Fluoride, total	0.46 J	mg/L
38	Compliance	E002	09/21/2023	Lead, total	0.0005 UJ	mg/L
38	Compliance	E002	09/21/2023	Lithium, total	0.0027 J	mg/L
38	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
38	Compliance	E002	09/21/2023	Molybdenum, total	0.0025 U	mg/L
38	Compliance	E002	09/21/2023	Oxidation Reduction Potential	-122	mV
38	Compliance	E002	09/21/2023	pH (field)	7.0	SU
38	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
38	Compliance	E002	09/21/2023	Specific Conductance @ 25C (field)	1,068	micromhos/cm
38	Compliance	E002	09/21/2023	Sulfate, total	1.20	mg/L
38	Compliance	E002	09/21/2023	Temperature	12.5	degrees C
38	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
38	Compliance	E002	09/21/2023	Total Dissolved Solids	560	mg/L
38	Compliance	E002	09/21/2023	Turbidity, field	9.88	NTU
40	Compliance	E002	09/21/2023	Antimony, total	0.0013 U	mg/L
40	Compliance	E002	09/21/2023	Arsenic, total	0.0180	mg/L
40	Compliance	E002	09/21/2023	Barium, total	0.0290	mg/L
40	Compliance	E002	09/21/2023	Beryllium, total	0.00053 U	mg/L
40	Compliance	E002	09/21/2023	Boron, total	23.0	mg/L
40	Compliance	E002	09/21/2023	Cadmium, total	0.00017 U	mg/L
40	Compliance	E002	09/21/2023	Calcium, total	490	mg/L
40	Compliance	E002	09/21/2023	Chloride, total	8.50	mg/L
40	Compliance	E002	09/21/2023	Chromium, total	0.0011 U	mg/L
40	Compliance	E002	09/21/2023	Cobalt, total	0.00600	mg/L
40	Compliance	E002	09/21/2023	Fluoride, total	0.19 U	mg/L
40	Compliance	E002	09/21/2023	Lead, total	0.00019 U	mg/L
40	Compliance	E002	09/21/2023	Lithium, total	0.760	mg/L
40	Compliance	E002	09/21/2023	Mercury, total	0.000079 U	mg/L
40	Compliance	E002	09/21/2023	Molybdenum, total	0.0550	mg/L
40	Compliance	E002	09/21/2023	Selenium, total	0.00098 U	mg/L
40	Compliance	E002	09/21/2023	Sulfate, total	3,200	mg/L

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
40	Compliance	E002	09/21/2023	Thallium, total	0.00057 U	mg/L
40	Compliance	E002	09/21/2023	Total Dissolved Solids	5,000	mg/L
40	Compliance	E002	09/21/2023	Turbidity, field	2.30	NTU
41	Compliance	E002	09/20/2023	Antimony, total	0.0013 U	mg/L
41	Compliance	E002	09/20/2023	Arsenic, total	0.0110	mg/L
41	Compliance	E002	09/20/2023	Barium, total	0.220	mg/L
41	Compliance	E002	09/20/2023	Beryllium, total	0.00053 U	mg/L
41	Compliance	E002	09/20/2023	Boron, total	3.00	mg/L
41	Compliance	E002	09/20/2023	Cadmium, total	0.00017 U	mg/L
41	Compliance	E002	09/20/2023	Calcium, total	77.0	mg/L
41	Compliance	E002	09/20/2023	Chloride, total	53.0	mg/L
41	Compliance	E002	09/20/2023	Chromium, total	0.0011 U	mg/L
41	Compliance	E002	09/20/2023	Cobalt, total	0.0004 U	mg/L
41	Compliance	E002	09/20/2023	Dissolved Oxygen	1.03	mg/L
41	Compliance	E002	09/20/2023	Fluoride, total	0.46 J	mg/L
41	Compliance	E002	09/20/2023	Lead, total	0.0005 UJ	mg/L
41	Compliance	E002	09/20/2023	Lithium, total	0.002 U	mg/L
41	Compliance	E002	09/20/2023	Mercury, total	0.000079 U	mg/L
41	Compliance	E002	09/20/2023	Molybdenum, total	0.0025 U	mg/L
41	Compliance	E002	09/20/2023	Oxidation Reduction Potential	-105	mV
41	Compliance	E002	09/20/2023	pH (field)	7.1	SU
41	Compliance	E002	09/20/2023	Selenium, total	0.00098 U	mg/L
41	Compliance	E002	09/20/2023	Specific Conductance @ 25C (field)	1,171	micromhos/cm
41	Compliance	E002	09/20/2023	Sulfate, total	0.21 U	mg/L
41	Compliance	E002	09/20/2023	Temperature	14.1	degrees C
41	Compliance	E002	09/20/2023	Thallium, total	0.00057 U	mg/L
41	Compliance	E002	09/20/2023	Total Dissolved Solids	650	mg/L
41	Compliance	E002	09/20/2023	Turbidity, field	15.9	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
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
02	LGU	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
02	LGU	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	9	11	CI around mean	0.00489	0.0600	Background	No Exceedance
02	LGU	E001	Barium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.193	2.0	Standard	No Exceedance
02	LGU	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
02	LGU	E001	Boron, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.305	2.45	Background	No Exceedance
02	LGU	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
02	LGU	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	20.9	200	Standard	No Exceedance
02	LGU	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
02	LGU	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
02	LGU	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	0.443	4.0	Standard	No Exceedance
02	LGU	E001	Lead, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
02	LGU	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	9	33	CI around mean	0.00269	0.04	Standard	No Exceedance
02	LGU	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
02	LGU	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.01	0.1	Standard	No Exceedance
02	LGU	E001	pH (field)	SU	03/31/21 - 06/20/23	9	0	CI around mean	7.3/7.7	6.5/9.0	Standard/Standard	No Exceedance
02	LGU	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	9	0	CI around mean	0.385	5	Standard	No Exceedance
02	LGU	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
02	LGU	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	-33.8	400	Standard	No Exceedance
02	LGU	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
02	LGU	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	543	1,200	Standard	No Exceedance
03R	LGU	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
03R	LGU	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.00393	0.0600	Background	No Exceedance
03R	LGU	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.281	2.0	Standard	No Exceedance
03R	LGU	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
03R	LGU	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	19.1	2.45	Background	Exceedance
03R	LGU	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.001	0.005	Standard	No Exceedance
03R	LGU	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	3	CI around mean	27	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
03R	LGU	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	0.0015	0.1	Standard	No Exceedance
03R	LGU	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.001	0.006	Standard	No Exceedance
03R	LGU	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.447	4.0	Standard	No Exceedance
03R	LGU	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	0.001	0.0075	Standard	No Exceedance
03R	LGU	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.003	0.04	Standard	No Exceedance
03R	LGU	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
03R	LGU	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.163	0.1	Standard	Exceedance
03R	LGU	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	7.1/7.4	6.5/9.0	Standard/Standard	No Exceedance
03R	LGU	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/21/23	8	0	CI around mean	0.764	5	Standard	No Exceedance
03R	LGU	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
03R	LGU	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	483	400	Standard	Exceedance
03R	LGU	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
03R	LGU	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	1,070	1,200	Standard	No Exceedance
04	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
04	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around geomean	0.00521	0.0600	Background	No Exceedance
04	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.237	2.0	Standard	No Exceedance
04	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
04	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	8.28	2.45	Background	Exceedance
04	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
04	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	12	200	Standard	No Exceedance
04	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
04	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	89	Most recent sample	0.001	0.006	Standard	No Exceedance
04	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.295	4.0	Standard	No Exceedance
04	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
04	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.0476	0.04	Standard	Exceedance
04	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
04	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.0247	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
04	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	7.3/7.5	6.5/9.0	Standard/Standard	No Exceedance
04	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/21/23	8	0	CI around mean	0.523	5	Standard	No Exceedance
04	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
04	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	58.1	400	Standard	No Exceedance
04	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
04	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	393	1,200	Standard	No Exceedance
05	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
05	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.01	0.0600	Background	No Exceedance
05	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0214	2.0	Standard	No Exceedance
05	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
05	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	18.1	2.45	Background	Exceedance
05	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
05	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	3	CI around median	9	200	Standard	No Exceedance
05	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
05	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
05	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.652	4.0	Standard	No Exceedance
05	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
05	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.0855	0.04	Standard	Exceedance
05	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
05	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.0364	0.1	Standard	No Exceedance
05	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	7.1/7.4	6.5/9.0	Standard/Standard	No Exceedance
05	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/20/23	8	0	CI around mean	-0.143	5	Standard	No Exceedance
05	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
05	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	141	400	Standard	No Exceedance
05	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
05	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	517	1,200	Standard	No Exceedance
07R	UA	E001	Antimony, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.006	Standard	No Exceedance

TABLE 2.
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845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
07R	UA	E001	Arsenic, total	mg/L	05/12/21 - 06/20/23	7	14	CI around geomean	0.000566	0.0600	Background	No Exceedance
07R	UA	E001	Barium, total	mg/L	05/12/21 - 06/20/23	7	0	CI around median	0.0176	2.0	Standard	No Exceedance
07R	UA	E001	Beryllium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.0005	0.004	Standard	No Exceedance
07R	UA	E001	Boron, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	31.3	2.45	Background	Exceedance
07R	UA	E001	Cadmium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.005	Standard	No Exceedance
07R	UA	E001	Chloride, total	mg/L	05/12/21 - 06/20/23	7	0	CI around median	4	200	Standard	No Exceedance
07R	UA	E001	Chromium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.1	Standard	No Exceedance
07R	UA	E001	Cobalt, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.006	Standard	No Exceedance
07R	UA	E001	Fluoride, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.115	4.0	Standard	No Exceedance
07R	UA	E001	Lead, total	mg/L	05/12/21 - 06/20/23	7	57	CI around median	0.001	0.0075	Standard	No Exceedance
07R	UA	E001	Lithium, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.531	0.04	Standard	Exceedance
07R	UA	E001	Mercury, total	mg/L	05/12/21 - 06/20/23	7	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
07R	UA	E001	Molybdenum, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.387	0.1	Standard	Exceedance
07R	UA	E001	pH (field)	SU	05/12/21 - 06/20/23	7	0	CI around mean	7.2/7.8	6.5/9.0	Standard/Standard	No Exceedance
07R	UA	E001	Radium 226 + Radium 228, total	pCi/L	05/12/21 - 06/20/23	7	0	CI around geomean	0.237	5	Standard	No Exceedance
07R	UA	E001	Selenium, total	mg/L	05/12/21 - 06/20/23	7	29	CI around mean	0.000454	0.05	Standard	No Exceedance
07R	UA	E001	Sulfate, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	1,720	400	Standard	Exceedance
07R	UA	E001	Thallium, total	mg/L	05/12/21 - 06/20/23	7	100	All ND - Last	0.002	0.002	Standard	No Exceedance
07R	UA	E001	Total Dissolved Solids	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	2,860	1,200	Standard	Exceedance
08R	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
08R	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.00933	0.0600	Background	No Exceedance
08R	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.0526	2.0	Standard	No Exceedance
08R	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
08R	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	19.7	2.45	Background	Exceedance
08R	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
08R	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	4	200	Standard	No Exceedance
08R	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance

TABLE 2.
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VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
08R	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
08R	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	67	CI around median	0.1	4.0	Standard	No Exceedance
08R	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
08R	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	0.13	0.04	Standard	Exceedance
08R	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
08R	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.145	0.1	Standard	Exceedance
08R	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	6.8/8.0	6.5/9.0	Standard/Standard	No Exceedance
08R	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/21/23	8	0	CI around mean	0.224	5	Standard	No Exceedance
08R	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
08R	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	397	400	Standard	No Exceedance
08R	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
08R	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	959	1,200	Standard	No Exceedance
17	UA	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.001	0.006	Standard	No Exceedance
17	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	6	17	CI around mean	0.00369	0.0600	Background	No Exceedance
17	UA	E001	Barium, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.024	2.0	Standard	No Exceedance
17	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
17	UA	E001	Boron, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	1.86	2.45	Background	No Exceedance
17	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.002	0.005	Standard	No Exceedance
17	UA	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	8.23	200	Standard	No Exceedance
17	UA	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.005	0.1	Standard	No Exceedance
17	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.00126	0.006	Standard	No Exceedance
17	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.138	4.0	Standard	No Exceedance
17	UA	E001	Lead, total	mg/L	03/31/21 - 06/20/23	6	67	CI around median (Last Sample, n<7)	0.0075	0.0075	Standard	No Exceedance
17	UA	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.0179	0.04	Standard	No Exceedance
17	UA	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
17	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	6	33	CI around mean	0.0017	0.1	Standard	No Exceedance
17	UA	E001	pH (field)	SU	03/31/21 - 06/20/23	6	0	CI around mean	6.7/6.9	6.5/9.0	Standard/Standard	No Exceedance

