



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

January 30, 2025

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

Re: Vermilion New East Ash Pond (IEPA ID: W1838000002-04) 2024 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 New East Ash Pond (IEPA ID: W1838000002-04), 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
New East Ash Pond; W1838000002-04

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 # W1838000002 - 01,03,04**

**Report
Completed
December
2024**

Vermilion Power Plant
ANNUAL CCR FUGITIVE DUST CONTROL REPORT

Reporting Year: 4th quarter 2023 - 3rd quarter 2024

Completed by: 
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 40 CFR 257.80 (c) and 35 I.A.C. 845.500 (c). 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 9/20/2024
Operator Name / Address	Dynegy Midwest Generation, LLC 1500 Eastport Plaza Drive, Collinsville, IL 62234
CCR unit	New 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 375 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 213 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: 12/13/2024

Site Name: Vermilion Power Station

CCR Unit: New 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)

Approximate Depth / Elevation						
Since previous inspection:	Elevation (ft)			Depth (ft)		
	Minimum	Present	Maximum	Minimum	Present	Maximum
Impounded Water		595			10	
CCR	585		606			21

Section 3

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

Prepared for

Dynegy Midwest Generation, LLC

Date

January 31, 2025

Project No.

1940103649-014

**2024 35 I.A.C. § 845 ANNUAL
GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS
IEPA ID NO. W1838000002-04**



Bright ideas. Sustainable change.

**2024 35 I.A.C. § 845 ANNUAL GROUNDWATER
MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT NEW EAST ASH POND**

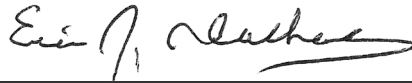
Project name **Vermilion Power Plant New East Ash Pond**
Project no. **1940103649-014**
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Document type **Annual Groundwater Monitoring and Corrective Action Report**
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Date **January 31, 2025**
Prepared by **Scott S. Woods**
Checked by **Lauren D. Cook**
Approved by **Eric J. Tlachac PE**
Description **Annual Report required by 35 I.A.C. § 845**

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TABLES (IN TEXT)

Table A	35 I.A.C. § 845 Monitoring Program Summary for 2024
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TABLES (ATTACHED)

Table 1	Field Parameters and Analytical Results – Quarter 1, 2024
	Field Parameters and Analytical Results – Quarter 2, 2024
	Field Parameters and Analytical Results – Quarter 3, 2024
	Field Parameters and Analytical Results – Quarter 4, 2024
Table 2	Evaluation of Compliance – Quarter 1, 2024
	Evaluation of Compliance – Quarter 2, 2024
	Evaluation of Compliance – Quarter 3, 2024

FIGURES (ATTACHED)

Figure 1	Monitoring Well Location Map
Figure 2	GWPS Exceedance Map Upper Unit – Quarter 4, 2023 and Quarters 1-3, 2024
Figure 3	GWPS Exceedance Map Bedrock Confining Unit - Quarter 4, 2023 and Quarters 1-3, 2024
Figure 4	Groundwater Elevation Map, January 24, 2024
Figure 5	Potentiometric surface Map, February 19, 2024
Figure 6	Groundwater Elevation Map, March 6, 2024
Figure 7	Groundwater Elevation Map, April 6, 2024
Figure 8	Potentiometric Surface Map, May 6, 2024
Figure 9	Groundwater Elevation Map, June 28-29, 2024
Figure 10	Potentiometric Surface Map, July 29, 2024
Figure 11	Groundwater Elevation Map, August 21, 2024
Figure 12	Groundwater Elevation Map, September 21, 2024
Figure 13	Potentiometric Surface Map, October 21, 2024
Figure 14	Groundwater Elevation Map, November 12, 2024
Figure 15	Potentiometric Surface Map, December 6, 2024

ATTACHMENTS

- Attachment A Groundwater Elevation Data
- Attachment B Quarter 4, 2023 Alternative Source Demonstration IEPA Response Letter
Quarter 1, 2024 Alternative Source Demonstration IEPA Response Letter
- Attachment C Comparison to Background – Quarter 1, 2024
Comparison to Background – Quarter 2, 2024
Comparison to Background – Quarter 3, 2024

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
ASD	Alternative Source Demonstration
CCA	compliance commitment agreement
CMA	assessment of corrective measures
CCR	coal combustion residuals
DMG	Dynegy Midwest Generation, LLC
E003	Quarter 4, 2023 sampling event
E004	Quarter 1, 2024 sampling event
E005	Quarter 2, 2024 sampling event
E006	Quarter 3, 2024 sampling event
E007	Quarter 4, 2024 sampling event
DMG	Dynegy Midwest Generation, LLC
GWPS	groundwater protection standard
ID	identification
IEPA	Illinois Environmental Protection Agency
IPCB	Illinois Pollution Control Board
NEAP	New East Ash Pond
NID	National Inventory of Dams
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 New East Ash Pond (NEAP) located at Vermilion Power Plant (VPP) near Oakwood, Illinois. The NEAP is recognized by coal combustion residuals (CCR) unit identification (ID) number (No.) 912, Illinois Environmental Protection Agency (IEPA) ID No. W1838000002-04, and National Inventory of Dams (NID) No. IL50291.

As required by 35 I.A.C. § 845, an operating permit application for the NEAP was submitted by Dynegy Midwest Generation (DMG), LLC to the 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) between other facility owners and the IEPA dated December 28, 2022, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the NEAP commenced in the second quarter of 2023 and quarterly groundwater sampling was conducted in 2024 in accordance with 35 I.A.C. § 845.650. All available groundwater monitoring data collected in 2024 is summarized in **Table 1** (field parameters and analytical results) and **Attachment A** (groundwater elevation data). After the NEAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

Monitoring well 10 was abandoned and replaced with monitoring well 10R in December 2024. Updates to the Groundwater Monitoring Plan (Ramboll Americas Engineering Solutions, Inc. [Ramboll], 2021) will be considered following IEPA review and approval of an 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, 2021]), constituent concentrations observed at compliance monitoring wells were evaluated for compliance with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances¹ of the GWPS (**Table 2**). The following GWPS exceedances were determined in 2024 (Ramboll, 2024a; Ramboll, 2024b; Ramboll, 2024c)²:

- Chloride in 35D, 70D, and 71D
- Lithium in 35D, 70D, and 71D
- Sulfate in 35D and 70S
- Total Dissolved Solids (TDS) in 35D, 70D , and 70S

An Alternative Source Demonstration (ASD) was completed on December 1, 2023 for the chloride, lithium, sulfate, and TDS GWPS exceedances detected at wells 35D and 70D during the Quarter 2, 2023 sampling event (Ramboll, 2023). The IEPA provided a written response on

¹ Throughout this document, "exceedance" or "exceedances" is intended to refer only to potential exceedances of proposed applicable background statistics or Groundwater Protection Standards (GWPSs) as described in the proposed groundwater monitoring program which was submitted to the IEPA on October 25, 2021 as part of DMG's operating permit application for the NEAP. That operating permit application, including the proposed groundwater monitoring program, remains under review by the IEPA and, therefore, DMG has not identified any actual exceedances.

² GWPS exceedances determined after January 31, 2025 will be reported in the Quarter 4, 2024 Groundwater Monitoring Data and Detected Exceedances Report.

December 28, 2023 that it did not concur with the ASD. Both of these documents were included in the 2023 Annual Groundwater Monitoring and Corrective Action Report (Rambol, 2024d). As allowed by 35 I.A.C. § 845.650(e)(7), DMG filed a petition with the Illinois Pollution Control Board (IPCB; case number 2024-53³) on February 22, 2024 for review of IEPA's non-concurrence and requested a partial stay of the requirements of 35 I.A.C. §§ 845.650(d), 845.660, 845.670, and 845.680 as they apply to the exceedances of the chloride, lithium, sulfate, and TDS GWPSs detected at compliance monitoring wells 35D and 70D. This request was unopposed by the IEPA and the IPCB granted it on April 18, 2024. The outcome of these non-concurrence review proceedings is pending.

An ASD was not completed for the remaining GWPS exceedances listed above; therefore an assessment of corrective measures (CMA) was initiated on December 31, 2023 in accordance with 35 I.A.C. § 845.660(d)(3). A CMA extension request was submitted to IEPA on January 2, 2024 and approved on January 3, 2024. The CMA extension request and approval letter were included in the 2023 Annual Groundwater Monitoring and Corrective Action Report (Ramboll, 2024d). The CMA was completed in accordance with 35 I.A.C. § 845.660 and submitted to IEPA on May 29, 2024 (Ramboll, 2024e). In accordance with 35 I.A.C. § 845.670, a semiannual report describing the progress in selecting and designing a groundwater corrective action remedy and developing a corrective action plan was submitted to IEPA on November 29, 2024 (Ramboll, 2024i).

As required by 35 I.A.C. § 845.670, a corrective action plan that identifies the selected remedy must be submitted to IEPA within one year after completing the CMA. Activities currently ongoing in support of developing the corrective action plan include development of a corrective action alternatives analysis, human health and ecological risk assessment, and supporting technical documents. Accordingly, a public meeting will be held prior to selection of a remedy in accordance with 35 I.A.C. § 845.660(d) and a corrective action plan will be submitted to IEPA on or before May 29, 2025. Activities currently ongoing in support of developing the corrective action plan include development of a corrective action alternatives analysis, human health and ecological risk assessment, and supporting technical documents. Remedial activities have not been initiated under 35 I.A.C. § 845.780 in 2024.

A second ASD was submitted on May 8, 2024 for the exceedance of the chloride GWPS at compliance monitoring well 71D during the Quarter 4, 2023 sampling event (Ramboll, 2024f). The IEPA provided a written response on June 5, 2024 that did not concur with the ASD (**Attachment B**).

A third ASD was submitted on July 24, 2024 for the exceedance of the TDS GWPS at compliance monitoring well 70D during the Quarter 1, 2024 sampling event (Ramboll, 2024g). The IEPA provided a written response on August 22, 2024 that did not concur with the ASD (**Attachment B**). DMG filed a petition with the IPCB (case number 2025-15⁴) for review of IEPA's non-concurrence on September 30, 2024 and requested a partial stay of the requirements of 35 I.A.C. §§ 845.650(d), 845.660, 845.670, and 845.680 as they apply to the exceedance of the TDS GWPS detected at compliance monitoring well 70D. This request was unopposed by the IEPA and the IPCB granted it on November 7, 2024. The outcome of this non-concurrence review proceedings is also pending.

³ <https://pcb.illinois.gov/Cases/GetCaseDetailsById?caseId=17464>

⁴ <https://pcb.illinois.gov/Cases/GetCaseDetailsById?caseId=17543>

A fourth ASD was submitted on December 20, 2024 for the lithium and chloride GWPS exceedances at compliance monitoring well 71D during the Quarter 3, 2024 sampling event (Ramboll, 2024h). A response from the IEPA is pending.

In accordance with 35 I.A.C. § 845.610(b)(3)(B), constituent concentrations observed at compliance monitoring wells were also evaluated quarterly for exceedances over statistical background levels (**Attachment C**).