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VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
17	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	6	0	CI around mean	-0.0431	5	Standard	No Exceedance
17	UA	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	6	83	Most recent sample	0.001	0.05	Standard	No Exceedance
17	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	831	400	Standard	Exceedance
17	UA	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.002	0.002	Standard	No Exceedance
17	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	1,380	1,200	Standard	Exceedance
20	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
20	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	78	CI around median	0.001	0.0600	Background	No Exceedance
20	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0158	2.0	Standard	No Exceedance
20	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
20	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.514	2.45	Background	No Exceedance
20	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
20	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	17	CI around median	4	200	Standard	No Exceedance
20	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
20	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.001	0.006	Standard	No Exceedance
20	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.1	4.0	Standard	No Exceedance
20	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
20	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.0185	0.04	Standard	No Exceedance
20	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
20	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
20	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.0	6.5/9.0	Standard/Standard	No Exceedance
20	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.29	5	Standard	No Exceedance
20	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
20	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	-38.3	400	Standard	No Exceedance
20	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
20	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	379	1,200	Standard	No Exceedance
34	LGU	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
34	LGU	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0238	0.0600	Background	No Exceedance

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OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
34	LGU	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.153	2.0	Standard	No Exceedance
34	LGU	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
34	LGU	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.463	2.45	Background	No Exceedance
34	LGU	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
34	LGU	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	32.9	200	Standard	No Exceedance
34	LGU	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	22	CI around mean	0.00168	0.1	Standard	No Exceedance
34	LGU	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	44	CI around geomean	0.00095	0.006	Standard	No Exceedance
34	LGU	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.648	4.0	Standard	No Exceedance
34	LGU	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	11	CI around mean	0.00144	0.0075	Standard	No Exceedance
34	LGU	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	33	CI around mean	0.00297	0.04	Standard	No Exceedance
34	LGU	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
34	LGU	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
34	LGU	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
34	LGU	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.285	5	Standard	No Exceedance
34	LGU	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
34	LGU	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	90	CI around median	10	400	Standard	No Exceedance
34	LGU	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
34	LGU	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around median	475	1,200	Standard	No Exceedance
36	UA	E001	Antimony, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
36	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/21/23	9	11	CB around linear reg	0.00374	0.0600	Background	No Exceedance
36	UA	E001	Barium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.106	2.0	Standard	No Exceedance
36	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
36	UA	E001	Boron, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	11.1	2.45	Background	Exceedance
36	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
36	UA	E001	Chloride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	19.7	200	Standard	No Exceedance
36	UA	E001	Chromium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
36	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
36	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.253	4.0	Standard	No Exceedance
36	UA	E001	Lead, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
36	UA	E001	Lithium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.113	0.04	Standard	Exceedance
36	UA	E001	Mercury, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
36	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.0961	0.1	Standard	No Exceedance
36	UA	E001	pH (field)	SU	03/31/21 - 06/21/23	9	0	CI around mean	6.9/7.2	6.5/9.0	Standard/Standard	No Exceedance
36	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/21/23	9	0	CI around mean	1.16	5	Standard	No Exceedance
36	UA	E001	Selenium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
36	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	936	400	Standard	Exceedance
36	UA	E001	Thallium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
36	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	1,610	1,200	Standard	Exceedance
37	LGU	E001	Antimony, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
37	LGU	E001	Arsenic, total	mg/L	03/31/21 - 06/21/23	9	0	CB around T-S line	0.0374	0.0600	Background	No Exceedance
37	LGU	E001	Barium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.271	2.0	Standard	No Exceedance
37	LGU	E001	Beryllium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
37	LGU	E001	Boron, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	1.16	2.45	Background	No Exceedance
37	LGU	E001	Cadmium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
37	LGU	E001	Chloride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	41.9	200	Standard	No Exceedance
37	LGU	E001	Chromium, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
37	LGU	E001	Cobalt, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
37	LGU	E001	Fluoride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.598	4.0	Standard	No Exceedance
37	LGU	E001	Lead, total	mg/L	03/31/21 - 06/21/23	9	78	CI around median	0.001	0.0075	Standard	No Exceedance
37	LGU	E001	Lithium, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.003	0.04	Standard	No Exceedance
37	LGU	E001	Mercury, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
37	LGU	E001	Molybdenum, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
37	LGU	E001	pH (field)	SU	03/31/21 - 06/21/23	9	0	CI around mean	6.8/7.1	6.5/9.0	Standard/Standard	No Exceedance
37	LGU	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/21/23	9	0	CI around mean	0.703	5	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
37	LGU	E001	Selenium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
37	LGU	E001	Sulfate, total	mg/L	03/31/21 - 06/21/23	9	0	CB around linear reg	216	400	Standard	No Exceedance
37	LGU	E001	Thallium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
37	LGU	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/21/23	9	0	CB around linear reg	571	1,200	Standard	No Exceedance
38	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
38	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.0182	0.0600	Background	No Exceedance
38	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CB around T-S line	-0.304	2.0	Standard	No Exceedance
38	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
38	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.403	2.45	Background	No Exceedance
38	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
38	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	18	200	Standard	No Exceedance
38	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
38	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
38	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.341	4.0	Standard	No Exceedance
38	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
38	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	33	CB around linear reg	-0.0194	0.04	Standard	No Exceedance
38	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
38	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	11	CB around linear reg	-0.00657	0.1	Standard	No Exceedance
38	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.2	6.5/9.0	Standard/Standard	No Exceedance
38	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.774	5	Standard	No Exceedance
38	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
38	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	10	400	Standard	No Exceedance
38	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
38	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	484	1,200	Standard	No Exceedance
40	UA	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
40	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0168	0.0600	Background	No Exceedance
40	UA	E001	Barium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.03	2.0	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
40	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
40	UA	E001	Boron, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	18.7	2.45	Background	Exceedance
40	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	9	89	CI around median	0.001	0.005	Standard	No Exceedance
40	UA	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	13.2	200	Standard	No Exceedance
40	UA	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.005	0.1	Standard	No Exceedance
40	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0051	0.006	Standard	No Exceedance
40	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	9	78	Most recent sample	0.1	4.0	Standard	No Exceedance
40	UA	E001	Lead, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0375	0.0075	Standard	No Exceedance (RL > GWPS)
40	UA	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around geomean	0.723	0.04	Standard	Exceedance
40	UA	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
40	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0636	0.1	Standard	No Exceedance
40	UA	E001	pH (field)	SU	03/31/21 - 06/20/23	9	0	CI around mean	6.4/6.6	6.5/9.0	Standard/Standard	No Exceedance
40	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	9	0	CI around mean	0.622	5	Standard	No Exceedance
40	UA	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
40	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	2,760	400	Standard	Exceedance
40	UA	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	9	78	CI around median	0.002	0.002	Standard	No Exceedance
40	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	4,330	1,200	Standard	Exceedance
41	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
41	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.00815	0.0600	Background	No Exceedance
41	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.23	2.0	Standard	No Exceedance
41	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
41	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	2.53	2.45	Background	Exceedance
41	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.005	Standard	No Exceedance
41	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	54.7	200	Standard	No Exceedance
41	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
41	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
41	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.409	4.0	Standard	No Exceedance
41	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
41	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.003	0.04	Standard	No Exceedance
41	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
41	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.01	0.1	Standard	No Exceedance
41	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
41	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/20/21 - 06/21/23	8	0	CI around mean	1.13	5	Standard	No Exceedance
41	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
41	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	10	400	Standard	No Exceedance
41	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
41	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	588	1,200	Standard	No Exceedance

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

845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Notes:

Compliance Result:

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

RL > GWPS: An individual LCL exceeded the GWPS with the RL used as the LCL because the sample result was less than the RL.

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

LGU = Lower Groundwater Unit

UA = Uppermost Aquifer

LCL = Lower Confidence Limit

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

RL = reporting limit

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
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
02	LGU	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
02	LGU	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	10	CI around mean	0.0052	0.0600	Background	No Exceedance
02	LGU	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.192	2.0	Standard	No Exceedance
02	LGU	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
02	LGU	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.304	2.45	Background	No Exceedance
02	LGU	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
02	LGU	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	30.6	200	Standard	No Exceedance
02	LGU	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
02	LGU	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
02	LGU	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CI around mean	0.481	4.0	Standard	No Exceedance
02	LGU	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
02	LGU	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	40	CI around mean	0.00278	0.04	Standard	No Exceedance
02	LGU	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
02	LGU	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
02	LGU	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	7.3/7.7	6.5/9.0	Standard/Standard	No Exceedance
02	LGU	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
02	LGU	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	-17.7	400	Standard	No Exceedance
02	LGU	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
02	LGU	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	547	1,200	Standard	No Exceedance
03R	LGU	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
03R	LGU	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CI around geomean	0.00456	0.0600	Background	No Exceedance
03R	LGU	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.282	2.0	Standard	No Exceedance
03R	LGU	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
03R	LGU	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	19.1	2.45	Background	Exceedance
03R	LGU	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.005	Standard	No Exceedance
03R	LGU	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	2	CI around mean	26.3	200	Standard	No Exceedance
03R	LGU	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	80	CI around median	0.0015	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
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VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
03R	LGU	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.006	Standard	No Exceedance
03R	LGU	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.45	4.0	Standard	No Exceedance
03R	LGU	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.001	0.0075	Standard	No Exceedance
03R	LGU	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.003	0.04	Standard	No Exceedance
03R	LGU	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
03R	LGU	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.169	0.1	Standard	Exceedance
03R	LGU	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	7.2/7.4	6.5/9.0	Standard/Standard	No Exceedance
03R	LGU	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
03R	LGU	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	487	400	Standard	Exceedance
03R	LGU	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
03R	LGU	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	1,080	1,200	Standard	No Exceedance
04	UA	E002	Antimony, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
04	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/20/23	10	0	CI around median	0.0053	0.0600	Background	No Exceedance
04	UA	E002	Barium, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	0.23	2.0	Standard	No Exceedance
04	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
04	UA	E002	Boron, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	8.46	2.45	Background	Exceedance
04	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
04	UA	E002	Chloride, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	11.1	200	Standard	No Exceedance
04	UA	E002	Chromium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.025	0.1	Standard	No Exceedance
04	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/20/23	10	90	Most recent sample	0.001	0.006	Standard	No Exceedance
04	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/20/23	10	10	CB around linear reg	0.326	4.0	Standard	No Exceedance
04	UA	E002	Lead, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
04	UA	E002	Lithium, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	0.0478	0.04	Standard	Exceedance
04	UA	E002	Mercury, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
04	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.0294	0.1	Standard	No Exceedance
04	UA	E002	pH (field)	SU	03/30/21 - 09/20/23	10	0	CI around mean	7.3/7.5	6.5/9.0	Standard/Standard	No Exceedance
04	UA	E002	Selenium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance

TABLE 2.
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 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
04	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	48.2	400	Standard	No Exceedance
04	UA	E002	Thallium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
04	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/20/23	10	0	CI around median	388	1,200	Standard	No Exceedance
05	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
05	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.0600	Background	No Exceedance
05	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0216	2.0	Standard	No Exceedance
05	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
05	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	18.3	2.45	Background	Exceedance
05	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
05	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	2	CI around median	7.2	200	Standard	No Exceedance
05	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.05	0.1	Standard	No Exceedance
05	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.006	Standard	No Exceedance
05	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.508	4.0	Standard	No Exceedance
05	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
05	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	0.0886	0.04	Standard	Exceedance
05	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
05	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0382	0.1	Standard	No Exceedance
05	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	7.2/7.4	6.5/9.0	Standard/Standard	No Exceedance
05	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
05	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	221	400	Standard	No Exceedance
05	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
05	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	521	1,200	Standard	No Exceedance
08R	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
08R	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0274	0.0600	Background	No Exceedance
08R	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.052	2.0	Standard	No Exceedance
08R	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
08R	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	14.4	2.45	Background	Exceedance