1. INTRODUCTION

This report has been prepared by Ramboll on behalf of DMG, to provide the information required by 35 I.A.C. § 845.610(e) for the NEAP 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 15**).
- D. In addition to all the monitoring data obtained under 35 I.A.C. §§ 845.600-680, a summary including the number of groundwater samples that were collected for analysis for each background and [downgradient] compliance well, and the dates the samples were collected (**Section 3.1** and **Table A**).
- E. A narrative discussion of any statistically significant increases (SSIs) over background levels for the constituents listed in 35 I.A.C. § 845.600 (**Section 3.3** and **Attachment D**).
- 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 must provide 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 VPP NEAP for calendar year 2024.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

An operating permit application for the NEAP 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 between other facility owners and the IEPA, groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the NEAP commenced in the second quarter of 2023. After the NEAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

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

As noted in the **Executive Summary**, GWPS exceedances were determined for the NEAP in 2024. An ASD was completed on December 1, 2023 for the chloride, lithium, sulfate, and TDS GWPS exceedances detected at wells 35D and 70D during the Quarter 2, 2023 sampling event (Ramboll, 2023). The IEPA provided a written response on December 28, 2023 that it did not concur with the ASD. Both of these documents were included in the 2023 Annual Groundwater Monitoring and Corrective Action Report (Ramboll, 2024d). As allowed by 35 I.A.C. § 845.650(e)(7), DMG filed a petition with the IPCB (case number 2024-53) for review of IEPA's non-concurrence on February 22, 2024 and requested a partial stay of the requirements of 35 I.A.C. §§ 845.650(d), 845.660, 845.670, and 845.680 as they apply to the exceedances of the chloride, lithium, sulfate, and TDS GWPSs detected at compliance monitoring wells 35D and 70D. This request was unopposed by the IEPA and the IPCB granted it on April 18, 2024. DMG filed a joint consolidated motion with the IPCB on April 12, 2024 to stay these non-concurrence review proceedings pending the outcome of another similar case, which IPCB granted on May 2, 2024 and extended on July 25, 2024. The outcome of the other similar case is pending.

An ASD was not completed for the remaining GWPS exceedances listed above; therefore a CMA was initiated on December 31, 2023 in accordance with 35 I.A.C. § 845.660. A CMA extension request was submitted to IEPA on January 2, 2024 and approved on January 3, 2024. The CMA extension request was included in the 2023 Annual Groundwater Monitoring and Corrective Action Report (Ramboll, 2024d). The CMA was completed in accordance with 35 I.A.C. § 845.660 and submitted to IEPA on May 29, 2024 (Ramboll, 2024e).

As required by 35 I.A.C. § 845.670, a corrective action plan that identifies the selected remedy must be submitted to IEPA within one year after completing the CMA. Activities currently ongoing in support of developing the corrective action plan include development of a corrective action alternatives analysis, human health and ecological risk assessment, and supporting technical documents. Accordingly, a public meeting will be held prior to selection of a remedy in accordance with 35 I.A.C. § 845.660(d) and a corrective action plan will be submitted to IEPA on or before May 29, 2025. Activities currently ongoing in support of developing the corrective action plan include development of a corrective action alternatives analysis, human health and ecological risk assessment, and supporting technical documents. In accordance with 35 I.A.C. § 845.670, a semiannual report describing the progress in selecting and designing a groundwater

corrective action remedy and developing a corrective action plan was submitted to IEPA on November 29, 2024 (Ramboll, 2024i).

A second ASD was submitted on May 8, 2024 for the exceedance of the chloride GWPS at compliance monitoring well 71D during the Quarter 4, 2023 sampling event (Ramboll, 2024f). The IEPA provided a written response on June 5, 2024 that did not concur with the ASD (**Attachment B**).

A third ASD was submitted on July 24, 2024 for the exceedance of the TDS GWPS at compliance monitoring well 70D during the Quarter 1, 2024 sampling event (Ramboll, 2024g). The IEPA provided a written response on August 22, 2024 that did not concur with the ASD (**Attachment B**). DMG filed a petition with the IPCB (case number 2025-15) for review of IEPA's non-concurrence on September 30, 2024 and requested a partial stay the requirements of 35 I.A.C. §§ 845.650(d), 845.660, 845.670, and 845.680 as they apply to the exceedance of the TDS GWPS detected at compliance monitoring well 70D. This request was unopposed by the IEPA and the IPCB granted it on November 7, 2024. The IPCB also acknowledged the joint consolidated motion referenced above to stay similar non-concurrence proceedings petitioned by DMG pending the outcome of another similar case.

A fourth ASD was submitted on December 20, 2024 for the exceedances of the lithium and chloride GWPSs detected at compliance monitoring well 71D during the Quarter 3, 2024 sampling event (Ramboll, 2024h). A response from the IEPA is pending.

3. KEY ACTIONS COMPLETED IN 2024

The proposed 35 I.A.C. § 845 monitoring system is presented in **Figure 1**. Monitoring well 10 was abandoned and replaced with monitoring well 10R in December 2024. Updates to the Groundwater Monitoring Plan (Ramboll, 2021) will be considered following IEPA review and approval of an operating permit.

Monthly groundwater level elevations as required by 35 I.A.C. § 845.650(b)(2). **Attachment A** summarizes the groundwater elevation data collected in 2024. Data gaps exist in monthly water level elevations due to malfunctioning pressure transducers in the affected monitoring wells. This equipment was replaced in December 2024 after consideration of replacement options and access limitations for some monitoring locations.

Potentiometric surfaces for January through December 2024 are included in **Figures 4 through 15**. In 2024 it was determined that groundwater flow into compliance monitoring wells 70D and 71D was too slow to allow for recovery of water levels in those wells to static equilibrium with the potentiometric surface in between quarterly sampling events. Consequently, measured groundwater elevations in these wells were not used for generating potentiometric surface maps.

A summary of the samples collected in 2024 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 in 2024⁵. 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 2024 is included in **Table A** on the following page. **Table 1** is a summary of the field parameters and analytical results from the 2024 sampling events. Laboratory analytical reports and field data sheets were provided in the quarterly Groundwater Monitoring Data and Detected Exceedances Reports for Quarters 1 through 3 (Ramboll, 2024a; Ramboll, 2024b; Ramboll, 2024c); therefore, these reports are not attached to this annual report to avoid reproduction of lengthy data transmittals that have been previously provided in hardcopy. Laboratory report and field data sheets will be provided in the Fourth Quarter Groundwater Monitoring Data and Detected

⁵ During the February 2024 sampling event, monitoring well 71S had insufficient water to sample for this event; therefore, no groundwater sample was collected. Monitoring well 71D purged dry and did not recover; therefore, no groundwater sample was collected during this event. Monitoring wells 16B and 35S were dry; therefore, groundwater elevation data were not recorded, and groundwater samples were not collected for this sampling event.

During the May 2024 sampling event, compliance monitoring well 16B was dry; therefore, groundwater elevation data were not recorded, and a groundwater sample was not collected. Compliance monitoring wells 35S and 71S had insufficient water to sample; therefore, a groundwater sample was not collected. Compliance monitoring well 71D purged dry and did not recover; therefore, a groundwater sample was not collected.

During the July 2024 sampling event, compliance monitoring well 16B was dry; therefore, groundwater elevation data were not recorded, and a groundwater sample was not collected. Compliance monitoring well 35S had insufficient water to sample for this sampling event.

During the October 2024 sampling event, compliance monitoring wells 16B, 35S, 71S, and 71D were dry at time of sampling; therefore, no groundwater samples were collected.

Exceedance Report, therefore, will not be attached to this annual report to avoid reproduction of lengthy data transmittals that will be provided in hardcopy.

Table A. 35 I.A.C. § 845 Monitoring Program Summary for 2024

Event ID	Sampling Dates ^{1, 2}	Analytical Data Receipt Date	Exceedance Determination Date	ASD Completion Date
E003	November 28 – 29, 2023	January 9, 2024	March 9, 2024 ⁴	May 8, 2024
E004 ⁵	February 20 – 21, 2024	March 26, 2024	May 25, 2024	July 24, 2024
E005 ⁶	May 7 – June 6, 2024	July 11, 2024	September 9, 2024	NA
E006 ⁷	July 29 – August 1, 2024	August 30, 2024	October 29, 2024	December 28, 2024
E007 ⁸	October 21 – 24, 2024	December 4, 2024	TBD ³	TBD

Notes:

ASD: Alternative Source Demonstration

NA: not applicable

TBD: to be determined after January 31, 2025

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: 10 and 22

³ GWPS exceedances determined after January 31, 2025 will be reported in the Quarter 4, 2024 Groundwater Monitoring Data and Detected Exceedances Report.

⁴ Statistical determinations were completed in 2024 and are included in the 2024 Annual Groundwater Monitoring and Corrective Action Report for completeness. Analytical data from 2023 sampling events used in statistical determinations are included in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

⁵ Monitoring well 71S had insufficient water to sample for this event; therefore, no groundwater sample was collected. Monitoring well 71D purged dry during sample collection; therefore, no groundwater sample was collected during this event. Monitoring wells 16B and 35S were dry; therefore, groundwater elevation data were not recorded, and groundwater samples were not collected for this sampling event.

⁶ Compliance monitoring well 16B was dry; therefore, groundwater elevation data was not recorded, and a groundwater sample was not collected. Compliance monitoring wells 35S and 71S had insufficient water to sample; therefore, a groundwater sample was not collected. Compliance monitoring well 71D purged dry during sample collection; therefore, a groundwater sample was not collected. Porewater well NED1, located within the boundary of the New East Ash Pond, was flooded, and could not be accessed to record groundwater elevation data.

⁷ Compliance monitoring well 16B was dry; therefore, groundwater elevation data was not recorded, and a groundwater sample was not collected. Compliance monitoring well 35S had insufficient water to sample for this sampling event. Porewater well NED1, located within the boundary of the New East Ash Pond, was flooded, and could not be accessed to record groundwater elevation data.

⁸ Compliance monitoring wells 16B, 35S, 71S, and 71D were dry at time of sampling; therefore, no groundwater samples were collected.

3.2 Exceedances of GWPS

In accordance with 35 I.A.C. § 845.610(b)(3)(C), the constituent concentrations observed at compliance monitoring wells 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 exceedances of the GWPSs were determined and are shown on **Figures 2 and 3**⁶:

- Chloride in 35D, 70D, and 71D
- Lithium in 35D, 70D, and 71D
- Sulfate in 35D and 70S
- Total Dissolved Solids (TDS) in 35D, 70D , and 70S

Response actions for these exceedances are summarized in **Section 2**.

3.3 Exceedances of Background

In accordance with 35 I.A.C. § 845.610(b)(3)(B), constituent concentrations observed at compliance monitoring wells were also evaluated quarterly for exceedances over statistical background levels for the constituents listed in 35 I.A.C. § 845.600. **Attachment C** shows the constituent concentrations compared to statistical background levels.

⁶ GWPS exceedances determined after January 31, 2025 will be reported in the Quarter 4, 2024 Groundwater Monitoring Data and Detected Exceedances Report.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

Quarterly groundwater monitoring was completed in 2024. 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 NEAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

As referenced in **Section 3**, malfunctioning pressure transducers in some monitoring wells caused gaps in groundwater elevation data. This equipment was replaced in December 2024 after consideration of replacement options and access limitations for some monitoring locations.

Also as referenced in **Section 3**, it was determined that groundwater flow into compliance monitoring wells 70D and 71D was too slow to allow for recovery of water levels in those wells to static equilibrium with the potentiometric surface in between quarterly sampling events. Consequently, vibrating-wire piezometers were installed at the site in December 2024 to provide groundwater elevation data in these locations without disruption from monitoring well sampling.

5. KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continuation of groundwater monitoring in accordance with the proposed groundwater monitoring plan and sampling methodologies provided in the operating permit application for the NEAP. After the NEAP 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 2025 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 will be met.
- A public meeting will be held prior to selection of a remedy in accordance with 35 I.A.C. § 845.660(d).
- A corrective action plan will be submitted to IEPA on or before May 29, 2025 as required by 35 I.A.C. § 845.670.

6. REFERENCES

Illinois Administrative Code, Title 35, Subtitle G, Chapter I, Subchapter J, Part 845: Standards for The Disposal of Coal Combustion Residuals In Surface Impoundments, effective April 21, 2021.

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

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023. Alternative Source Demonstration, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. December 1, 2023.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2023/2023%2012%2001%20Vermilion%20NEAP%20845.650%20ASD-W1838000002-04.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024a. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2024 Quarter 1, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. May 25, 2024.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024-VE%20NEAP%202024%201st%20qtr%2035%20IAC%20845%20GW%20report-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%90004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024b. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2024 Quarter 2, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. September 9, 2024.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024-VE%20NEAP%202024%202nd%20qtr%2035%20IAC%20845%20GW%20report-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%90004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024c. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2024 Quarter 3, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. October 29, 2024.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024-Vermilion%20NEAP%202024%203rd%20qtr%2035%20IAC%20845%20GW%20report-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%90004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024d. 2023 35 I.A.C. § 845 Annual Groundwater Monitoring and Corrective Action Report, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois, IEPA ID No. W1838000002-04. January 31, 2024.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2023/2023-Vermilion%20NEAP%20Part%20845%20Annual%20Cons%20Rpt-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%90004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024e. 35 I.A.C. § 845 Corrective Measures Assessment, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois, IEPA ID No. W1838000002-04. May 29, 2024.
<https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024-2024%2005%2029%20Vermilion%20NEAP%20Final%20CMA%20and%20N&E-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%90004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024f. Alternative Source Demonstration, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. May 8, 2024. <https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024%2005%2008%20Vermilion%20NEAP%20845.650%20ASD-W1838000002-04.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024g. Alternative Source Demonstration, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. July 24, 2024. <https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024%2007%2024%20Vermilion%20NEAP%20845.650%20ASD-W1838000002-04.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024h. Alternative Source Demonstration, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. December 20, 2024. <https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024%2012%2028%20Vermilion%20NEAP%20845.650%20ASD-W1838000002%E2%80%9004.pdf>

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024i. Semiannual Remedy Selection Progress Report, New East Ash Pond, Vermilion Power Plant, Oakwood, Illinois. November 29, 2024. <https://www.luminant.com/documents/ccr/il-ccr/Vermilion/2024/2024-2024%2011%2029%20Vermilion%20NEAP%20Semi%20Rem%20Sel%20Prog%20Rpt-Vermilion-New%20East%20Ash%20Pond-W1838000002%E2%80%9004.pdf>

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
10	Background	E004	02/20/2024	Antimony, total	0.0013 U	mg/L
10	Background	E004	02/20/2024	Arsenic, total	0.00023 U	mg/L
10	Background	E004	02/20/2024	Barium, total	0.0760	mg/L
10	Background	E004	02/20/2024	Beryllium, total	0.00053 U	mg/L
10	Background	E004	02/20/2024	Boron, total	0.0680 J+	mg/L
10	Background	E004	02/20/2024	Cadmium, total	0.00017 U	mg/L
10	Background	E004	02/20/2024	Calcium, total	180	mg/L
10	Background	E004	02/20/2024	Chloride, total	3.50	mg/L
10	Background	E004	02/20/2024	Chromium, total	0.0024 J	mg/L
10	Background	E004	02/20/2024	Cobalt, total	0.00320	mg/L
10	Background	E004	02/20/2024	Dissolved Oxygen	3.11	mg/L
10	Background	E004	02/20/2024	Fluoride, total	0.130	mg/L
10	Background	E004	02/20/2024	Lead, total	0.00019 U	mg/L
10	Background	E004	02/20/2024	Lithium, total	0.0140	mg/L
10	Background	E004	02/20/2024	Mercury, total	0.000079 U	mg/L
10	Background	E004	02/20/2024	Molybdenum, total	0.0025 U	mg/L
10	Background	E004	02/20/2024	Oxidation Reduction Potential	28.8	mV
10	Background	E004	02/20/2024	pH (field)	6.8	SU
10	Background	E004	02/20/2024	Radium 226 + Radium 228, total	2.51	pCi/L
10	Background	E004	02/20/2024	Selenium, total	0.0013 J	mg/L
10	Background	E004	02/20/2024	Specific Conductance @ 25C (field)	1,099	micromhos/cm
10	Background	E004	02/20/2024	Sulfate, total	300	mg/L
10	Background	E004	02/20/2024	Temperature	12.7	degrees C
10	Background	E004	02/20/2024	Thallium, total	0.00057 U	mg/L
10	Background	E004	02/20/2024	Total Dissolved Solids	1,100	mg/L
10	Background	E004	02/20/2024	Turbidity, field	8.45	NTU
22	Background	E004	02/21/2024	Antimony, total	0.0013 U	mg/L
22	Background	E004	02/21/2024	Arsenic, total	0.00023 U	mg/L
22	Background	E004	02/21/2024	Barium, total	0.0840	mg/L
22	Background	E004	02/21/2024	Beryllium, total	0.00053 U	mg/L
22	Background	E004	02/21/2024	Boron, total	0.400 J+	mg/L
22	Background	E004	02/21/2024	Cadmium, total	0.00017 U	mg/L
22	Background	E004	02/21/2024	Calcium, total	46.0	mg/L
22	Background	E004	02/21/2024	Chloride, total	7.70	mg/L
22	Background	E004	02/21/2024	Chromium, total	0.0011 U	mg/L
22	Background	E004	02/21/2024	Cobalt, total	0.0004 U	mg/L
22	Background	E004	02/21/2024	Dissolved Oxygen	0.120	mg/L
22	Background	E004	02/21/2024	Fluoride, total	0.370	mg/L
22	Background	E004	02/21/2024	Lead, total	0.0005 UJ	mg/L
22	Background	E004	02/21/2024	Lithium, total	0.0280	mg/L
22	Background	E004	02/21/2024	Mercury, total	0.000079 U	mg/L
22	Background	E004	02/21/2024	Molybdenum, total	0.0025 U	mg/L
22	Background	E004	02/21/2024	Oxidation Reduction Potential	-73.5	mV
22	Background	E004	02/21/2024	pH (field)	7.4	SU
22	Background	E004	02/21/2024	Radium 226 + Radium 228, total	0.724	pCi/L
22	Background	E004	02/21/2024	Selenium, total	0.00098 U	mg/L

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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
22	Background	E004	02/21/2024	Specific Conductance @ 25C (field)	623	micromhos/cm
22	Background	E004	02/21/2024	Sulfate, total	29.0	mg/L
22	Background	E004	02/21/2024	Temperature	13.2	degrees C
22	Background	E004	02/21/2024	Thallium, total	0.00057 U	mg/L
22	Background	E004	02/21/2024	Total Dissolved Solids	490	mg/L
22	Background	E004	02/21/2024	Turbidity, field	6.40	NTU
16B	Compliance	E004	--	Antimony, total	--	mg/L
16B	Compliance	E004	--	Arsenic, total	--	mg/L
16B	Compliance	E004	--	Barium, total	--	mg/L
16B	Compliance	E004	--	Beryllium, total	--	mg/L
16B	Compliance	E004	--	Boron, total	--	mg/L
16B	Compliance	E004	--	Cadmium, total	--	mg/L
16B	Compliance	E004	--	Calcium, total	--	mg/L
16B	Compliance	E004	--	Chloride, total	--	mg/L
16B	Compliance	E004	--	Chromium, total	--	mg/L
16B	Compliance	E004	--	Cobalt, total	--	mg/L
16B	Compliance	E004	--	Dissolved Oxygen	--	mg/L
16B	Compliance	E004	--	Fluoride, total	--	mg/L
16B	Compliance	E004	--	Lead, total	--	mg/L
16B	Compliance	E004	--	Lithium, total	--	mg/L
16B	Compliance	E004	--	Mercury, total	--	mg/L
16B	Compliance	E004	--	Molybdenum, total	--	mg/L
16B	Compliance	E004	--	Oxidation Reduction Potential	--	mV
16B	Compliance	E004	--	pH (field)	--	SU
16B	Compliance	E004	--	Radium 226 + Radium 228, total	--	pCi/L
16B	Compliance	E004	--	Selenium, total	--	mg/L
16B	Compliance	E004	--	Specific Conductance @ 25C (field)	--	micromhos/cm
16B	Compliance	E004	--	Sulfate, total	--	mg/L
16B	Compliance	E004	--	Temperature	--	degrees C
16B	Compliance	E004	--	Thallium, total	--	mg/L
16B	Compliance	E004	--	Total Dissolved Solids	--	mg/L
16B	Compliance	E004	--	Turbidity, field	--	NTU
16A	Compliance	E004	02/21/2024	Antimony, total	0.0013 U	mg/L
16A	Compliance	E004	02/21/2024	Arsenic, total	0.00530	mg/L
16A	Compliance	E004	02/21/2024	Barium, total	0.340	mg/L
16A	Compliance	E004	02/21/2024	Beryllium, total	0.00061 J	mg/L
16A	Compliance	E004	02/21/2024	Boron, total	0.620 J+	mg/L
16A	Compliance	E004	02/21/2024	Cadmium, total	0.00017 U	mg/L
16A	Compliance	E004	02/21/2024	Calcium, total	30.0	mg/L
16A	Compliance	E004	02/21/2024	Chloride, total	140	mg/L
16A	Compliance	E004	02/21/2024	Chromium, total	0.0140	mg/L
16A	Compliance	E004	02/21/2024	Cobalt, total	0.0110	mg/L
16A	Compliance	E004	02/21/2024	Dissolved Oxygen	2.86	mg/L
16A	Compliance	E004	02/21/2024	Fluoride, total	0.870	mg/L
16A	Compliance	E004	02/21/2024	Lead, total	0.00810 J+	mg/L
16A	Compliance	E004	02/21/2024	Lithium, total	0.0460	mg/L