TABLE 2.
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 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
08R	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
08R	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	4	200	Standard	No Exceedance
08R	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.05	0.1	Standard	No Exceedance
08R	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
08R	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.1	4.0	Standard	No Exceedance
08R	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
08R	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	0.13	0.04	Standard	Exceedance
08R	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
08R	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.161	0.1	Standard	Exceedance
08R	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CB around linear reg	6.6/9.5	6.5/9.0	Standard/Standard	No Exceedance
08R	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
08R	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	329	400	Standard	No Exceedance
08R	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
08R	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	1,000	1,200	Standard	No Exceedance
17	UA	E002	Antimony, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.003	0.006	Standard	No Exceedance
17	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/21/23	7	14	CI around mean	0.00371	0.0600	Background	No Exceedance
17	UA	E002	Barium, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	0.025	2.0	Standard	No Exceedance
17	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.001	0.004	Standard	No Exceedance
17	UA	E002	Boron, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	2.52	2.45	Background	Exceedance
17	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
17	UA	E002	Chloride, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	11.7	200	Standard	No Exceedance
17	UA	E002	Chromium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.005	0.1	Standard	No Exceedance
17	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/21/23	7	14	CI around mean	0.000858	0.006	Standard	No Exceedance
17	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/21/23	7	14	CI around geomean	0.121	4.0	Standard	No Exceedance
17	UA	E002	Lead, total	mg/L	03/31/21 - 09/21/23	7	71	CI around median	0.0005	0.0075	Standard	No Exceedance
17	UA	E002	Lithium, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	0.0171	0.04	Standard	No Exceedance
17	UA	E002	Mercury, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.0002	0.002	Standard	No Exceedance

TABLE 2.
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OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
17	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/21/23	7	43	CI around mean	0.00128	0.1	Standard	No Exceedance
17	UA	E002	pH (field)	SU	03/31/21 - 09/21/23	7	0	CI around mean	6.7/7.0	6.5/9.0	Standard/Standard	No Exceedance
17	UA	E002	Selenium, total	mg/L	03/31/21 - 09/21/23	7	86	CI around median	0.001	0.05	Standard	No Exceedance
17	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	866	400	Standard	Exceedance
17	UA	E002	Thallium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.002	0.002	Standard	No Exceedance
17	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	1,480	1,200	Standard	Exceedance
20	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
20	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.001	0.0600	Background	No Exceedance
20	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0165	2.0	Standard	No Exceedance
20	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
20	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.534	2.45	Background	No Exceedance
20	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
20	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	14	CI around median	4	200	Standard	No Exceedance
20	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
20	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.006	Standard	No Exceedance
20	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	1	4.0	Standard	No Exceedance
20	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
20	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around geomean	0.0192	0.04	Standard	No Exceedance
20	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
20	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.0015	0.1	Standard	No Exceedance
20	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.0	6.5/9.0	Standard/Standard	No Exceedance
20	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
20	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	69.6	400	Standard	No Exceedance
20	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
20	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	387	1,200	Standard	No Exceedance
34	LGU	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
34	LGU	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0238	0.0600	Background	No Exceedance

TABLE 2.
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
34	LGU	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.151	2.0	Standard	No Exceedance
34	LGU	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
34	LGU	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.465	2.45	Background	No Exceedance
34	LGU	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
34	LGU	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	32.9	200	Standard	No Exceedance
34	LGU	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	30	CI around mean	0.00177	0.1	Standard	No Exceedance
34	LGU	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	50	CI around median	0.001	0.006	Standard	No Exceedance
34	LGU	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around median	0.64	4.0	Standard	No Exceedance
34	LGU	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.00126	0.0075	Standard	No Exceedance
34	LGU	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	40	CI around mean	0.00303	0.04	Standard	No Exceedance
34	LGU	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
34	LGU	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.0015	0.1	Standard	No Exceedance
34	LGU	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
34	LGU	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
34	LGU	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	87	CI around median	10	400	Standard	No Exceedance
34	LGU	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
34	LGU	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around median	475	1,200	Standard	No Exceedance
36	UA	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
36	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	10	CB around linear reg	0.00319	0.0600	Background	No Exceedance
36	UA	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.102	2.0	Standard	No Exceedance
36	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
36	UA	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	11.5	2.45	Background	Exceedance
36	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
36	UA	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	19	200	Standard	No Exceedance
36	UA	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.05	0.1	Standard	No Exceedance
36	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
36	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CB around T-S line	0.26	4.0	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
36	UA	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
36	UA	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.125	0.04	Standard	Exceedance
36	UA	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
36	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.104	0.1	Standard	Exceedance
36	UA	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	7.0/7.2	6.5/9.0	Standard/Standard	No Exceedance
36	UA	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
36	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	944	400	Standard	Exceedance
36	UA	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
36	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	1,620	1,200	Standard	Exceedance
37	LGU	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
37	LGU	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	0	CI around median	0.0257	0.0600	Background	No Exceedance
37	LGU	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.275	2.0	Standard	No Exceedance
37	LGU	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
37	LGU	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	1.2	2.45	Background	No Exceedance
37	LGU	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
37	LGU	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	42	200	Standard	No Exceedance
37	LGU	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.0015	0.1	Standard	No Exceedance
37	LGU	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
37	LGU	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CI around median	0.58	4.0	Standard	No Exceedance
37	LGU	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	80	CI around median	0.001	0.0075	Standard	No Exceedance
37	LGU	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.003	0.04	Standard	No Exceedance
37	LGU	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
37	LGU	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.0015	0.1	Standard	No Exceedance
37	LGU	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	6.8/7.1	6.5/9.0	Standard/Standard	No Exceedance
37	LGU	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
37	LGU	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	248	400	Standard	No Exceedance
37	LGU	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
37	LGU	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	690	1,200	Standard	No Exceedance
38	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
38	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0227	0.0600	Background	No Exceedance
38	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CB around T-S line	-0.367	2.0	Standard	No Exceedance
38	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
38	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.405	2.45	Background	No Exceedance
38	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
38	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	17.7	200	Standard	No Exceedance
38	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
38	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
38	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.341	4.0	Standard	No Exceedance
38	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
38	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	40	CB around linear reg	-0.0112	0.04	Standard	No Exceedance
38	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
38	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	20	CI around mean	0.00226	0.1	Standard	No Exceedance
38	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.1	6.5/9.0	Standard/Standard	No Exceedance
38	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
38	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	10	400	Standard	No Exceedance
38	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
38	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	490	1,200	Standard	No Exceedance
40	UA	E002	Antimony, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
40	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.017	0.0600	Background	No Exceedance
40	UA	E002	Barium, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.0297	2.0	Standard	No Exceedance
40	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
40	UA	E002	Boron, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	19.1	2.45	Background	Exceedance
40	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/21/23	10	90	CI around median	0.001	0.005	Standard	No Exceedance
40	UA	E002	Chloride, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	11.9	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 3, 2023
 845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
40	UA	E002	Chromium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
40	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.00521	0.006	Standard	No Exceedance
40	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/21/23	10	80	CI around median	0.1	4.0	Standard	No Exceedance
40	UA	E002	Lead, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
40	UA	E002	Lithium, total	mg/L	03/31/21 - 09/21/23	10	0	CI around median	0.74	0.04	Standard	Exceedance
40	UA	E002	Mercury, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
40	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.0616	0.1	Standard	No Exceedance
40	UA	E002	Selenium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
40	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	2,800	400	Standard	Exceedance
40	UA	E002	Thallium, total	mg/L	03/31/21 - 09/21/23	10	80	CI around median	0.002	0.002	Standard	No Exceedance
40	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	4,350	1,200	Standard	Exceedance
41	UA	E002	Antimony, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.003	0.006	Standard	No Exceedance
41	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.0078	0.0600	Background	No Exceedance
41	UA	E002	Barium, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.199	2.0	Standard	No Exceedance
41	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.004	Standard	No Exceedance
41	UA	E002	Boron, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	2.59	2.45	Background	Exceedance
41	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
41	UA	E002	Chloride, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	54.3	200	Standard	No Exceedance
41	UA	E002	Chromium, total	mg/L	03/30/21 - 09/20/23	10	90	CI around median	0.0015	0.1	Standard	No Exceedance
41	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.006	Standard	No Exceedance
41	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/20/23	10	10	CI around median	0.41	4.0	Standard	No Exceedance
41	UA	E002	Lead, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
41	UA	E002	Lithium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.005	0.04	Standard	No Exceedance
41	UA	E002	Mercury, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
41	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.005	0.1	Standard	No Exceedance
41	UA	E002	pH (field)	SU	03/30/21 - 09/20/23	10	0	CI around mean	7.0/7.1	6.5/9.0	Standard/Standard	No Exceedance
41	UA	E002	Selenium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0025	0.05	Standard	No Exceedance

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

845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
41	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/20/23	10	80	CI around median	10	400	Standard	No Exceedance
41	UA	E002	Thallium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.002	0.002	Standard	No Exceedance
41	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	592	1,200	Standard	No Exceedance

Notes:

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

LGU = Lower Groundwater Unit

UA = Uppermost Aquifer

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range

For pH, the values presented are the lower / upper limits

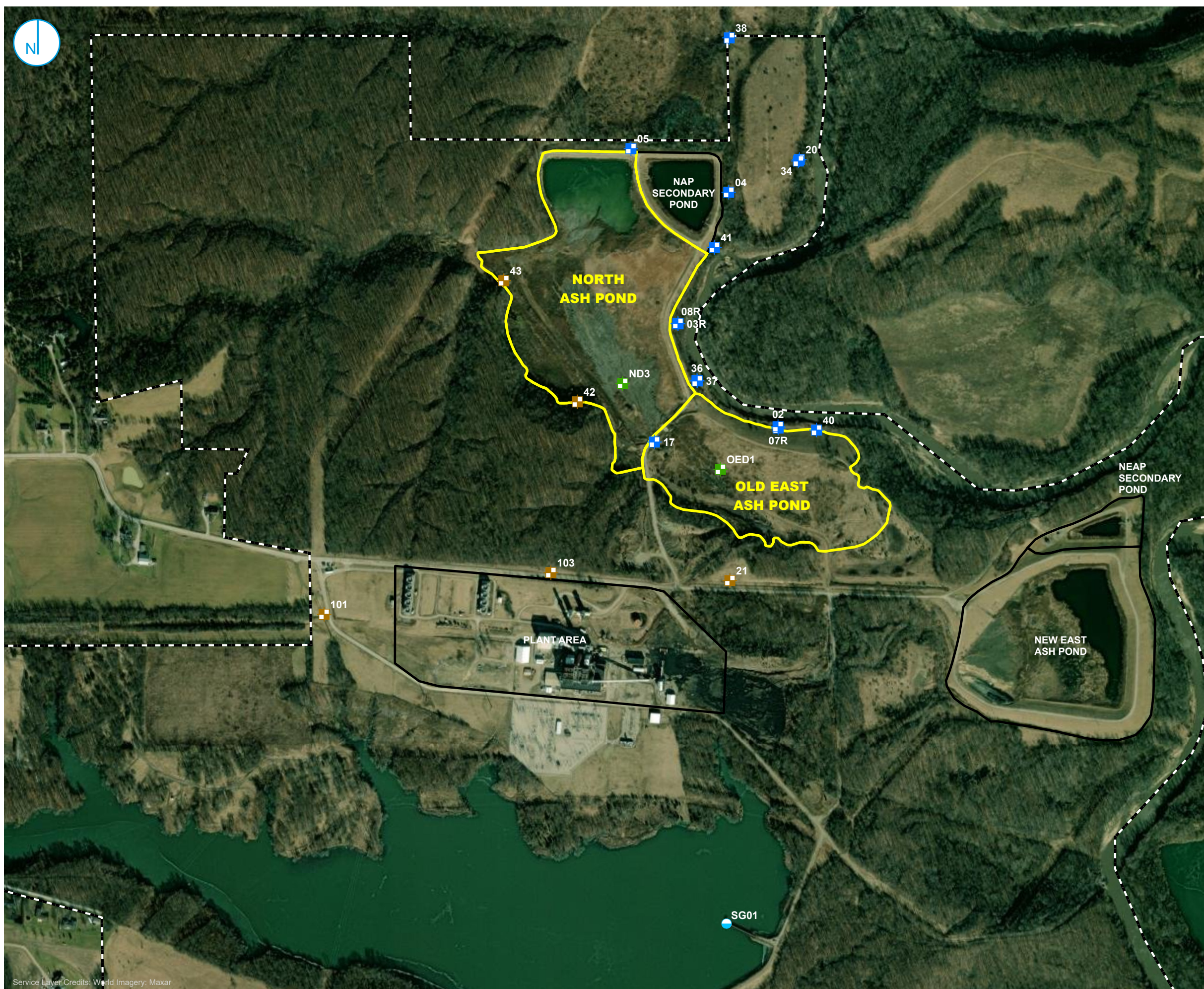
GWPS = Groundwater Protection Standard

GWPS Source:

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

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

FIGURES



- COMPLIANCE WELL
- BACKGROUND WELL
- SOURCE SAMPLE LOCATION
- STAFF GAGE
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 300 600 Feet