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845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
16A	Compliance	E004	02/21/2024	Mercury, total	0.000079 U	mg/L
16A	Compliance	E004	02/21/2024	Molybdenum, total	0.0025 U	mg/L
16A	Compliance	E004	02/21/2024	Oxidation Reduction Potential	-102	mV
16A	Compliance	E004	02/21/2024	pH (field)	7.7	SU
16A	Compliance	E004	02/21/2024	Radium 226 + Radium 228, total	1.77	pCi/L
16A	Compliance	E004	02/21/2024	Selenium, total	0.00098 U	mg/L
16A	Compliance	E004	02/21/2024	Specific Conductance @ 25C (field)	1,032	micromhos/cm
16A	Compliance	E004	02/21/2024	Sulfate, total	5.20	mg/L
16A	Compliance	E004	02/21/2024	Temperature	12.1	degrees C
16A	Compliance	E004	02/21/2024	Thallium, total	0.00057 U	mg/L
16A	Compliance	E004	02/21/2024	Total Dissolved Solids	650	mg/L
16A	Compliance	E004	02/21/2024	Turbidity, field	136	NTU
35S	Compliance	E004	--	Antimony, total	--	mg/L
35S	Compliance	E004	--	Arsenic, total	--	mg/L
35S	Compliance	E004	--	Barium, total	--	mg/L
35S	Compliance	E004	--	Beryllium, total	--	mg/L
35S	Compliance	E004	--	Boron, total	--	mg/L
35S	Compliance	E004	--	Cadmium, total	--	mg/L
35S	Compliance	E004	--	Calcium, total	--	mg/L
35S	Compliance	E004	--	Chloride, total	--	mg/L
35S	Compliance	E004	--	Chromium, total	--	mg/L
35S	Compliance	E004	--	Cobalt, total	--	mg/L
35S	Compliance	E004	--	Dissolved Oxygen	--	mg/L
35S	Compliance	E004	--	Fluoride, total	--	mg/L
35S	Compliance	E004	--	Lead, total	--	mg/L
35S	Compliance	E004	--	Lithium, total	--	mg/L
35S	Compliance	E004	--	Mercury, total	--	mg/L
35S	Compliance	E004	--	Molybdenum, total	--	mg/L
35S	Compliance	E004	--	Oxidation Reduction Potential	--	mV
35S	Compliance	E004	--	pH (field)	--	SU
35S	Compliance	E004	--	Radium 226 + Radium 228, total	--	pCi/L
35S	Compliance	E004	--	Selenium, total	--	mg/L
35S	Compliance	E004	--	Specific Conductance @ 25C (field)	--	micromhos/cm
35S	Compliance	E004	--	Sulfate, total	--	mg/L
35S	Compliance	E004	--	Temperature	--	degrees C
35S	Compliance	E004	--	Thallium, total	--	mg/L
35S	Compliance	E004	--	Total Dissolved Solids	--	mg/L
35S	Compliance	E004	--	Turbidity, field	--	NTU
35D	Compliance	E004	02/21/2024	Antimony, total	0.0013 U	mg/L
35D	Compliance	E004	02/21/2024	Arsenic, total	0.0023 J	mg/L
35D	Compliance	E004	02/21/2024	Barium, total	0.0260	mg/L
35D	Compliance	E004	02/21/2024	Beryllium, total	0.00053 U	mg/L
35D	Compliance	E004	02/21/2024	Boron, total	2.10	mg/L
35D	Compliance	E004	02/21/2024	Cadmium, total	0.00017 U	mg/L
35D	Compliance	E004	02/21/2024	Calcium, total	110	mg/L
35D	Compliance	E004	02/21/2024	Chloride, total	440	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
35D	Compliance	E004	02/21/2024	Chromium, total	0.0011 U	mg/L
35D	Compliance	E004	02/21/2024	Cobalt, total	0.0004 U	mg/L
35D	Compliance	E004	02/21/2024	Dissolved Oxygen	0.140	mg/L
35D	Compliance	E004	02/21/2024	Fluoride, total	0.700	mg/L
35D	Compliance	E004	02/21/2024	Lead, total	0.0005 UJ	mg/L
35D	Compliance	E004	02/21/2024	Lithium, total	0.130	mg/L
35D	Compliance	E004	02/21/2024	Mercury, total	0.000079 U	mg/L
35D	Compliance	E004	02/21/2024	Molybdenum, total	0.0035 J	mg/L
35D	Compliance	E004	02/21/2024	Oxidation Reduction Potential	-16.2	mV
35D	Compliance	E004	02/21/2024	pH (field)	7.4	SU
35D	Compliance	E004	02/21/2024	Radium 226 + Radium 228, total	0.558	pCi/L
35D	Compliance	E004	02/21/2024	Selenium, total	0.00098 U	mg/L
35D	Compliance	E004	02/21/2024	Specific Conductance @ 25C (field)	4,000	micromhos/cm
35D	Compliance	E004	02/21/2024	Sulfate, total	1,600	mg/L
35D	Compliance	E004	02/21/2024	Temperature	12.5	degrees C
35D	Compliance	E004	02/21/2024	Thallium, total	0.00057 U	mg/L
35D	Compliance	E004	02/21/2024	Total Dissolved Solids	3,900	mg/L
35D	Compliance	E004	02/21/2024	Turbidity, field	31.0	NTU
70S	Compliance	E004	02/21/2024	Antimony, total	0.0013 U	mg/L
70S	Compliance	E004	02/21/2024	Arsenic, total	0.00032 J	mg/L
70S	Compliance	E004	02/21/2024	Barium, total	0.0240	mg/L
70S	Compliance	E004	02/21/2024	Beryllium, total	0.00053 U	mg/L
70S	Compliance	E004	02/21/2024	Boron, total	0.430 J+	mg/L
70S	Compliance	E004	02/21/2024	Cadmium, total	0.00026 J	mg/L
70S	Compliance	E004	02/21/2024	Calcium, total	210	mg/L
70S	Compliance	E004	02/21/2024	Chloride, total	11.0	mg/L
70S	Compliance	E004	02/21/2024	Chromium, total	0.0011 U	mg/L
70S	Compliance	E004	02/21/2024	Cobalt, total	0.0004 U	mg/L
70S	Compliance	E004	02/21/2024	Dissolved Oxygen	0.220	mg/L
70S	Compliance	E004	02/21/2024	Fluoride, total	0.130	mg/L
70S	Compliance	E004	02/21/2024	Lead, total	0.00019 U	mg/L
70S	Compliance	E004	02/21/2024	Lithium, total	0.00930	mg/L
70S	Compliance	E004	02/21/2024	Mercury, total	0.000079 U	mg/L
70S	Compliance	E004	02/21/2024	Molybdenum, total	0.0034 J	mg/L
70S	Compliance	E004	02/21/2024	Oxidation Reduction Potential	68.4	mV
70S	Compliance	E004	02/21/2024	pH (field)	6.9	SU
70S	Compliance	E004	02/21/2024	Radium 226 + Radium 228, total	0.325	pCi/L
70S	Compliance	E004	02/21/2024	Selenium, total	0.00098 U	mg/L
70S	Compliance	E004	02/21/2024	Specific Conductance @ 25C (field)	1,298	micromhos/cm
70S	Compliance	E004	02/21/2024	Sulfate, total	600	mg/L
70S	Compliance	E004	02/21/2024	Temperature	11.0	degrees C
70S	Compliance	E004	02/21/2024	Thallium, total	0.00057 U	mg/L
70S	Compliance	E004	02/21/2024	Total Dissolved Solids	1,200	mg/L
70S	Compliance	E004	02/21/2024	Turbidity, field	6.82	NTU
70D	Compliance	E004	02/21/2024	Antimony, total	0.0013 U	mg/L
70D	Compliance	E004	02/21/2024	Arsenic, total	0.00058 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 1, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
70D	Compliance	E004	02/21/2024	Barium, total	0.680	mg/L
70D	Compliance	E004	02/21/2024	Beryllium, total	0.00053 U	mg/L
70D	Compliance	E004	02/21/2024	Boron, total	1.50	mg/L
70D	Compliance	E004	02/21/2024	Cadmium, total	0.00017 U	mg/L
70D	Compliance	E004	02/21/2024	Calcium, total	84.0	mg/L
70D	Compliance	E004	02/21/2024	Chloride, total	730	mg/L
70D	Compliance	E004	02/21/2024	Chromium, total	0.0035 J	mg/L
70D	Compliance	E004	02/21/2024	Cobalt, total	0.00270	mg/L
70D	Compliance	E004	02/21/2024	Dissolved Oxygen	0.300	mg/L
70D	Compliance	E004	02/21/2024	Fluoride, total	0.400	mg/L
70D	Compliance	E004	02/21/2024	Lead, total	0.00200 J+	mg/L
70D	Compliance	E004	02/21/2024	Lithium, total	0.0970	mg/L
70D	Compliance	E004	02/21/2024	Mercury, total	0.000079 U	mg/L
70D	Compliance	E004	02/21/2024	Molybdenum, total	0.0025 U	mg/L
70D	Compliance	E004	02/21/2024	Oxidation Reduction Potential	26.7	mV
70D	Compliance	E004	02/21/2024	pH (field)	6.9	SU
70D	Compliance	E004	02/21/2024	Radium 226 + Radium 228, total	1.94	pCi/L
70D	Compliance	E004	02/21/2024	Selenium, total	0.00098 U	mg/L
70D	Compliance	E004	02/21/2024	Specific Conductance @ 25C (field)	2,781	micromhos/cm
70D	Compliance	E004	02/21/2024	Sulfate, total	43.0	mg/L
70D	Compliance	E004	02/21/2024	Temperature	11.7	degrees C
70D	Compliance	E004	02/21/2024	Thallium, total	0.00057 U	mg/L
70D	Compliance	E004	02/21/2024	Total Dissolved Solids	1,900	mg/L
70D	Compliance	E004	02/21/2024	Turbidity, field	19.6	NTU
71S	Compliance	E004	--	Antimony, total	--	mg/L
71S	Compliance	E004	--	Arsenic, total	--	mg/L
71S	Compliance	E004	--	Barium, total	--	mg/L
71S	Compliance	E004	--	Beryllium, total	--	mg/L
71S	Compliance	E004	--	Boron, total	--	mg/L
71S	Compliance	E004	--	Cadmium, total	--	mg/L
71S	Compliance	E004	--	Calcium, total	--	mg/L
71S	Compliance	E004	--	Chloride, total	--	mg/L
71S	Compliance	E004	--	Chromium, total	--	mg/L
71S	Compliance	E004	--	Cobalt, total	--	mg/L
71S	Compliance	E004	--	Dissolved Oxygen	--	mg/L
71S	Compliance	E004	--	Fluoride, total	--	mg/L
71S	Compliance	E004	--	Lead, total	--	mg/L
71S	Compliance	E004	--	Lithium, total	--	mg/L
71S	Compliance	E004	--	Mercury, total	--	mg/L
71S	Compliance	E004	--	Molybdenum, total	--	mg/L
71S	Compliance	E004	--	Oxidation Reduction Potential	--	mV
71S	Compliance	E004	--	pH (field)	--	SU
71S	Compliance	E004	--	Radium 226 + Radium 228, total	--	pCi/L
71S	Compliance	E004	--	Selenium, total	--	mg/L
71S	Compliance	E004	--	Specific Conductance @ 25C (field)	--	micromhos/cm
71S	Compliance	E004	--	Sulfate, total	--	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 1, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
71S	Compliance	E004	--	Temperature	--	degrees C
71S	Compliance	E004	--	Thallium, total	--	mg/L
71S	Compliance	E004	--	Total Dissolved Solids	--	mg/L
71S	Compliance	E004	--	Turbidity, field	--	NTU
71D	Compliance	E004	--	Antimony, total	--	mg/L
71D	Compliance	E004	--	Arsenic, total	--	mg/L
71D	Compliance	E004	--	Barium, total	--	mg/L
71D	Compliance	E004	--	Beryllium, total	--	mg/L
71D	Compliance	E004	--	Boron, total	--	mg/L
71D	Compliance	E004	--	Cadmium, total	--	mg/L
71D	Compliance	E004	--	Calcium, total	--	mg/L
71D	Compliance	E004	--	Chloride, total	--	mg/L
71D	Compliance	E004	--	Chromium, total	--	mg/L
71D	Compliance	E004	--	Cobalt, total	--	mg/L
71D	Compliance	E004	--	Dissolved Oxygen	--	mg/L
71D	Compliance	E004	--	Fluoride, total	--	mg/L
71D	Compliance	E004	--	Lead, total	--	mg/L
71D	Compliance	E004	--	Lithium, total	--	mg/L
71D	Compliance	E004	--	Mercury, total	--	mg/L
71D	Compliance	E004	--	Molybdenum, total	--	mg/L
71D	Compliance	E004	--	Oxidation Reduction Potential	--	mV
71D	Compliance	E004	--	pH (field)	--	SU
71D	Compliance	E004	--	Radium 226 + Radium 228, total	--	pCi/L
71D	Compliance	E004	--	Selenium, total	--	mg/L
71D	Compliance	E004	--	Specific Conductance @ 25C (field)	--	micromhos/cm
71D	Compliance	E004	--	Sulfate, total	--	mg/L
71D	Compliance	E004	--	Temperature	--	degrees C
71D	Compliance	E004	--	Thallium, total	--	mg/L
71D	Compliance	E004	--	Total Dissolved Solids	--	mg/L
71D	Compliance	E004	--	Turbidity, field	--	NTU

Notes:
- = no data available
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 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
10	Background	E005	06/06/2024	Antimony, total	0.0013 U	mg/L
10	Background	E005	06/06/2024	Arsenic, total	0.00023 U	mg/L
10	Background	E005	06/06/2024	Barium, total	0.0650	mg/L
10	Background	E005	06/06/2024	Beryllium, total	0.00053 U	mg/L
10	Background	E005	06/06/2024	Boron, total	0.0990 J+	mg/L
10	Background	E005	06/06/2024	Cadmium, total	0.00017 U	mg/L
10	Background	E005	06/06/2024	Calcium, total	190	mg/L
10	Background	E005	06/06/2024	Chloride, total	4.9 J	mg/L
10	Background	E005	06/06/2024	Chromium, total	0.0011 U	mg/L
10	Background	E005	06/06/2024	Cobalt, total	0.0007 J	mg/L
10	Background	E005	06/06/2024	Dissolved Oxygen	7.86	mg/L
10	Background	E005	06/06/2024	Fluoride, total	0.130	mg/L
10	Background	E005	06/06/2024	Lead, total	0.00019 U	mg/L
10	Background	E005	06/06/2024	Lithium, total	0.0200	mg/L
10	Background	E005	06/06/2024	Mercury, total	0.000076 U	mg/L
10	Background	E005	06/06/2024	Molybdenum, total	0.0025 U	mg/L
10	Background	E005	06/06/2024	Oxidation Reduction Potential	274	mV
10	Background	E005	06/06/2024	pH (field)	7.3	SU
10	Background	E005	06/06/2024	Radium 226 + Radium 228, total	0.599	pCi/L
10	Background	E005	06/06/2024	Selenium, total	0.00098 U	mg/L
10	Background	E005	06/06/2024	Specific Conductance @ 25C (field)	1,540	micromhos/cm
10	Background	E005	06/06/2024	Sulfate, total	320	mg/L
10	Background	E005	06/06/2024	Temperature	23.6	degrees C
10	Background	E005	06/06/2024	Thallium, total	0.00057 U	mg/L
10	Background	E005	06/06/2024	Total Dissolved Solids	990	mg/L
10	Background	E005	06/06/2024	Turbidity, field	68.0	NTU
22	Background	E005	05/07/2024	Antimony, total	0.0013 U	mg/L
22	Background	E005	05/07/2024	Arsenic, total	0.00023 U	mg/L
22	Background	E005	05/07/2024	Barium, total	0.0780	mg/L
22	Background	E005	05/07/2024	Beryllium, total	0.00053 U	mg/L
22	Background	E005	05/07/2024	Boron, total	0.400	mg/L
22	Background	E005	05/07/2024	Cadmium, total	0.00017 U	mg/L
22	Background	E005	05/07/2024	Calcium, total	45.0	mg/L
22	Background	E005	05/07/2024	Chloride, total	6.90	mg/L
22	Background	E005	05/07/2024	Chromium, total	0.0011 U	mg/L
22	Background	E005	05/07/2024	Cobalt, total	0.0004 U	mg/L
22	Background	E005	05/07/2024	Dissolved Oxygen	0.950	mg/L
22	Background	E005	05/07/2024	Fluoride, total	0.370	mg/L
22	Background	E005	05/07/2024	Lead, total	0.00019 U	mg/L
22	Background	E005	05/07/2024	Lithium, total	0.0320	mg/L
22	Background	E005	05/07/2024	Mercury, total	0.000076 U	mg/L
22	Background	E005	05/07/2024	Molybdenum, total	0.0025 U	mg/L
22	Background	E005	05/07/2024	Oxidation Reduction Potential	-67.1	mV
22	Background	E005	05/07/2024	pH (field)	7.4	SU
22	Background	E005	05/07/2024	Radium 226 + Radium 228, total	0.89	pCi/L
22	Background	E005	05/07/2024	Selenium, total	0.00098 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
22	Background	E005	05/07/2024	Specific Conductance @ 25C (field)	780	micromhos/cm
22	Background	E005	05/07/2024	Sulfate, total	29.0	mg/L
22	Background	E005	05/07/2024	Temperature	15.2	degrees C
22	Background	E005	05/07/2024	Thallium, total	0.00057 U	mg/L
22	Background	E005	05/07/2024	Total Dissolved Solids	460	mg/L
22	Background	E005	05/07/2024	Turbidity, field	3.21	NTU
16B	Compliance	E005	--	Antimony, total	--	mg/L
16B	Compliance	E005	--	Arsenic, total	--	mg/L
16B	Compliance	E005	--	Barium, total	--	mg/L
16B	Compliance	E005	--	Beryllium, total	--	mg/L
16B	Compliance	E005	--	Boron, total	--	mg/L
16B	Compliance	E005	--	Cadmium, total	--	mg/L
16B	Compliance	E005	--	Calcium, total	--	mg/L
16B	Compliance	E005	--	Chloride, total	--	mg/L
16B	Compliance	E005	--	Chromium, total	--	mg/L
16B	Compliance	E005	--	Cobalt, total	--	mg/L
16B	Compliance	E005	--	Dissolved Oxygen	--	mg/L
16B	Compliance	E005	--	Fluoride, total	--	mg/L
16B	Compliance	E005	--	Lead, total	--	mg/L
16B	Compliance	E005	--	Lithium, total	--	mg/L
16B	Compliance	E005	--	Mercury, total	--	mg/L
16B	Compliance	E005	--	Molybdenum, total	--	mg/L
16B	Compliance	E005	--	Oxidation Reduction Potential	--	mV
16B	Compliance	E005	--	pH (field)	--	SU
16B	Compliance	E005	--	Radium 226 + Radium 228, total	--	pCi/L
16B	Compliance	E005	--	Selenium, total	--	mg/L
16B	Compliance	E005	--	Specific Conductance @ 25C (field)	--	micromhos/cm
16B	Compliance	E005	--	Sulfate, total	--	mg/L
16B	Compliance	E005	--	Temperature	--	degrees C
16B	Compliance	E005	--	Thallium, total	--	mg/L
16B	Compliance	E005	--	Total Dissolved Solids	--	mg/L
16B	Compliance	E005	--	Turbidity, field	--	NTU
16A	Compliance	E005	06/06/2024	Antimony, total	0.0013 U	mg/L
16A	Compliance	E005	06/06/2024	Arsenic, total	0.00280	mg/L
16A	Compliance	E005	06/06/2024	Barium, total	0.350	mg/L
16A	Compliance	E005	06/06/2024	Beryllium, total	0.00053 U	mg/L
16A	Compliance	E005	06/06/2024	Boron, total	0.770 J+	mg/L
16A	Compliance	E005	06/06/2024	Cadmium, total	0.00017 U	mg/L
16A	Compliance	E005	06/06/2024	Calcium, total	46.0	mg/L
16A	Compliance	E005	06/06/2024	Chloride, total	110	mg/L
16A	Compliance	E005	06/06/2024	Chromium, total	0.00650	mg/L
16A	Compliance	E005	06/06/2024	Cobalt, total	0.00300	mg/L
16A	Compliance	E005	06/06/2024	Dissolved Oxygen	4.16	mg/L
16A	Compliance	E005	06/06/2024	Fluoride, total	0.720	mg/L
16A	Compliance	E005	06/06/2024	Lead, total	0.00270	mg/L
16A	Compliance	E005	06/06/2024	Lithium, total	0.0370	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
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NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
16A	Compliance	E005	06/06/2024	Mercury, total	0.000076 U	mg/L
16A	Compliance	E005	06/06/2024	Molybdenum, total	0.0025 U	mg/L
16A	Compliance	E005	06/06/2024	Oxidation Reduction Potential	72.0	mV
16A	Compliance	E005	06/06/2024	pH (field)	7.1	SU
16A	Compliance	E005	06/06/2024	Radium 226 + Radium 228, total	0.944	pCi/L
16A	Compliance	E005	06/06/2024	Selenium, total	0.00098 U	mg/L
16A	Compliance	E005	06/06/2024	Specific Conductance @ 25C (field)	398	micromhos/cm
16A	Compliance	E005	06/06/2024	Sulfate, total	37.0	mg/L
16A	Compliance	E005	06/06/2024	Temperature	22.4	degrees C
16A	Compliance	E005	06/06/2024	Thallium, total	0.00057 U	mg/L
16A	Compliance	E005	06/06/2024	Total Dissolved Solids	700	mg/L
16A	Compliance	E005	06/06/2024	Turbidity, field	55.1	NTU
35S	Compliance	E005	--	Antimony, total	--	mg/L
35S	Compliance	E005	--	Arsenic, total	--	mg/L
35S	Compliance	E005	--	Barium, total	--	mg/L
35S	Compliance	E005	--	Beryllium, total	--	mg/L
35S	Compliance	E005	--	Boron, total	--	mg/L
35S	Compliance	E005	--	Cadmium, total	--	mg/L
35S	Compliance	E005	--	Calcium, total	--	mg/L
35S	Compliance	E005	--	Chloride, total	--	mg/L
35S	Compliance	E005	--	Chromium, total	--	mg/L
35S	Compliance	E005	--	Cobalt, total	--	mg/L
35S	Compliance	E005	--	Dissolved Oxygen	--	mg/L
35S	Compliance	E005	--	Fluoride, total	--	mg/L
35S	Compliance	E005	--	Lead, total	--	mg/L
35S	Compliance	E005	--	Lithium, total	--	mg/L
35S	Compliance	E005	--	Mercury, total	--	mg/L
35S	Compliance	E005	--	Molybdenum, total	--	mg/L
35S	Compliance	E005	--	Oxidation Reduction Potential	--	mV
35S	Compliance	E005	--	pH (field)	--	SU
35S	Compliance	E005	--	Radium 226 + Radium 228, total	--	pCi/L
35S	Compliance	E005	--	Selenium, total	--	mg/L
35S	Compliance	E005	--	Specific Conductance @ 25C (field)	--	micromhos/cm
35S	Compliance	E005	--	Sulfate, total	--	mg/L
35S	Compliance	E005	--	Temperature	--	degrees C
35S	Compliance	E005	--	Thallium, total	--	mg/L
35S	Compliance	E005	--	Total Dissolved Solids	--	mg/L
35S	Compliance	E005	--	Turbidity, field	--	NTU
35D	Compliance	E005	06/06/2024	Antimony, total	0.0013 U	mg/L
35D	Compliance	E005	06/06/2024	Arsenic, total	0.00220	mg/L
35D	Compliance	E005	06/06/2024	Barium, total	0.0250	mg/L
35D	Compliance	E005	06/06/2024	Beryllium, total	0.00053 U	mg/L
35D	Compliance	E005	06/06/2024	Boron, total	2.00	mg/L
35D	Compliance	E005	06/06/2024	Cadmium, total	0.00017 U	mg/L
35D	Compliance	E005	06/06/2024	Calcium, total	100	mg/L
35D	Compliance	E005	06/06/2024	Chloride, total	470	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
35D	Compliance	E005	06/06/2024	Chromium, total	0.0011 U	mg/L
35D	Compliance	E005	06/06/2024	Cobalt, total	0.0004 U	mg/L
35D	Compliance	E005	06/06/2024	Dissolved Oxygen	0.970	mg/L
35D	Compliance	E005	06/06/2024	Fluoride, total	0.730	mg/L
35D	Compliance	E005	06/06/2024	Lead, total	0.00031 J	mg/L
35D	Compliance	E005	06/06/2024	Lithium, total	0.160	mg/L
35D	Compliance	E005	06/06/2024	Mercury, total	0.000076 U	mg/L
35D	Compliance	E005	06/06/2024	Molybdenum, total	0.0037 J	mg/L
35D	Compliance	E005	06/06/2024	Oxidation Reduction Potential	112	mV
35D	Compliance	E005	06/06/2024	pH (field)	7.8	SU
35D	Compliance	E005	06/06/2024	Radium 226 + Radium 228, total	0.812	pCi/L
35D	Compliance	E005	06/06/2024	Selenium, total	0.00098 U	mg/L
35D	Compliance	E005	06/06/2024	Specific Conductance @ 25C (field)	4,740	micromhos/cm
35D	Compliance	E005	06/06/2024	Sulfate, total	1,500	mg/L
35D	Compliance	E005	06/06/2024	Temperature	18.8	degrees C
35D	Compliance	E005	06/06/2024	Thallium, total	0.00057 U	mg/L
35D	Compliance	E005	06/06/2024	Total Dissolved Solids	3,500	mg/L
35D	Compliance	E005	06/06/2024	Turbidity, field	3.40	NTU
70S	Compliance	E005	06/06/2024	Antimony, total	0.0013 U	mg/L
70S	Compliance	E005	06/06/2024	Arsenic, total	0.00033 J	mg/L
70S	Compliance	E005	06/06/2024	Barium, total	0.0160	mg/L
70S	Compliance	E005	06/06/2024	Beryllium, total	0.00053 U	mg/L
70S	Compliance	E005	06/06/2024	Boron, total	0.470 J+	mg/L
70S	Compliance	E005	06/06/2024	Cadmium, total	0.00017 U	mg/L
70S	Compliance	E005	06/06/2024	Calcium, total	210	mg/L
70S	Compliance	E005	06/06/2024	Chloride, total	10.0	mg/L
70S	Compliance	E005	06/06/2024	Chromium, total	0.0011 U	mg/L
70S	Compliance	E005	06/06/2024	Cobalt, total	0.0004 U	mg/L
70S	Compliance	E005	06/06/2024	Dissolved Oxygen	2.20	mg/L
70S	Compliance	E005	06/06/2024	Fluoride, total	0.130	mg/L
70S	Compliance	E005	06/06/2024	Lead, total	0.00033 J	mg/L
70S	Compliance	E005	06/06/2024	Lithium, total	0.0150	mg/L
70S	Compliance	E005	06/06/2024	Mercury, total	0.000076 U	mg/L
70S	Compliance	E005	06/06/2024	Molybdenum, total	0.0025 U	mg/L
70S	Compliance	E005	06/06/2024	Oxidation Reduction Potential	442	mV
70S	Compliance	E005	06/06/2024	pH (field)	7.2	SU
70S	Compliance	E005	06/06/2024	Radium 226 + Radium 228, total	1.34	pCi/L
70S	Compliance	E005	06/06/2024	Selenium, total	0.00098 U	mg/L
70S	Compliance	E005	06/06/2024	Specific Conductance @ 25C (field)	1,430	micromhos/cm
70S	Compliance	E005	06/06/2024	Sulfate, total	560	mg/L
70S	Compliance	E005	06/06/2024	Temperature	13.6	degrees C
70S	Compliance	E005	06/06/2024	Thallium, total	0.00057 U	mg/L
70S	Compliance	E005	06/06/2024	Total Dissolved Solids	1,100	mg/L
70S	Compliance	E005	06/06/2024	Turbidity, field	1.10	NTU
70D	Compliance	E005	06/06/2024	Antimony, total	0.0013 U	mg/L
70D	Compliance	E005	06/06/2024	Arsenic, total	0.0007 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
70D	Compliance	E005	06/06/2024	Barium, total	0.480	mg/L
70D	Compliance	E005	06/06/2024	Beryllium, total	0.00053 U	mg/L
70D	Compliance	E005	06/06/2024	Boron, total	1.70	mg/L
70D	Compliance	E005	06/06/2024	Cadmium, total	0.00017 U	mg/L
70D	Compliance	E005	06/06/2024	Calcium, total	96.0	mg/L
70D	Compliance	E005	06/06/2024	Chloride, total	890	mg/L
70D	Compliance	E005	06/06/2024	Chromium, total	0.0042 J	mg/L
70D	Compliance	E005	06/06/2024	Cobalt, total	0.00260	mg/L
70D	Compliance	E005	06/06/2024	Dissolved Oxygen	4.40	mg/L
70D	Compliance	E005	06/06/2024	Fluoride, total	0.450	mg/L
70D	Compliance	E005	06/06/2024	Lead, total	0.00230	mg/L
70D	Compliance	E005	06/06/2024	Lithium, total	0.120	mg/L
70D	Compliance	E005	06/06/2024	Mercury, total	0.000076 U	mg/L
70D	Compliance	E005	06/06/2024	Molybdenum, total	0.0025 U	mg/L
70D	Compliance	E005	06/06/2024	Oxidation Reduction Potential	4.84	mV
70D	Compliance	E005	06/06/2024	pH (field)	7.2	SU
70D	Compliance	E005	06/06/2024	Radium 226 + Radium 228, total	1.41	pCi/L
70D	Compliance	E005	06/06/2024	Selenium, total	0.00098 U	mg/L
70D	Compliance	E005	06/06/2024	Specific Conductance @ 25C (field)	2,710	micromhos/cm
70D	Compliance	E005	06/06/2024	Sulfate, total	41.0	mg/L
70D	Compliance	E005	06/06/2024	Temperature	16	degrees C
70D	Compliance	E005	06/06/2024	Thallium, total	0.00057 U	mg/L
70D	Compliance	E005	06/06/2024	Total Dissolved Solids	1,800	mg/L
70D	Compliance	E005	06/06/2024	Turbidity, field	9.70	NTU
71S	Compliance	E005	--	Antimony, total	--	mg/L
71S	Compliance	E005	--	Arsenic, total	--	mg/L
71S	Compliance	E005	--	Barium, total	--	mg/L
71S	Compliance	E005	--	Beryllium, total	--	mg/L
71S	Compliance	E005	--	Boron, total	--	mg/L
71S	Compliance	E005	--	Cadmium, total	--	mg/L
71S	Compliance	E005	--	Calcium, total	--	mg/L
71S	Compliance	E005	--	Chloride, total	--	mg/L
71S	Compliance	E005	--	Chromium, total	--	mg/L
71S	Compliance	E005	--	Cobalt, total	--	mg/L
71S	Compliance	E005	--	Dissolved Oxygen	--	mg/L
71S	Compliance	E005	--	Fluoride, total	--	mg/L
71S	Compliance	E005	--	Lead, total	--	mg/L
71S	Compliance	E005	--	Lithium, total	--	mg/L
71S	Compliance	E005	--	Mercury, total	--	mg/L
71S	Compliance	E005	--	Molybdenum, total	--	mg/L
71S	Compliance	E005	--	Oxidation Reduction Potential	--	mV
71S	Compliance	E005	--	pH (field)	--	SU
71S	Compliance	E005	--	Radium 226 + Radium 228, total	--	pCi/L
71S	Compliance	E005	--	Selenium, total	--	mg/L
71S	Compliance	E005	--	Specific Conductance @ 25C (field)	--	micromhos/cm
71S	Compliance	E005	--	Sulfate, total	--	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
71S	Compliance	E005	--	Temperature	--	degrees C
71S	Compliance	E005	--	Thallium, total	--	mg/L
71S	Compliance	E005	--	Total Dissolved Solids	--	mg/L
71S	Compliance	E005	--	Turbidity, field	--	NTU
71D	Compliance	E005	--	Antimony, total	--	mg/L
71D	Compliance	E005	--	Arsenic, total	--	mg/L
71D	Compliance	E005	--	Barium, total	--	mg/L
71D	Compliance	E005	--	Beryllium, total	--	mg/L
71D	Compliance	E005	--	Boron, total	--	mg/L
71D	Compliance	E005	--	Cadmium, total	--	mg/L
71D	Compliance	E005	--	Calcium, total	--	mg/L
71D	Compliance	E005	--	Chloride, total	--	mg/L
71D	Compliance	E005	--	Chromium, total	--	mg/L
71D	Compliance	E005	--	Cobalt, total	--	mg/L
71D	Compliance	E005	--	Dissolved Oxygen	--	mg/L
71D	Compliance	E005	--	Fluoride, total	--	mg/L
71D	Compliance	E005	--	Lead, total	--	mg/L
71D	Compliance	E005	--	Lithium, total	--	mg/L
71D	Compliance	E005	--	Mercury, total	--	mg/L
71D	Compliance	E005	--	Molybdenum, total	--	mg/L
71D	Compliance	E005	--	Oxidation Reduction Potential	--	mV
71D	Compliance	E005	--	pH (field)	--	SU
71D	Compliance	E005	--	Radium 226 + Radium 228, total	--	pCi/L
71D	Compliance	E005	--	Selenium, total	--	mg/L
71D	Compliance	E005	--	Specific Conductance @ 25C (field)	--	micromhos/cm
71D	Compliance	E005	--	Sulfate, total	--	mg/L
71D	Compliance	E005	--	Temperature	--	degrees C
71D	Compliance	E005	--	Thallium, total	--	mg/L
71D	Compliance	E005	--	Total Dissolved Solids	--	mg/L
71D	Compliance	E005	--	Turbidity, field	--	NTU