MONITORING WELL LOCATION MAP

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- TOTAL BORON EXCEEDANCE
- TOTAL LITHIUM EXCEEDANCE
- TOTAL MOLYBDENUM EXCEEDANCE
- TOTAL SULFATE EXCEEDANCE
- TOTAL DISSOLVED SOLIDS EXCEEDANCE
- COMPLIANCE WELL WITHOUT EXCEEDANCE
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 200 400
Feet

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

2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- TOTAL BORON EXCEEDANCE
- TOTAL MOLYBDENUM EXCEEDANCE
- TOTAL SULFATE EXCEEDANCE
- COMPLIANCE WELL WITHOUT EXCEEDANCE
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 200 400 Feet

GWPS EXCEEDANCE MAP LOWER GROUNDWATER UNIT QUARTERS 2-3, 2023

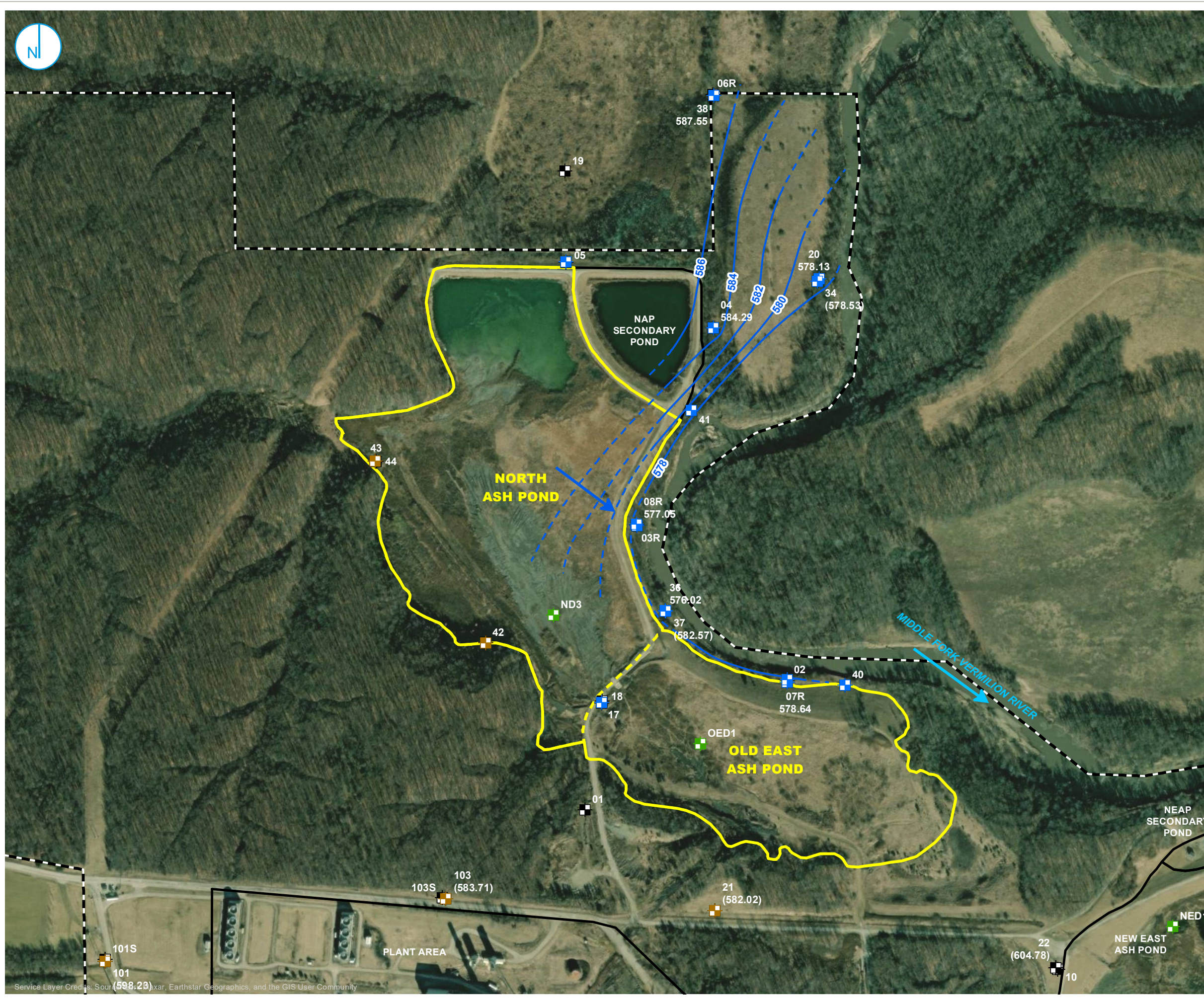
2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

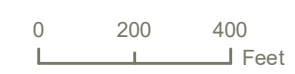


Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- 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).



**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 MAY 19, 2023**

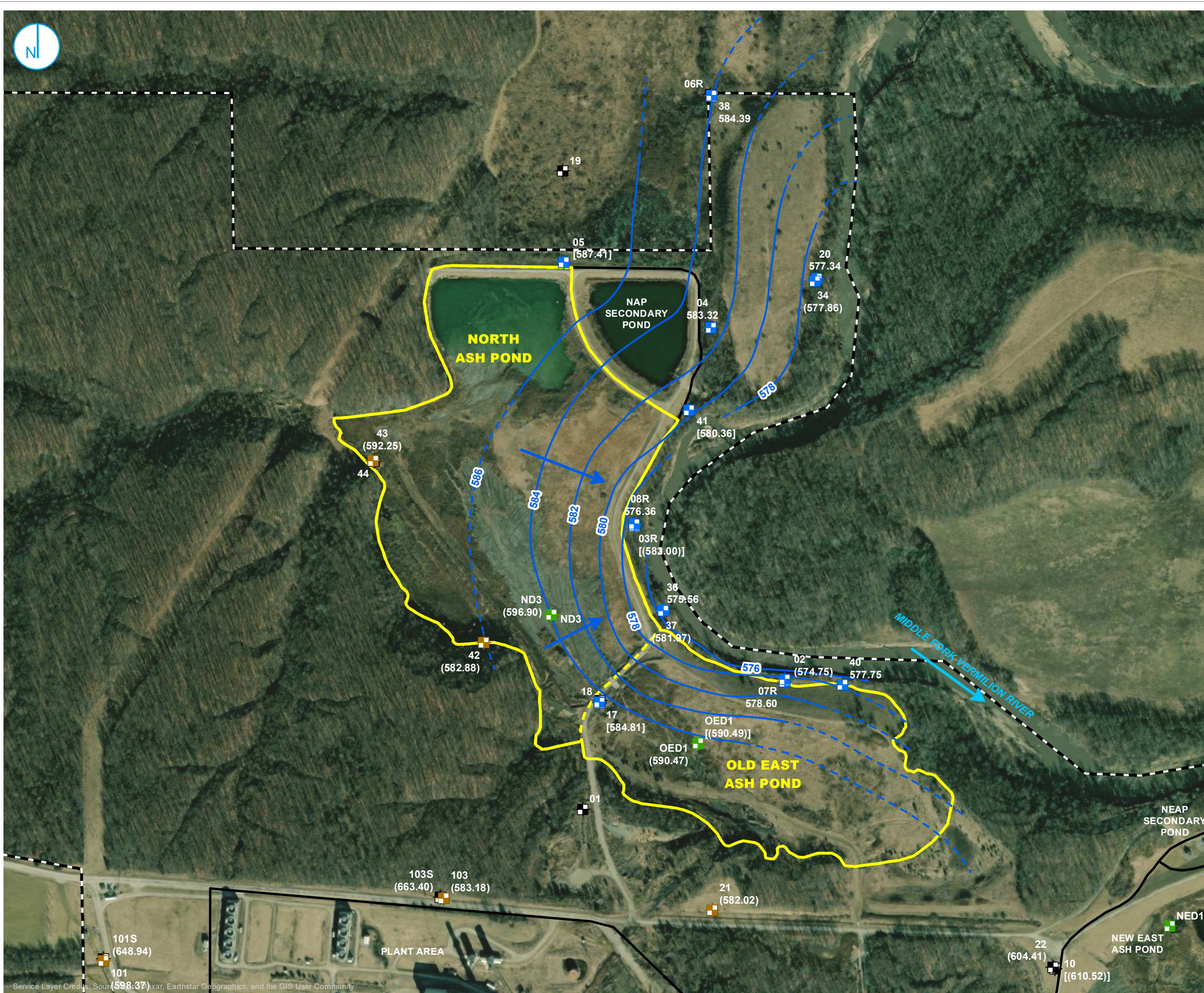
**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 4

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



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



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTES:

1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988



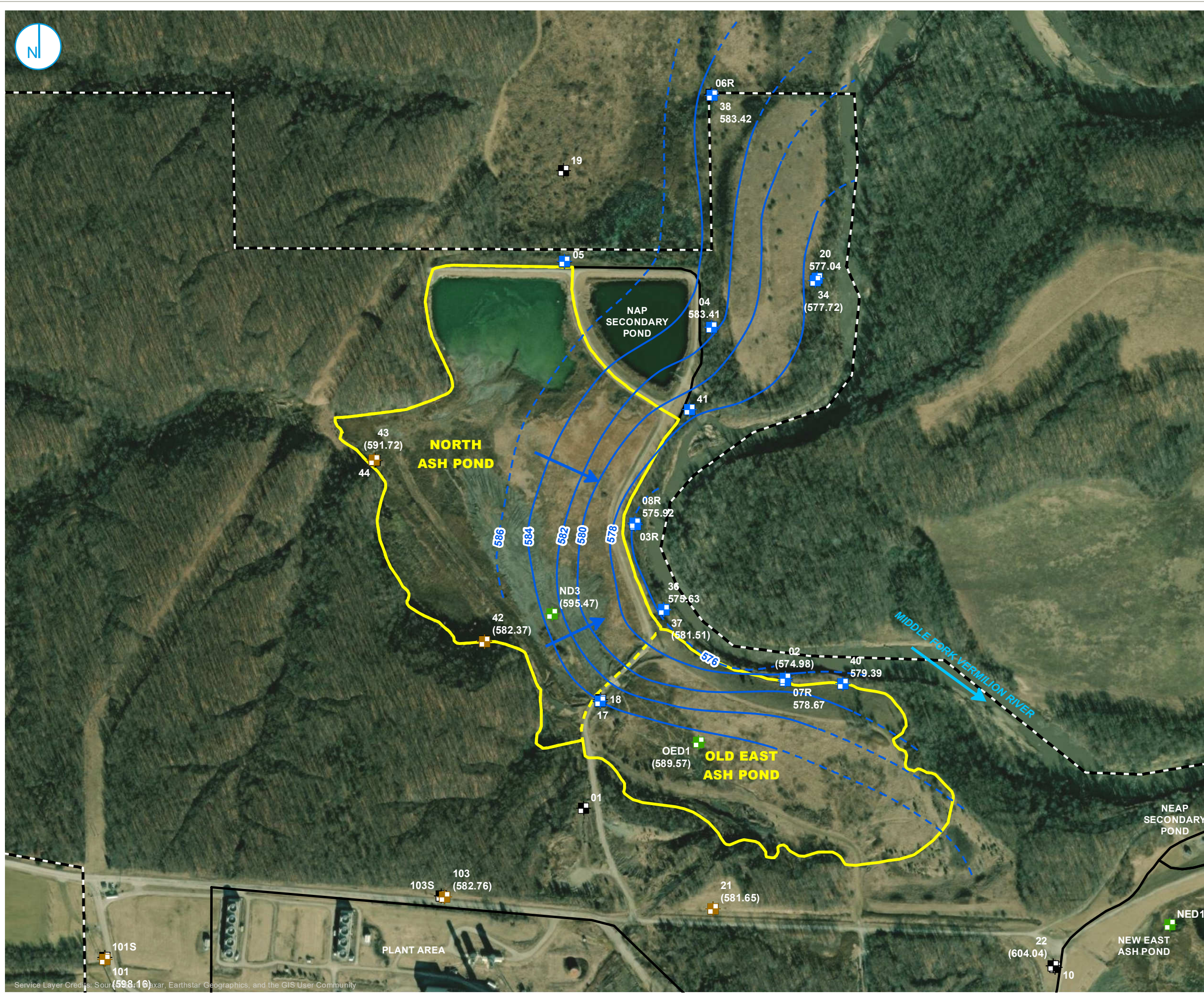
**UPPERMOST AQUIFER
POTENTIOMETRIC SURFACE MAP
JUNE 19, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 5



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



- COMPLIANCE MONITORING
- BACKGROUND MONITORING
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION
- GROUNDWATER FLOW
- REGULATED UNIT (SUBJECT)
- SITE FEATURE
- PROPERTY