Notes:
- = no data available
C = Celsius
cm = centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = Nephelometric Turbidity Units
pCi/L = picocuries per liter
SU = Standard Units
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
10	Background	E006	08/01/2024	Antimony, total	0.0013 U	mg/L
10	Background	E006	08/01/2024	Arsenic, total	0.00023 U	mg/L
10	Background	E006	08/01/2024	Barium, total	0.0670	mg/L
10	Background	E006	08/01/2024	Beryllium, total	0.00053 U	mg/L
10	Background	E006	08/01/2024	Boron, total	0.0740 J+	mg/L
10	Background	E006	08/01/2024	Cadmium, total	0.00017 U	mg/L
10	Background	E006	08/01/2024	Calcium, total	180	mg/L
10	Background	E006	08/01/2024	Chloride, total	2.70	mg/L
10	Background	E006	08/01/2024	Chromium, total	0.0011 U	mg/L
10	Background	E006	08/01/2024	Cobalt, total	0.00550	mg/L
10	Background	E006	08/01/2024	Dissolved Oxygen	1.48	mg/L
10	Background	E006	08/01/2024	Fluoride, total	0.130	mg/L
10	Background	E006	08/01/2024	Lead, total	0.00019 U	mg/L
10	Background	E006	08/01/2024	Lithium, total	0.0200	mg/L
10	Background	E006	08/01/2024	Mercury, total	0.000076 U	mg/L
10	Background	E006	08/01/2024	Molybdenum, total	0.0025 U	mg/L
10	Background	E006	08/01/2024	Oxidation Reduction Potential	97.3	mV
10	Background	E006	08/01/2024	pH (field)	6.7	SU
10	Background	E006	08/01/2024	Radium 226 + Radium 228, total	0.202	pCi/L
10	Background	E006	08/01/2024	Selenium, total	0.00098 U	mg/L
10	Background	E006	08/01/2024	Specific Conductance @ 25C (field)	1,313	micromhos/cm
10	Background	E006	08/01/2024	Sulfate, total	280	mg/L
10	Background	E006	08/01/2024	Temperature	16.8	degrees C
10	Background	E006	08/01/2024	Thallium, total	0.00057 U	mg/L
10	Background	E006	08/01/2024	Total Dissolved Solids	1,000	mg/L
10	Background	E006	08/01/2024	Turbidity, field	9.10	NTU
22	Background	E006	07/29/2024	Antimony, total	0.0013 U	mg/L
22	Background	E006	07/29/2024	Arsenic, total	0.00023 U	mg/L
22	Background	E006	07/29/2024	Barium, total	0.0830	mg/L
22	Background	E006	07/29/2024	Beryllium, total	0.00053 U	mg/L
22	Background	E006	07/29/2024	Boron, total	0.380 J+	mg/L
22	Background	E006	07/29/2024	Cadmium, total	0.00017 U	mg/L
22	Background	E006	07/29/2024	Calcium, total	46.0	mg/L
22	Background	E006	07/29/2024	Chloride, total	7.40	mg/L
22	Background	E006	07/29/2024	Chromium, total	0.0011 U	mg/L
22	Background	E006	07/29/2024	Cobalt, total	0.0004 U	mg/L
22	Background	E006	07/29/2024	Dissolved Oxygen	0.180	mg/L
22	Background	E006	07/29/2024	Fluoride, total	0.400	mg/L
22	Background	E006	07/29/2024	Lead, total	0.00019 U	mg/L
22	Background	E006	07/29/2024	Lithium, total	0.0330	mg/L
22	Background	E006	07/29/2024	Mercury, total	0.000076 U	mg/L
22	Background	E006	07/29/2024	Molybdenum, total	0.0025 U	mg/L
22	Background	E006	07/29/2024	Oxidation Reduction Potential	-45.3	mV
22	Background	E006	07/29/2024	pH (field)	7.3	SU
22	Background	E006	07/29/2024	Radium 226 + Radium 228, total	0.836	pCi/L
22	Background	E006	07/29/2024	Selenium, total	0.00098 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
22	Background	E006	07/29/2024	Specific Conductance @ 25C (field)	763	micromhos/cm
22	Background	E006	07/29/2024	Sulfate, total	29.0	mg/L
22	Background	E006	07/29/2024	Temperature	15.2	degrees C
22	Background	E006	07/29/2024	Thallium, total	0.00057 U	mg/L
22	Background	E006	07/29/2024	Total Dissolved Solids	460	mg/L
22	Background	E006	07/29/2024	Turbidity, field	25.3	NTU
16B	Compliance	E006	--	Antimony, total	NS ⁷	mg/L
16B	Compliance	E006	--	Arsenic, total	NS ⁷	mg/L
16B	Compliance	E006	--	Barium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Beryllium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Boron, total	NS ⁷	mg/L
16B	Compliance	E006	--	Cadmium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Calcium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Chloride, total	NS ⁷	mg/L
16B	Compliance	E006	--	Chromium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Cobalt, total	NS ⁷	mg/L
16B	Compliance	E006	--	Dissolved Oxygen	NS ⁷	mg/L
16B	Compliance	E006	--	Fluoride, total	NS ⁷	mg/L
16B	Compliance	E006	--	Lead, total	NS ⁷	mg/L
16B	Compliance	E006	--	Lithium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Mercury, total	NS ⁷	mg/L
16B	Compliance	E006	--	Molybdenum, total	NS ⁷	mg/L
16B	Compliance	E006	--	Oxidation Reduction Potential	NS ⁷	mV
16B	Compliance	E006	--	pH (field)	NS ⁷	SU
16B	Compliance	E006	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
16B	Compliance	E006	--	Selenium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
16B	Compliance	E006	--	Sulfate, total	NS ⁷	mg/L
16B	Compliance	E006	--	Temperature	NS ⁷	degrees C
16B	Compliance	E006	--	Thallium, total	NS ⁷	mg/L
16B	Compliance	E006	--	Total Dissolved Solids	NS ⁷	mg/L
16B	Compliance	E006	--	Turbidity, field	NS ⁷	NTU
16A	Compliance	E006	07/31/2024	Antimony, total	0.0013 U	mg/L
16A	Compliance	E006	07/31/2024	Arsenic, total	0.00150 J	mg/L
16A	Compliance	E006	07/31/2024	Barium, total	0.300	mg/L
16A	Compliance	E006	07/31/2024	Beryllium, total	0.00053 U	mg/L
16A	Compliance	E006	07/31/2024	Boron, total	0.840 J+	mg/L
16A	Compliance	E006	07/31/2024	Cadmium, total	0.00017 U	mg/L
16A	Compliance	E006	07/31/2024	Calcium, total	33.0	mg/L
16A	Compliance	E006	07/31/2024	Chloride, total	130	mg/L
16A	Compliance	E006	07/31/2024	Chromium, total	0.00550 J+	mg/L
16A	Compliance	E006	07/31/2024	Cobalt, total	0.00170	mg/L
16A	Compliance	E006	07/31/2024	Dissolved Oxygen	1.95	mg/L
16A	Compliance	E006	07/31/2024	Fluoride, total	0.860	mg/L
16A	Compliance	E006	07/31/2024	Lead, total	0.00150 J+	mg/L
16A	Compliance	E006	07/31/2024	Lithium, total	0.0360	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2024
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OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
16A	Compliance	E006	07/31/2024	Mercury, total	0.000076 U	mg/L
16A	Compliance	E006	07/31/2024	Molybdenum, total	0.0025 U	mg/L
16A	Compliance	E006	07/31/2024	Oxidation Reduction Potential	-131	mV
16A	Compliance	E006	07/31/2024	pH (field)	7.7	SU
16A	Compliance	E006	07/31/2024	Radium 226 + Radium 228, total	1.95	pCi/L
16A	Compliance	E006	07/31/2024	Selenium, total	0.00098 U	mg/L
16A	Compliance	E006	07/31/2024	Specific Conductance @ 25C (field)	1,379	micromhos/cm
16A	Compliance	E006	07/31/2024	Sulfate, total	2.90	mg/L
16A	Compliance	E006	07/31/2024	Temperature	12.6	degrees C
16A	Compliance	E006	07/31/2024	Thallium, total	0.00057 U	mg/L
16A	Compliance	E006	07/31/2024	Total Dissolved Solids	640	mg/L
16A	Compliance	E006	07/31/2024	Turbidity, field	57.4	NTU
35S	Compliance	E006	--	Antimony, total	NS ⁷	mg/L
35S	Compliance	E006	--	Arsenic, total	NS ⁷	mg/L
35S	Compliance	E006	--	Barium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Beryllium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Boron, total	NS ⁷	mg/L
35S	Compliance	E006	--	Cadmium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Calcium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Chloride, total	NS ⁷	mg/L
35S	Compliance	E006	--	Chromium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Cobalt, total	NS ⁷	mg/L
35S	Compliance	E006	--	Dissolved Oxygen	NS ⁷	mg/L
35S	Compliance	E006	--	Fluoride, total	NS ⁷	mg/L
35S	Compliance	E006	--	Lead, total	NS ⁷	mg/L
35S	Compliance	E006	--	Lithium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Mercury, total	NS ⁷	mg/L
35S	Compliance	E006	--	Molybdenum, total	NS ⁷	mg/L
35S	Compliance	E006	--	Oxidation Reduction Potential	NS ⁷	mV
35S	Compliance	E006	--	pH (field)	NS ⁷	SU
35S	Compliance	E006	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
35S	Compliance	E006	--	Selenium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
35S	Compliance	E006	--	Sulfate, total	NS ⁷	mg/L
35S	Compliance	E006	--	Temperature	NS ⁷	degrees C
35S	Compliance	E006	--	Thallium, total	NS ⁷	mg/L
35S	Compliance	E006	--	Total Dissolved Solids	NS ⁷	mg/L
35S	Compliance	E006	--	Turbidity, field	NS ⁷	NTU
35D	Compliance	E006	07/31/2024	Antimony, total	0.0013 U	mg/L
35D	Compliance	E006	07/31/2024	Arsenic, total	0.00200	mg/L
35D	Compliance	E006	07/31/2024	Barium, total	0.0230	mg/L
35D	Compliance	E006	07/31/2024	Beryllium, total	0.00053 U	mg/L
35D	Compliance	E006	07/31/2024	Boron, total	1.90	mg/L
35D	Compliance	E006	07/31/2024	Cadmium, total	0.00017 U	mg/L
35D	Compliance	E006	07/31/2024	Calcium, total	95.0	mg/L
35D	Compliance	E006	07/31/2024	Chloride, total	380	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 3, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
35D	Compliance	E006	07/31/2024	Chromium, total	0.0011 U	mg/L
35D	Compliance	E006	07/31/2024	Cobalt, total	0.0004 U	mg/L
35D	Compliance	E006	07/31/2024	Dissolved Oxygen	0.960	mg/L
35D	Compliance	E006	07/31/2024	Fluoride, total	0.730	mg/L
35D	Compliance	E006	07/31/2024	Lead, total	0.00019 U	mg/L
35D	Compliance	E006	07/31/2024	Lithium, total	0.150	mg/L
35D	Compliance	E006	07/31/2024	Mercury, total	0.000076 U	mg/L
35D	Compliance	E006	07/31/2024	Molybdenum, total	0.0028 J	mg/L
35D	Compliance	E006	07/31/2024	Oxidation Reduction Potential	-60.9	mV
35D	Compliance	E006	07/31/2024	pH (field)	7.3	SU
35D	Compliance	E006	07/31/2024	Radium 226 + Radium 228, total	0.898	pCi/L
35D	Compliance	E006	07/31/2024	Selenium, total	0.00098 U	mg/L
35D	Compliance	E006	07/31/2024	Specific Conductance @ 25C (field)	4,663	micromhos/cm
35D	Compliance	E006	07/31/2024	Sulfate, total	1,400	mg/L
35D	Compliance	E006	07/31/2024	Temperature	16.9	degrees C
35D	Compliance	E006	07/31/2024	Thallium, total	0.00057 U	mg/L
35D	Compliance	E006	07/31/2024	Total Dissolved Solids	3,500	mg/L
35D	Compliance	E006	07/31/2024	Turbidity, field	8.91	NTU
70S	Compliance	E006	07/30/2024	Antimony, total	0.0013 U	mg/L
70S	Compliance	E006	07/30/2024	Arsenic, total	0.00028 J	mg/L
70S	Compliance	E006	07/30/2024	Barium, total	0.0150	mg/L
70S	Compliance	E006	07/30/2024	Beryllium, total	0.00053 U	mg/L
70S	Compliance	E006	07/30/2024	Boron, total	0.450 J+	mg/L
70S	Compliance	E006	07/30/2024	Cadmium, total	0.00031 J	mg/L
70S	Compliance	E006	07/30/2024	Calcium, total	190	mg/L
70S	Compliance	E006	07/30/2024	Chloride, total	9.80	mg/L
70S	Compliance	E006	07/30/2024	Chromium, total	0.0011 U	mg/L
70S	Compliance	E006	07/30/2024	Cobalt, total	0.0004 U	mg/L
70S	Compliance	E006	07/30/2024	Dissolved Oxygen	1.26	mg/L
70S	Compliance	E006	07/30/2024	Fluoride, total	0.150	mg/L
70S	Compliance	E006	07/30/2024	Lead, total	0.0005 UJ	mg/L
70S	Compliance	E006	07/30/2024	Lithium, total	0.0180	mg/L
70S	Compliance	E006	07/30/2024	Mercury, total	0.000076 U	mg/L
70S	Compliance	E006	07/30/2024	Molybdenum, total	0.0048 J	mg/L
70S	Compliance	E006	07/30/2024	Oxidation Reduction Potential	128	mV
70S	Compliance	E006	07/30/2024	pH (field)	6.9	SU
70S	Compliance	E006	07/30/2024	Radium 226 + Radium 228, total	0.338	pCi/L
70S	Compliance	E006	07/30/2024	Selenium, total	0.00098 U	mg/L
70S	Compliance	E006	07/30/2024	Specific Conductance @ 25C (field)	1,293	micromhos/cm
70S	Compliance	E006	07/30/2024	Sulfate, total	510	mg/L
70S	Compliance	E006	07/30/2024	Temperature	14.5	degrees C
70S	Compliance	E006	07/30/2024	Thallium, total	0.00057 U	mg/L
70S	Compliance	E006	07/30/2024	Total Dissolved Solids	1,200	mg/L
70S	Compliance	E006	07/30/2024	Turbidity, field	6.07	NTU
70D	Compliance	E006	07/30/2024	Antimony, total	0.0013 U	mg/L
70D	Compliance	E006	07/30/2024	Arsenic, total	0.00042 J	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
70D	Compliance	E006	07/30/2024	Barium, total	0.320	mg/L
70D	Compliance	E006	07/30/2024	Beryllium, total	0.00053 U	mg/L
70D	Compliance	E006	07/30/2024	Boron, total	1.30	mg/L
70D	Compliance	E006	07/30/2024	Cadmium, total	0.00017 U	mg/L
70D	Compliance	E006	07/30/2024	Calcium, total	91.0	mg/L
70D	Compliance	E006	07/30/2024	Chloride, total	410	mg/L
70D	Compliance	E006	07/30/2024	Chromium, total	0.005 UJ	mg/L
70D	Compliance	E006	07/30/2024	Cobalt, total	0.00110	mg/L
70D	Compliance	E006	07/30/2024	Dissolved Oxygen	2.90	mg/L
70D	Compliance	E006	07/30/2024	Fluoride, total	0.450	mg/L
70D	Compliance	E006	07/30/2024	Lead, total	0.000990 J+	mg/L
70D	Compliance	E006	07/30/2024	Lithium, total	0.0930	mg/L
70D	Compliance	E006	07/30/2024	Mercury, total	0.000076 U	mg/L
70D	Compliance	E006	07/30/2024	Molybdenum, total	0.0029 J	mg/L
70D	Compliance	E006	07/30/2024	Oxidation Reduction Potential	148	mV
70D	Compliance	E006	07/30/2024	pH (field)	6.8	SU
70D	Compliance	E006	07/30/2024	Radium 226 + Radium 228, total	1.45	pCi/L
70D	Compliance	E006	07/30/2024	Selenium, total	0.00098 U	mg/L
70D	Compliance	E006	07/30/2024	Specific Conductance @ 25C (field)	2,892	micromhos/cm
70D	Compliance	E006	07/30/2024	Sulfate, total	61.0	mg/L
70D	Compliance	E006	07/30/2024	Temperature	15.1	degrees C
70D	Compliance	E006	07/30/2024	Thallium, total	0.00057 U	mg/L
70D	Compliance	E006	07/30/2024	Total Dissolved Solids	1,400	mg/L
70D	Compliance	E006	07/30/2024	Turbidity, field	18.5	NTU
71S	Compliance	E006	07/30/2024	Antimony, total	0.0013 U	mg/L
71S	Compliance	E006	07/30/2024	Arsenic, total	0.00140	mg/L
71S	Compliance	E006	07/30/2024	Barium, total	0.0490	mg/L
71S	Compliance	E006	07/30/2024	Beryllium, total	0.00053 U	mg/L
71S	Compliance	E006	07/30/2024	Boron, total	0.240 J+	mg/L
71S	Compliance	E006	07/30/2024	Cadmium, total	0.00017 U	mg/L
71S	Compliance	E006	07/30/2024	Calcium, total	120	mg/L
71S	Compliance	E006	07/30/2024	Chloride, total	1.50	mg/L
71S	Compliance	E006	07/30/2024	Chromium, total	0.0011 U	mg/L
71S	Compliance	E006	07/30/2024	Cobalt, total	0.00150	mg/L
71S	Compliance	E006	07/30/2024	Dissolved Oxygen	0.180	mg/L
71S	Compliance	E006	07/30/2024	Fluoride, total	0.210	mg/L
71S	Compliance	E006	07/30/2024	Lead, total	0.0005 UJ	mg/L
71S	Compliance	E006	07/30/2024	Lithium, total	0.00870	mg/L
71S	Compliance	E006	07/30/2024	Mercury, total	0.000076 U	mg/L
71S	Compliance	E006	07/30/2024	Molybdenum, total	0.0029 J	mg/L
71S	Compliance	E006	07/30/2024	Oxidation Reduction Potential	8.90	mV
71S	Compliance	E006	07/30/2024	pH (field)	6.8	SU
71S	Compliance	E006	07/30/2024	Radium 226 + Radium 228, total	0.393	pCi/L
71S	Compliance	E006	07/30/2024	Selenium, total	0.00098 U	mg/L
71S	Compliance	E006	07/30/2024	Specific Conductance @ 25C (field)	1,021	micromhos/cm
71S	Compliance	E006	07/30/2024	Sulfate, total	62.0	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
71S	Compliance	E006	07/30/2024	Temperature	17.1	degrees C
71S	Compliance	E006	07/30/2024	Thallium, total	0.00057 U	mg/L
71S	Compliance	E006	07/30/2024	Total Dissolved Solids	560	mg/L
71S	Compliance	E006	07/30/2024	Turbidity, field	1.26	NTU
71D	Compliance	E006	08/01/2024	Antimony, total	0.0013 U	mg/L
71D	Compliance	E006	08/01/2024	Arsenic, total	0.00026 J	mg/L
71D	Compliance	E006	08/01/2024	Barium, total	0.250	mg/L
71D	Compliance	E006	08/01/2024	Beryllium, total	0.00053 U	mg/L
71D	Compliance	E006	08/01/2024	Boron, total	0.780 J+	mg/L
71D	Compliance	E006	08/01/2024	Cadmium, total	0.00017 U	mg/L
71D	Compliance	E006	08/01/2024	Calcium, total	22.0	mg/L
71D	Compliance	E006	08/01/2024	Chloride, total	680	mg/L
71D	Compliance	E006	08/01/2024	Chromium, total	0.005 UJ	mg/L
71D	Compliance	E006	08/01/2024	Cobalt, total	0.00079 J	mg/L
71D	Compliance	E006	08/01/2024	Dissolved Oxygen	0.460	mg/L
71D	Compliance	E006	08/01/2024	Fluoride, total	0.520	mg/L
71D	Compliance	E006	08/01/2024	Lead, total	0.000890 J+	mg/L
71D	Compliance	E006	08/01/2024	Lithium, total	0.110	mg/L
71D	Compliance	E006	08/01/2024	Mercury, total	0.00019 U	mg/L
71D	Compliance	E006	08/01/2024	Molybdenum, total	0.0025 U	mg/L
71D	Compliance	E006	08/01/2024	Oxidation Reduction Potential	89.3	mV
71D	Compliance	E006	08/01/2024	pH (field)	7.0	SU
71D	Compliance	E006	08/01/2024	Radium 226 + Radium 228, total	NS ⁷	pCi/L
71D	Compliance	E006	08/01/2024	Selenium, total	0.00098 U	mg/L
71D	Compliance	E006	08/01/2024	Specific Conductance @ 25C (field)	4,496	micromhos/cm
71D	Compliance	E006	08/01/2024	Sulfate, total	42.0	mg/L
71D	Compliance	E006	08/01/2024	Temperature	15.8	degrees C
71D	Compliance	E006	08/01/2024	Thallium, total	0.00057 U	mg/L
71D	Compliance	E006	08/01/2024	Total Dissolved Solids	2,300	mg/L
71D	Compliance	E006	08/01/2024	Turbidity, field	23.4	NTU