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



**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 JULY 19, 2023**

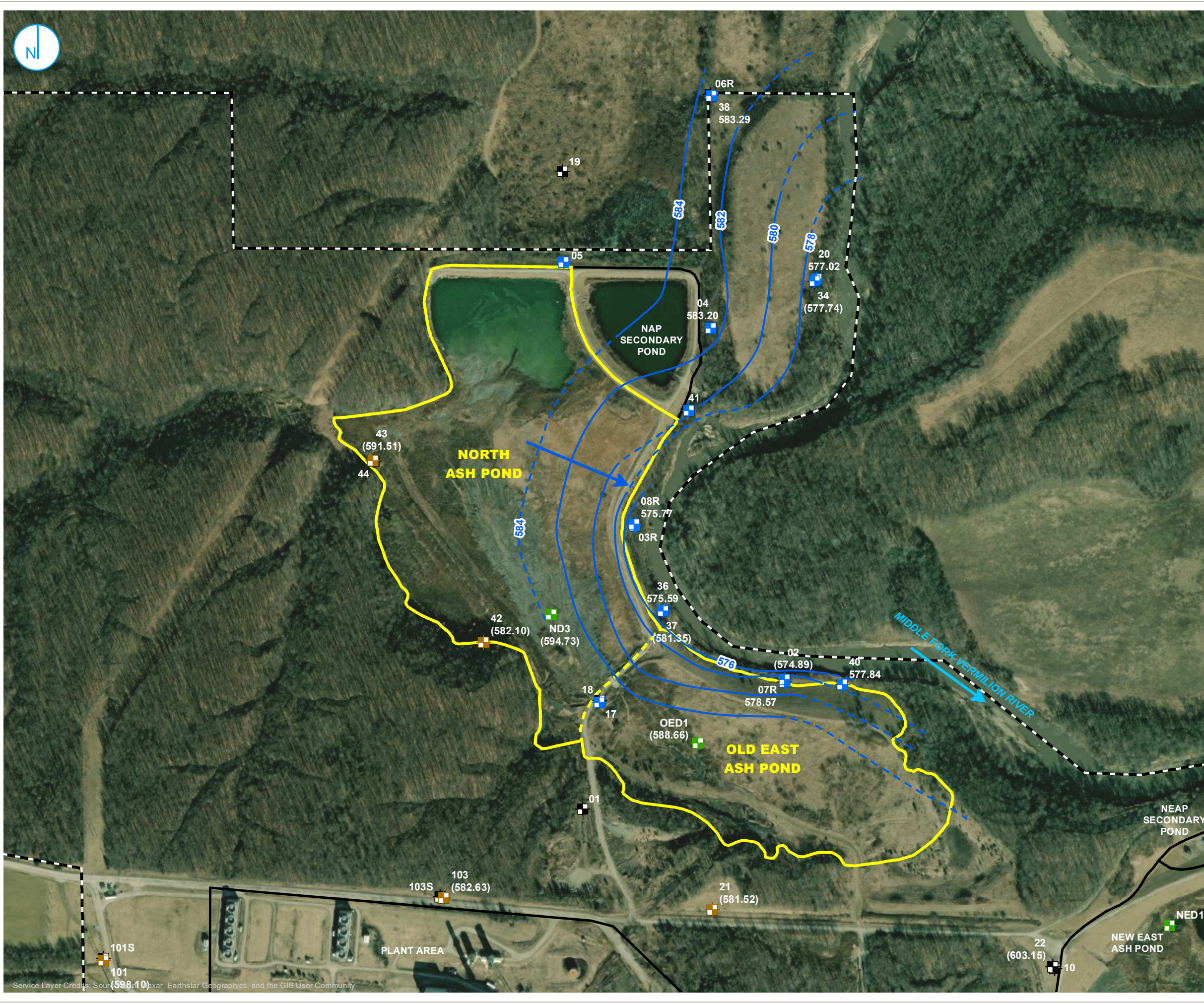
**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 6

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



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



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- 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).



**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 AUGUST 19, 2023**

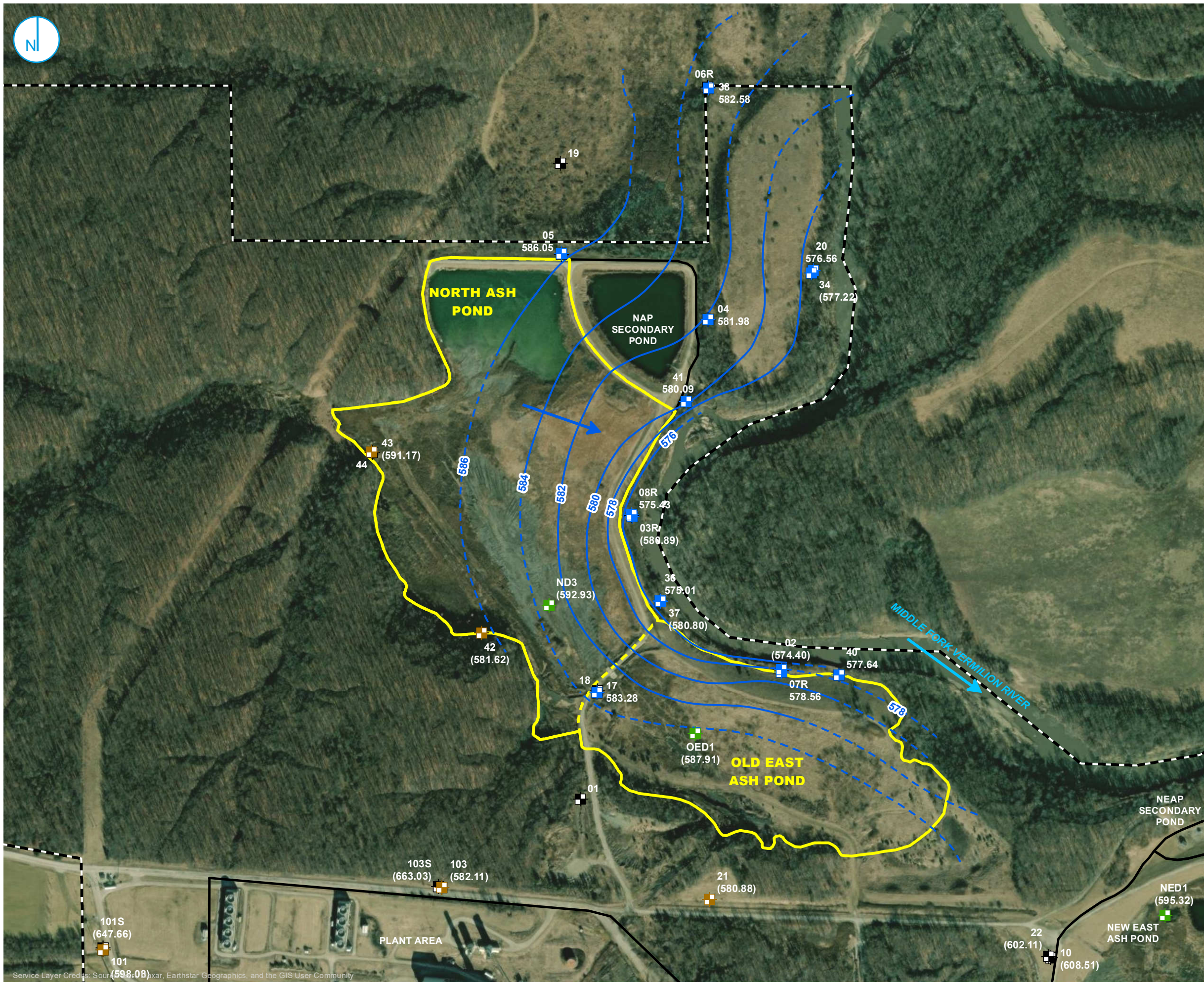
**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 7

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



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



- COMPLIANCE MONITORING
- BACKGROUND MONITORING
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION
- GROUNDWATER FLOW
- REGULATED UNIT (SUBJECT)
- SITE FEATURE
- 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).



**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 SEPTEMBER 18, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 8





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- 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).

0 200 400
 Feet

**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 OCTOBER 26, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 9



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



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTES:

1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



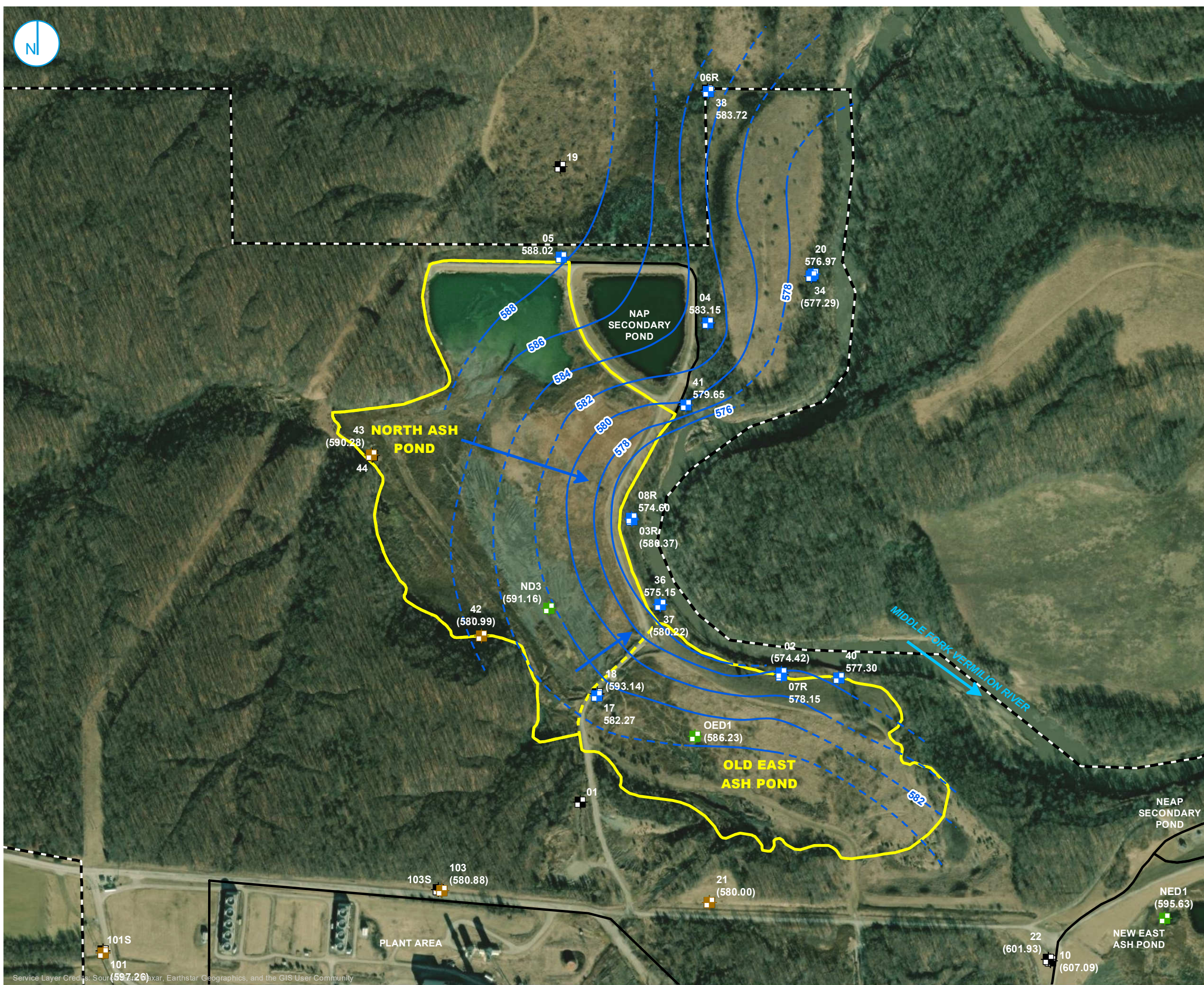
**UPPERMOST AQUIFER
POTENTIOMETRIC SURFACE MAP
NOVEMBER 27, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NORTH ASH POND AND OLD EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 10



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



- COMPLIANCE MONITORING
- BACKGROUND MONITORING
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION
- GROUNDWATER FLOW
- REGULATED UNIT (SUBJECT)
- SITE FEATURE
- PROPERTY

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



**UPPERMOST AQUIFER
 POTENTIOMETRIC SURFACE MAP
 DECEMBER 14, 2023**

**2023 ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT
 NORTH ASH POND AND OLD EAST ASH POND
 VERMILION POWER PLANT
 OAKWOOD, ILLINOIS**

FIGURE 11



ATTACHMENTS

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

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

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
02	Compliance	LGU	06/19/2023	19.11	574.75
02	Compliance	LGU	07/19/2023	18.88	574.98
02	Compliance	LGU	08/19/2023	18.97	574.89
02	Compliance	LGU	09/18/2023	19.47	574.40
02	Compliance	LGU	10/26/2023	19.35	574.52
02	Compliance	LGU	11/27/2023	19.54	574.33
02	Compliance	LGU	12/14/2023	19.45	574.42
03R	Compliance	LGU	06/21/2023	[7.86]	[582.00]
03R	Compliance	LGU	09/18/2023	8.97	580.89
03R	Compliance	LGU	10/26/2023	9.38	580.48
03R	Compliance	LGU	11/27/2023	9.34	580.52
03R	Compliance	LGU	12/14/2023	9.49	580.37
04	Compliance	UA	05/19/2023	6.60	584.29
04	Compliance	UA	06/19/2023	7.57	583.32
04	Compliance	UA	07/19/2023	7.48	583.41
04	Compliance	UA	08/19/2023	7.69	583.20
04	Compliance	UA	09/18/2023	8.91	581.98
04	Compliance	UA	10/26/2023	8.92	581.97
04	Compliance	UA	11/27/2023	8.67	582.22
04	Compliance	UA	12/14/2023	7.74	583.15
05	Compliance	UA	06/20/2023	[8.24]	[587.41]
05	Compliance	UA	09/18/2023	9.60	586.05
05	Compliance	UA	10/26/2023	8.44	587.21
05	Compliance	UA	11/27/2023	7.84	587.81
05	Compliance	UA	12/14/2023	7.63	588.02
07R	Compliance	UA	05/19/2023	15.85	578.64
07R	Compliance	UA	06/19/2023	15.89	578.60
07R	Compliance	UA	07/19/2023	15.82	578.67
07R	Compliance	UA	08/19/2023	15.92	578.57
07R	Compliance	UA	09/18/2023	15.94	578.56
07R	Compliance	UA	10/26/2023	16.20	578.30
07R	Compliance	UA	11/27/2023	16.31	578.19
07R	Compliance	UA	12/14/2023	16.35	578.15
08R	Compliance	UA	05/19/2023	12.80	577.05
08R	Compliance	UA	06/19/2023	13.49	576.36
08R	Compliance	UA	07/19/2023	13.93	575.92
08R	Compliance	UA	08/19/2023	14.09	575.77
08R	Compliance	UA	09/18/2023	14.43	575.43
08R	Compliance	UA	11/27/2023	15.07	574.79
08R	Compliance	UA	12/14/2023	15.26	574.60
17	Compliance	UA	06/20/2023	[38.38]	[584.81]
17	Compliance	UA	09/18/2023	39.91	583.28
17	Compliance	UA	10/26/2023	40.62	582.57
17	Compliance	UA	11/27/2023	40.76	582.43
17	Compliance	UA	12/14/2023	40.92	582.27
20	Compliance	UA	05/19/2023	14.13	578.13

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
20	Compliance	UA	06/19/2023	14.92	577.34
20	Compliance	UA	07/19/2023	15.22	577.04
20	Compliance	UA	08/19/2023	15.24	577.02
20	Compliance	UA	09/18/2023	15.71	576.56
20	Compliance	UA	10/26/2023	15.71	576.56
20	Compliance	UA	11/27/2023	15.55	576.72
20	Compliance	UA	12/14/2023	15.30	576.97
21	Background	LGU	05/19/2023	90.68	582.02
21	Background	LGU	06/19/2023	90.68	582.02
21	Background	LGU	07/19/2023	91.05	581.65
21	Background	LGU	08/19/2023	91.19	581.52
21	Background	LGU	09/18/2023	91.83	580.88
21	Background	LGU	10/26/2023	92.11	580.60
21	Background	LGU	11/27/2023	92.10	580.61
21	Background	LGU	12/14/2023	92.71	580.00
34	Compliance	LGU	05/19/2023	13.91	578.53
34	Compliance	LGU	06/19/2023	14.58	577.86
34	Compliance	LGU	07/19/2023	14.72	577.72
34	Compliance	LGU	08/19/2023	14.70	577.74
34	Compliance	LGU	09/18/2023	15.23	577.22
34	Compliance	LGU	10/26/2023	14.13	578.32
34	Compliance	LGU	11/27/2023	13.85	578.60
34	Compliance	LGU	12/14/2023	15.16	577.29
36	Compliance	UA	05/19/2023	13.93	576.02
36	Compliance	UA	06/19/2023	14.39	575.56
36	Compliance	UA	07/19/2023	14.32	575.63
36	Compliance	UA	08/19/2023	14.37	575.59
36	Compliance	UA	09/18/2023	14.95	575.01
36	Compliance	UA	10/26/2023	14.99	574.97
36	Compliance	UA	11/27/2023	15.00	574.96
36	Compliance	UA	12/14/2023	14.81	575.15
37	Compliance	LGU	05/19/2023	7.13	582.57
37	Compliance	LGU	06/19/2023	7.73	581.97
37	Compliance	LGU	07/19/2023	8.19	581.51
37	Compliance	LGU	08/19/2023	8.36	581.35
37	Compliance	LGU	09/18/2023	8.91	580.80
37	Compliance	LGU	10/26/2023	9.27	580.44
37	Compliance	LGU	11/27/2023	9.25	580.46
37	Compliance	LGU	12/14/2023	9.49	580.22
38	Compliance	UA	05/19/2023	4.13	587.55
38	Compliance	UA	06/19/2023	7.29	584.39
38	Compliance	UA	07/19/2023	8.26	583.42
38	Compliance	UA	08/19/2023	8.40	583.29
38	Compliance	UA	09/18/2023	9.11	582.58
38	Compliance	UA	10/26/2023	9.29	582.40
38	Compliance	UA	11/27/2023	8.62	583.07

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
38	Compliance	UA	12/14/2023	7.97	583.72
40	Compliance	UA	06/19/2023	14.51	577.75
40	Compliance	UA	07/19/2023	12.87	579.39
40	Compliance	UA	08/19/2023	14.42	577.84
40	Compliance	UA	09/18/2023	14.63	577.64
40	Compliance	UA	10/26/2023	14.88	577.39
40	Compliance	UA	11/27/2023	17.95	574.32
40	Compliance	UA	12/14/2023	14.97	577.30
41	Compliance	UA	06/21/2023	[6.81]	[580.36]
41	Compliance	UA	09/18/2023	7.08	580.09
41	Compliance	UA	10/26/2023	7.32	579.85
41	Compliance	UA	11/27/2023	7.25	579.92
41	Compliance	UA	12/14/2023	7.52	579.65
42	Background	LGU	06/19/2023	25.51	582.88
42	Background	LGU	07/19/2023	26.02	582.37
42	Background	LGU	08/19/2023	26.30	582.10
42	Background	LGU	09/18/2023	26.78	581.62
42	Background	LGU	10/26/2023	27.15	581.25
42	Background	LGU	11/27/2023	27.16	581.24
42	Background	LGU	12/14/2023	27.41	580.99
43	Background	LGU	06/19/2023	15.58	592.25
43	Background	LGU	07/19/2023	16.11	591.72
43	Background	LGU	08/19/2023	16.33	591.51
43	Background	LGU	09/18/2023	16.67	591.17
43	Background	LGU	10/26/2023	16.92	590.92
43	Background	LGU	11/27/2023	17.07	590.77
43	Background	LGU	12/14/2023	17.56	590.28
101	Background	LGU	05/19/2023	108.43	598.23
101	Background	LGU	06/19/2023	108.29	598.37
101	Background	LGU	07/19/2023	108.50	598.16
101	Background	LGU	08/19/2023	108.57	598.10
101	Background	LGU	09/18/2023	108.59	598.08
101	Background	LGU	10/26/2023	108.86	597.81
101	Background	LGU	11/27/2023	108.81	597.86
101	Background	LGU	12/14/2023	109.41	597.26
103	Background	LGU	05/19/2023	136.66	583.71
103	Background	LGU	06/19/2023	137.20	583.18
103	Background	LGU	07/19/2023	137.61	582.76
103	Background	LGU	08/19/2023	137.75	582.63
103	Background	LGU	09/18/2023	138.27	582.11
103	Background	LGU	10/26/2023	138.90	581.48
103	Background	LGU	11/27/2023	138.89	581.49
103	Background	LGU	12/14/2023	139.50	580.88
ND3	Water Level	CCR	05/19/2023	15.41	599.14
ND3	Water Level	CCR	06/19/2023	17.64	596.90
ND3	Water Level	CCR	07/19/2023	19.07	595.47

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
ND3	Water Level	CCR	08/19/2023	19.81	594.73
ND3	Water Level	CCR	09/18/2023	21.62	592.93
ND3	Water Level	CCR	11/27/2023	23.30	591.25
ND3	Water Level	CCR	12/14/2023	23.39	591.16
OED1	Water Level	CCR	05/19/2023	39.96	590.44
OED1	Water Level	CCR	06/19/2023	39.93	590.47
OED1	Water Level	CCR	07/19/2023	40.83	589.57
OED1	Water Level	CCR	08/19/2023	41.75	588.66
OED1	Water Level	CCR	09/18/2023	42.50	587.91
OED1	Water Level	CCR	11/27/2023	43.94	586.47
OED1	Water Level	CCR	12/14/2023	44.18	586.23
SG01	Water Level	SW	09/18/2023	18.30	671.02
SG01	Water Level	SW	10/26/2023	19.23	670.09
SG01	Water Level	SW	11/27/2023	19.15	670.17
SG01	Water Level	SW	12/14/2023	19.04	670.28

Notes:

Due to malfunctioning pressure transducer, data gaps exist in monthly water level elevations prior to the fourth quarter. Monthly depth to water measurements were collected manually in the fourth quarter.

BMP = below measuring point

Bracketing [] indicates that the measurement was obtained outside of the episodic depth to groundwater measurements time frame.

NAVD88 = North American Vertical Datum of 1988

Monitored Unit Abbreviations:

CCR = coal combustion residuals

LGU = lower groundwater unit

SW = surface water

UA = uppermost aquifer

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ATTACHMENT B COMPARISON OF STATISTICAL RESULTS TO BACKGROUND

- **ATTACHMENT C FROM THE QUARTER 2, 2023
GROUNDWATER MONITORING DATA AND DETECTED
EXCEEDANCES REPORT (RAMBOLL, 2023a)**
- **ATTACHMENT C FROM THE QUARTER 3, 2023
GROUNDWATER MONITORING DATA AND DETECTED
EXCEEDANCES REPORT (RAMBOLL, 2023b)**

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
02	LGU	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
02	LGU	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	9	11	CI around mean	0.00489	0.0600
02	LGU	E001	Barium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.193	0.520
02	LGU	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
02	LGU	E001	Boron, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.305	2.45
02	LGU	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.002	0.001
02	LGU	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	20.9	82.0
02	LGU	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.005	0.0200
02	LGU	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.00400
02	LGU	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	0.443	1.14
02	LGU	E001	Lead, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0075	0.00600
02	LGU	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	9	33	CI around mean	0.00269	0.0300
02	LGU	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
02	LGU	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.01	0.0200
02	LGU	E001	pH (field)	SU	03/31/21 - 06/20/23	9	0	CI around mean	7.3/7.7	6.8/7.8
02	LGU	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	9	0	CI around mean	0.385	1.90
02	LGU	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
02	LGU	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	9	0	CB around linear reg	-33.8	227
02	LGU	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.002	0.002
02	LGU	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	543	746
03R	LGU	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
03R	LGU	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.00393	0.0600
03R	LGU	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.281	0.520
03R	LGU	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
03R	LGU	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	19.1	2.45
03R	LGU	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.001	0.001
03R	LGU	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	3	CI around mean	27	82.0

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
03R	LGU	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	0.0015	0.0200
03R	LGU	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.001	0.00400
03R	LGU	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.447	1.14
03R	LGU	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	0.001	0.00600
03R	LGU	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.003	0.0300
03R	LGU	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
03R	LGU	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.163	0.0200
03R	LGU	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	7.1/7.4	6.8/7.8
03R	LGU	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/21/23	8	0	CI around mean	0.764	1.90
03R	LGU	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
03R	LGU	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	483	227
03R	LGU	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
03R	LGU	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	1,070	746
04	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
04	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around geomean	0.00521	0.0600
04	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.237	0.520
04	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
04	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	8.28	2.45
04	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.001
04	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	12	82.0
04	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.005	0.0200
04	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	89	Most recent sample	0.001	0.00400
04	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.295	1.14
04	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.00600
04	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.0476	0.0300
04	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
04	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.0247	0.0200

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OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
04	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	7.3/7.5	6.8/7.8
04	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/21/23	8	0	CI around mean	0.523	1.90
04	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
04	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	58.1	227
04	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
04	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	393	746
05	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
05	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.01	0.0600
05	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0214	0.520
05	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
05	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	18.1	2.45
05	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.001
05	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	3	CI around median	9	82.0
05	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.0200
05	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00400
05	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.652	1.14
05	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.00600
05	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.0855	0.0300
05	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
05	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.0364	0.0200
05	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	7.1/7.4	6.8/7.8
05	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/20/23	8	0	CI around mean	-0.143	1.90
05	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
05	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	141	227
05	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002
05	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	517	746
07R	UA	E001	Antimony, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.00100

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07R	UA	E001	Arsenic, total	mg/L	05/12/21 - 06/20/23	7	14	CI around geomean	0.000566	0.0600
07R	UA	E001	Barium, total	mg/L	05/12/21 - 06/20/23	7	0	CI around median	0.0176	0.520
07R	UA	E001	Beryllium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.0005	0.001
07R	UA	E001	Boron, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	31.3	2.45
07R	UA	E001	Cadmium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.001
07R	UA	E001	Chloride, total	mg/L	05/12/21 - 06/20/23	7	0	CI around median	4	82.0
07R	UA	E001	Chromium, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.0200
07R	UA	E001	Cobalt, total	mg/L	05/12/21 - 06/20/23	7	71	CI around median	0.001	0.00400
07R	UA	E001	Fluoride, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.115	1.14
07R	UA	E001	Lead, total	mg/L	05/12/21 - 06/20/23	7	57	CI around median	0.001	0.00600
07R	UA	E001	Lithium, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.531	0.0300
07R	UA	E001	Mercury, total	mg/L	05/12/21 - 06/20/23	7	100	All ND - Last	0.0002	0.0002
07R	UA	E001	Molybdenum, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	0.387	0.0200
07R	UA	E001	pH (field)	SU	05/12/21 - 06/20/23	7	0	CI around mean	7.2/7.8	6.8/7.8
07R	UA	E001	Radium 226 + Radium 228, total	pCi/L	05/12/21 - 06/20/23	7	0	CI around geomean	0.237	1.90
07R	UA	E001	Selenium, total	mg/L	05/12/21 - 06/20/23	7	29	CI around mean	0.000454	0.001
07R	UA	E001	Sulfate, total	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	1,720	227
07R	UA	E001	Thallium, total	mg/L	05/12/21 - 06/20/23	7	100	All ND - Last	0.002	0.002
07R	UA	E001	Total Dissolved Solids	mg/L	05/12/21 - 06/20/23	7	0	CI around mean	2,860	746
08R	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
08R	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.00933	0.0600
08R	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.0526	0.520
08R	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
08R	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	19.7	2.45
08R	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.001
08R	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	4	82.0
08R	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.005	0.0200

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
08R	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00400
08R	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	67	CI around median	0.1	1.14
08R	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.00600
08R	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around median	0.13	0.0300
08R	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
08R	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.145	0.0200
08R	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	6.8/8.0	6.8/7.8
08R	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/21/21 - 06/21/23	8	0	CI around mean	0.224	1.90
08R	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
08R	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	397	227
08R	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
08R	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	959	746
17	UA	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.001	0.00100
17	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	6	17	CI around mean	0.00369	0.0600
17	UA	E001	Barium, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.024	0.520
17	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.0005	0.001
17	UA	E001	Boron, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	1.86	2.45
17	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.002	0.001
17	UA	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	8.23	82.0
17	UA	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.005	0.0200
17	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.00126	0.00400
17	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.138	1.14
17	UA	E001	Lead, total	mg/L	03/31/21 - 06/20/23	6	67	CI around median (Last Sample, n<7)	0.0075	0.00600
17	UA	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	0.0179	0.0300
17	UA	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.0002	0.0002
17	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	6	33	CI around mean	0.0017	0.0200
17	UA	E001	pH (field)	SU	03/31/21 - 06/20/23	6	0	CI around mean	6.7/6.9	6.8/7.8

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
17	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	6	0	CI around mean	-0.0431	1.90
17	UA	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	6	83	Most recent sample	0.001	0.001
17	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	831	227
17	UA	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	6	100	All ND - Last	0.002	0.002
17	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	6	0	CI around mean	1,380	746
20	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
20	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	78	CI around median	0.001	0.0600
20	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0158	0.520
20	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
20	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.514	2.45
20	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.001
20	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	17	CI around median	4	82.0
20	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.0200
20	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.001	0.00400
20	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.1	1.14
20	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.00600
20	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.0185	0.0300
20	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
20	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.0015	0.0200
20	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.0	6.8/7.8
20	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.29	1.90
20	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
20	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	-38.3	227
20	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002
20	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	379	746
34	LGU	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
34	LGU	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.0238	0.0600

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34	LGU	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	0.153	0.520
34	LGU	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
34	LGU	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.463	2.45
34	LGU	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.001
34	LGU	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	32.9	82.0
34	LGU	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	22	CI around mean	0.00168	0.0200
34	LGU	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	44	CI around geomean	0.00095	0.00400
34	LGU	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.648	1.14
34	LGU	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	11	CI around mean	0.00144	0.00600
34	LGU	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	33	CI around mean	0.00297	0.0300
34	LGU	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
34	LGU	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	89	CI around median	0.0015	0.0200
34	LGU	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.1	6.8/7.8
34	LGU	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.285	1.90
34	LGU	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
34	LGU	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	90	CI around median	10	227
34	LGU	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002
34	LGU	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around median	475	746
36	UA	E001	Antimony, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
36	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/21/23	9	11	CB around linear reg	0.00374	0.0600
36	UA	E001	Barium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.106	0.520
36	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
36	UA	E001	Boron, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	11.1	2.45
36	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.001
36	UA	E001	Chloride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	19.7	82.0
36	UA	E001	Chromium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.005	0.0200
36	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.00400

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
36	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.253	1.14
36	UA	E001	Lead, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0075	0.00600
36	UA	E001	Lithium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.113	0.0300
36	UA	E001	Mercury, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
36	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.0961	0.0200
36	UA	E001	pH (field)	SU	03/31/21 - 06/21/23	9	0	CI around mean	6.9/7.2	6.8/7.8
36	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/21/23	9	0	CI around mean	1.16	1.90
36	UA	E001	Selenium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
36	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	936	227
36	UA	E001	Thallium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
36	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	1,610	746
37	LGU	E001	Antimony, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
37	LGU	E001	Arsenic, total	mg/L	03/31/21 - 06/21/23	9	0	CB around T-S line	0.0374	0.0600
37	LGU	E001	Barium, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.271	0.520
37	LGU	E001	Beryllium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
37	LGU	E001	Boron, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	1.16	2.45
37	LGU	E001	Cadmium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.001
37	LGU	E001	Chloride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	41.9	82.0
37	LGU	E001	Chromium, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.0015	0.0200
37	LGU	E001	Cobalt, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.00400
37	LGU	E001	Fluoride, total	mg/L	03/31/21 - 06/21/23	9	0	CI around mean	0.598	1.14
37	LGU	E001	Lead, total	mg/L	03/31/21 - 06/21/23	9	78	CI around median	0.001	0.00600
37	LGU	E001	Lithium, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.003	0.0300
37	LGU	E001	Mercury, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
37	LGU	E001	Molybdenum, total	mg/L	03/31/21 - 06/21/23	9	89	CI around median	0.0015	0.0200
37	LGU	E001	pH (field)	SU	03/31/21 - 06/21/23	9	0	CI around mean	6.8/7.1	6.8/7.8
37	LGU	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/21/23	9	0	CI around mean	0.703	1.90

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
37	LGU	E001	Selenium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
37	LGU	E001	Sulfate, total	mg/L	03/31/21 - 06/21/23	9	0	CB around linear reg	216	227
37	LGU	E001	Thallium, total	mg/L	03/31/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
37	LGU	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/21/23	9	0	CB around linear reg	571	746
38	UA	E001	Antimony, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
38	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/20/23	9	0	CB around linear reg	0.0182	0.0600
38	UA	E001	Barium, total	mg/L	03/30/21 - 06/20/23	9	0	CB around T-S line	-0.304	0.520
38	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
38	UA	E001	Boron, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.403	2.45
38	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.001
38	UA	E001	Chloride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around geomean	18	82.0
38	UA	E001	Chromium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.005	0.0200
38	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.00400
38	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	0.341	1.14
38	UA	E001	Lead, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0075	0.00600
38	UA	E001	Lithium, total	mg/L	03/30/21 - 06/20/23	9	33	CB around linear reg	-0.0194	0.0300
38	UA	E001	Mercury, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
38	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/20/23	9	11	CB around linear reg	-0.00657	0.0200
38	UA	E001	pH (field)	SU	03/30/21 - 06/20/23	9	0	CI around mean	6.9/7.2	6.8/7.8
38	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/19/21 - 06/20/23	8	0	CI around mean	0.774	1.90
38	UA	E001	Selenium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
38	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	10	227
38	UA	E001	Thallium, total	mg/L	03/30/21 - 06/20/23	9	100	All ND - Last	0.002	0.002
38	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/20/23	9	0	CI around mean	484	746
40	UA	E001	Antimony, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.00100
40	UA	E001	Arsenic, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0168	0.0600
40	UA	E001	Barium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.03	0.520

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
40	UA	E001	Beryllium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0005	0.001
40	UA	E001	Boron, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	18.7	2.45
40	UA	E001	Cadmium, total	mg/L	03/31/21 - 06/20/23	9	89	CI around median	0.001	0.001
40	UA	E001	Chloride, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	13.2	82.0
40	UA	E001	Chromium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.005	0.0200
40	UA	E001	Cobalt, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0051	0.00400
40	UA	E001	Fluoride, total	mg/L	03/31/21 - 06/20/23	9	78	Most recent sample	0.1	1.14
40	UA	E001	Lead, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0375	0.00600
40	UA	E001	Lithium, total	mg/L	03/31/21 - 06/20/23	9	0	CI around geomean	0.723	0.0300
40	UA	E001	Mercury, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.0002	0.0002
40	UA	E001	Molybdenum, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	0.0636	0.0200
40	UA	E001	pH (field)	SU	03/31/21 - 06/20/23	9	0	CI around mean	6.4/6.6	6.8/7.8
40	UA	E001	Radium 226 + Radium 228, total	pCi/L	03/31/21 - 06/20/23	9	0	CI around mean	0.622	1.90
40	UA	E001	Selenium, total	mg/L	03/31/21 - 06/20/23	9	100	All ND - Last	0.001	0.001
40	UA	E001	Sulfate, total	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	2,760	227
40	UA	E001	Thallium, total	mg/L	03/31/21 - 06/20/23	9	78	CI around median	0.002	0.002
40	UA	E001	Total Dissolved Solids	mg/L	03/31/21 - 06/20/23	9	0	CI around mean	4,330	746
41	UA	E001	Antimony, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00100
41	UA	E001	Arsenic, total	mg/L	03/30/21 - 06/21/23	9	0	CB around linear reg	0.00815	0.0600
41	UA	E001	Barium, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.23	0.520
41	UA	E001	Beryllium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0005	0.001
41	UA	E001	Boron, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	2.53	2.45
41	UA	E001	Cadmium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.001
41	UA	E001	Chloride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	54.7	82.0
41	UA	E001	Chromium, total	mg/L	03/30/21 - 06/21/23	9	89	CI around median	0.0015	0.0200
41	UA	E001	Cobalt, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.00400
41	UA	E001	Fluoride, total	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	0.409	1.14

**ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023**

845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
41	UA	E001	Lead, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0075	0.00600
41	UA	E001	Lithium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.003	0.0300
41	UA	E001	Mercury, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.0002	0.0002
41	UA	E001	Molybdenum, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.01	0.0200
41	UA	E001	pH (field)	SU	03/30/21 - 06/21/23	9	0	CI around mean	6.9/7.1	6.8/7.8
41	UA	E001	Radium 226 + Radium 228, total	pCi/L	04/20/21 - 06/21/23	8	0	CI around mean	1.13	1.90
41	UA	E001	Selenium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.001	0.001
41	UA	E001	Sulfate, total	mg/L	03/30/21 - 06/21/23	9	78	CI around median	10	227
41	UA	E001	Thallium, total	mg/L	03/30/21 - 06/21/23	9	100	All ND - Last	0.002	0.002
41	UA	E001	Total Dissolved Solids	mg/L	03/30/21 - 06/21/23	9	0	CI around mean	588	746

Notes:

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

HSU = hydrostratigraphic unit:

LGU = Lower Groundwater Unit

UA = Uppermost Aquifer

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range

For pH, the values presented are the lower / upper limits of the background determination

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
02	LGU	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.00100
02	LGU	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	10	CI around mean	0.0052	0.0600
02	LGU	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.192	0.520
02	LGU	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.001
02	LGU	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.304	2.45
02	LGU	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.001
02	LGU	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	30.6	82.0
02	LGU	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.005	0.0200
02	LGU	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.00400
02	LGU	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CI around mean	0.481	1.14
02	LGU	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.00600
02	LGU	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	40	CI around mean	0.00278	0.0300
02	LGU	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.0002
02	LGU	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.005	0.0200
02	LGU	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	7.3/7.7	6.8/7.8
02	LGU	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.001
02	LGU	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	-17.7	227
02	LGU	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002
02	LGU	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	547	746
03R	LGU	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
03R	LGU	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CI around geomean	0.00456	0.0600
03R	LGU	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.282	0.520
03R	LGU	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
03R	LGU	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	19.1	2.45
03R	LGU	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.001
03R	LGU	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	2	CI around mean	26.3	82.0
03R	LGU	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	80	CI around median	0.0015	0.0200

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
03R	LGU	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.00400
03R	LGU	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.45	1.14
03R	LGU	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.001	0.00600
03R	LGU	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.003	0.0300
03R	LGU	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
03R	LGU	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.169	0.0200
03R	LGU	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	7.2/7.4	6.8/7.8
03R	LGU	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
03R	LGU	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	487	227
03R	LGU	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
03R	LGU	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	1,080	746
04	UA	E002	Antimony, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.003	0.00100
04	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/20/23	10	0	CI around median	0.0053	0.0600
04	UA	E002	Barium, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	0.23	0.520
04	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.001
04	UA	E002	Boron, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	8.46	2.45
04	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.001
04	UA	E002	Chloride, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	11.1	82.0
04	UA	E002	Chromium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.025	0.0200
04	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/20/23	10	90	Most recent sample	0.001	0.00400
04	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/20/23	10	10	CB around linear reg	0.326	1.14
04	UA	E002	Lead, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.00600
04	UA	E002	Lithium, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	0.0478	0.0300
04	UA	E002	Mercury, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0002	0.0002
04	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.0294	0.0200
04	UA	E002	pH (field)	SU	03/30/21 - 09/20/23	10	0	CI around mean	7.3/7.5	6.8/7.8
04	UA	E002	Selenium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0025	0.001

ATTACHMENT C.

COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 3, 2023

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
04	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	48.2	227
04	UA	E002	Thallium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.002	0.002
04	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/20/23	10	0	CI around median	388	746
05	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
05	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.0600
05	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0216	0.520
05	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
05	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	18.3	2.45
05	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.001
05	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	2	CI around median	7.2	82.0
05	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.05	0.0200
05	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.00400
05	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.508	1.14
05	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.00600
05	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	0.0886	0.0300
05	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
05	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0382	0.0200
05	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	7.2/7.4	6.8/7.8
05	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
05	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	221	227
05	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
05	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	521	746
08R	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
08R	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0274	0.0600
08R	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.052	0.520
08R	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
08R	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	14.4	2.45

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

845 QUARTERLY REPORT
 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
08R	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.001
08R	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	4	82.0
08R	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.05	0.0200
08R	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.00400
08R	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.1	1.14
08R	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.00600
08R	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around median	0.13	0.0300
08R	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
08R	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.161	0.0200
08R	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CB around linear reg	6.6/9.5	6.8/7.8
08R	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
08R	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	329	227
08R	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
08R	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	1,000	746
17	UA	E002	Antimony, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.003	0.00100
17	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/21/23	7	14	CI around mean	0.00371	0.0600
17	UA	E002	Barium, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	0.025	0.520
17	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.001	0.001
17	UA	E002	Boron, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	2.52	2.45
17	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.0005	0.001
17	UA	E002	Chloride, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	11.7	82.0
17	UA	E002	Chromium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.005	0.0200
17	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/21/23	7	14	CI around mean	0.000858	0.00400
17	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/21/23	7	14	CI around geomean	0.121	1.14
17	UA	E002	Lead, total	mg/L	03/31/21 - 09/21/23	7	71	CI around median	0.0005	0.00600
17	UA	E002	Lithium, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	0.0171	0.0300
17	UA	E002	Mercury, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.0002	0.0002

ATTACHMENT C.
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845 QUARTERLY REPORT
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NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
17	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/21/23	7	43	CI around mean	0.00128	0.0200
17	UA	E002	pH (field)	SU	03/31/21 - 09/21/23	7	0	CI around mean	6.7/7.0	6.8/7.8
17	UA	E002	Selenium, total	mg/L	03/31/21 - 09/21/23	7	86	CI around median	0.001	0.001
17	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	866	227
17	UA	E002	Thallium, total	mg/L	03/31/21 - 09/21/23	7	100	All ND - Last	0.002	0.002
17	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/21/23	7	0	CI around mean	1,480	746
20	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
20	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	70	CI around median	0.001	0.0600
20	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0165	0.520
20	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
20	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.534	2.45
20	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.001
20	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	14	CI around median	4	82.0
20	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.005	0.0200
20	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.001	0.00400
20	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	1	1.14
20	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.00600
20	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around geomean	0.0192	0.0300
20	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
20	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.0015	0.0200
20	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.0	6.8/7.8
20	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
20	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	69.6	227
20	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
20	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	387	746
34	LGU	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
34	LGU	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.0238	0.0600

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 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
34	LGU	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.151	0.520
34	LGU	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
34	LGU	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.465	2.45
34	LGU	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.001
34	LGU	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	32.9	82.0
34	LGU	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	30	CI around mean	0.00177	0.0200
34	LGU	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	50	CI around median	0.001	0.00400
34	LGU	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around median	0.64	1.14
34	LGU	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.00126	0.00600
34	LGU	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	40	CI around mean	0.00303	0.0300
34	LGU	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
34	LGU	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	0.0015	0.0200
34	LGU	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.1	6.8/7.8
34	LGU	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
34	LGU	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	87	CI around median	10	227
34	LGU	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
34	LGU	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around median	475	746
36	UA	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.00100
36	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	10	CB around linear reg	0.00319	0.0600
36	UA	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.102	0.520
36	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.001
36	UA	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	11.5	2.45
36	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.001
36	UA	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	19	82.0
36	UA	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.05	0.0200
36	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.00400
36	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CB around T-S line	0.26	1.14

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 VERMILION POWER PLANT
 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
36	UA	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.00600
36	UA	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.125	0.0300
36	UA	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.0002
36	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.104	0.0200
36	UA	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	7.0/7.2	6.8/7.8
36	UA	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.001
36	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	944	227
36	UA	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002
36	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	1,620	746
37	LGU	E002	Antimony, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.003	0.00100
37	LGU	E002	Arsenic, total	mg/L	03/31/21 - 09/20/23	10	0	CI around median	0.0257	0.0600
37	LGU	E002	Barium, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	0.275	0.520
37	LGU	E002	Beryllium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.001
37	LGU	E002	Boron, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	1.2	2.45
37	LGU	E002	Cadmium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0005	0.001
37	LGU	E002	Chloride, total	mg/L	03/31/21 - 09/20/23	10	0	CI around mean	42	82.0
37	LGU	E002	Chromium, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.0015	0.0200
37	LGU	E002	Cobalt, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.001	0.00400
37	LGU	E002	Fluoride, total	mg/L	03/31/21 - 09/20/23	10	10	CI around median	0.58	1.14
37	LGU	E002	Lead, total	mg/L	03/31/21 - 09/20/23	10	80	CI around median	0.001	0.00600
37	LGU	E002	Lithium, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.003	0.0300
37	LGU	E002	Mercury, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0002	0.0002
37	LGU	E002	Molybdenum, total	mg/L	03/31/21 - 09/20/23	10	90	CI around median	0.0015	0.0200
37	LGU	E002	pH (field)	SU	03/31/21 - 09/20/23	10	0	CI around mean	6.8/7.1	6.8/7.8
37	LGU	E002	Selenium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.0025	0.001
37	LGU	E002	Sulfate, total	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	248	227
37	LGU	E002	Thallium, total	mg/L	03/31/21 - 09/20/23	10	100	All ND - Last	0.002	0.002

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 NORTH ASH POND AND OLD EAST ASH POND
 OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
37	LGU	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/20/23	10	0	CB around linear reg	690	746
38	UA	E002	Antimony, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
38	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/21/23	10	0	CB around linear reg	0.0227	0.0600
38	UA	E002	Barium, total	mg/L	03/30/21 - 09/21/23	10	0	CB around T-S line	-0.367	0.520
38	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
38	UA	E002	Boron, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	0.405	2.45
38	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.001
38	UA	E002	Chloride, total	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	17.7	82.0
38	UA	E002	Chromium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.005	0.0200
38	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.001	0.00400
38	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/21/23	10	10	CI around mean	0.341	1.14
38	UA	E002	Lead, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0005	0.00600
38	UA	E002	Lithium, total	mg/L	03/30/21 - 09/21/23	10	40	CB around linear reg	-0.0112	0.0300
38	UA	E002	Mercury, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
38	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/21/23	10	20	CI around mean	0.00226	0.0200
38	UA	E002	pH (field)	SU	03/30/21 - 09/21/23	10	0	CI around mean	6.9/7.1	6.8/7.8
38	UA	E002	Selenium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
38	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/21/23	10	90	CI around median	10	227
38	UA	E002	Thallium, total	mg/L	03/30/21 - 09/21/23	10	100	All ND - Last	0.002	0.002
38	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/21/23	10	0	CI around mean	490	746
40	UA	E002	Antimony, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.003	0.00100
40	UA	E002	Arsenic, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.017	0.0600
40	UA	E002	Barium, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.0297	0.520
40	UA	E002	Beryllium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.001	0.001
40	UA	E002	Boron, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	19.1	2.45
40	UA	E002	Cadmium, total	mg/L	03/31/21 - 09/21/23	10	90	CI around median	0.001	0.001
40	UA	E002	Chloride, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	11.9	82.0

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NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
40	UA	E002	Chromium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.005	0.0200
40	UA	E002	Cobalt, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.00521	0.00400
40	UA	E002	Fluoride, total	mg/L	03/31/21 - 09/21/23	10	80	CI around median	0.1	1.14
40	UA	E002	Lead, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0005	0.00600
40	UA	E002	Lithium, total	mg/L	03/31/21 - 09/21/23	10	0	CI around median	0.74	0.0300
40	UA	E002	Mercury, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0002	0.0002
40	UA	E002	Molybdenum, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	0.0616	0.0200
40	UA	E002	Selenium, total	mg/L	03/31/21 - 09/21/23	10	100	All ND - Last	0.0025	0.001
40	UA	E002	Sulfate, total	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	2,800	227
40	UA	E002	Thallium, total	mg/L	03/31/21 - 09/21/23	10	80	CI around median	0.002	0.002
40	UA	E002	Total Dissolved Solids	mg/L	03/31/21 - 09/21/23	10	0	CI around mean	4,350	746
41	UA	E002	Antimony, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.003	0.00100
41	UA	E002	Arsenic, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.0078	0.0600
41	UA	E002	Barium, total	mg/L	03/30/21 - 09/20/23	10	0	CB around linear reg	0.199	0.520
41	UA	E002	Beryllium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.001
41	UA	E002	Boron, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	2.59	2.45
41	UA	E002	Cadmium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.001
41	UA	E002	Chloride, total	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	54.3	82.0
41	UA	E002	Chromium, total	mg/L	03/30/21 - 09/20/23	10	90	CI around median	0.0015	0.0200
41	UA	E002	Cobalt, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.001	0.00400
41	UA	E002	Fluoride, total	mg/L	03/30/21 - 09/20/23	10	10	CI around median	0.41	1.14
41	UA	E002	Lead, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0005	0.00600
41	UA	E002	Lithium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.005	0.0300
41	UA	E002	Mercury, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0002	0.0002
41	UA	E002	Molybdenum, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.005	0.0200
41	UA	E002	pH (field)	SU	03/30/21 - 09/20/23	10	0	CI around mean	7.0/7.1	6.8/7.8
41	UA	E002	Selenium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.0025	0.001

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

845 QUARTERLY REPORT
VERMILION POWER PLANT
NORTH ASH POND AND OLD EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
41	UA	E002	Sulfate, total	mg/L	03/30/21 - 09/20/23	10	80	CI around median	10	227
41	UA	E002	Thallium, total	mg/L	03/30/21 - 09/20/23	10	100	All ND - Last	0.002	0.002
41	UA	E002	Total Dissolved Solids	mg/L	03/30/21 - 09/20/23	10	0	CI around mean	592	746

Notes:

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

HSU = hydrostratigraphic unit:

LGU = Lower Groundwater Unit

UA = Uppermost Aquifer

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range

For pH, the values presented are the lower / upper limits of the background determination