Notes:
C = Celsius
cm = centimeter
mg/L = milligrams per liter
Missing Code (if applicable):
NR¹ = Select parameters were not analyzed.
NS¹ = This well has been, or will be, abandoned; therefore, a sample was not collected.
NS² = Well either needs or was undergoing maintenance, therefore, a sample was not collected.
NS³ = A sample was not collected because the location was inaccessible.
NS⁴ = The location could not be found, therefore a sample was not collected.
NS⁵ = A sample was not collected because of damage to the well.
NS⁶ = A sample was not collected because of pump issues.
NS⁷ = A sample was not collected because the well was either dry or was purged dry and did not recover.
PM¹ = Select parameters were not analyzed as the well purged dry during sample collection and did not sufficiently recover to sample for all parameters.
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 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2024
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
10	Background	E007	10/21/2024	Antimony, total	0.0013 U	mg/L
10	Background	E007	10/21/2024	Arsenic, total	0.00072 J	mg/L
10	Background	E007	10/21/2024	Barium, total	0.0990	mg/L
10	Background	E007	10/21/2024	Beryllium, total	0.00053 U	mg/L
10	Background	E007	10/21/2024	Boron, total	0.05 UJ	mg/L
10	Background	E007	10/21/2024	Cadmium, total	0.00017 U	mg/L
10	Background	E007	10/21/2024	Calcium, total	190	mg/L
10	Background	E007	10/21/2024	Chloride, total	6.80	mg/L
10	Background	E007	10/21/2024	Chromium, total	0.0016 J	mg/L
10	Background	E007	10/21/2024	Cobalt, total	0.0110	mg/L
10	Background	E007	10/21/2024	Dissolved Oxygen	1.70	mg/L
10	Background	E007	10/21/2024	Fluoride, total	0.130	mg/L
10	Background	E007	10/21/2024	Lead, total	0.00019 U	mg/L
10	Background	E007	10/21/2024	Lithium, total	0.0160	mg/L
10	Background	E007	10/21/2024	Mercury, total	0.000076 U	mg/L
10	Background	E007	10/21/2024	Molybdenum, total	0.0025 U	mg/L
10	Background	E007	10/21/2024	Oxidation Reduction Potential	84.2	mV
10	Background	E007	10/21/2024	pH (field)	6.9	SU
10	Background	E007	10/21/2024	Radium 226 + Radium 228, total	0.482	pCi/L
10	Background	E007	10/21/2024	Selenium, total	0.00098 U	mg/L
10	Background	E007	10/21/2024	Specific Conductance @ 25C (field)	1,097	micromhos/cm
10	Background	E007	10/21/2024	Sulfate, total	230	mg/L
10	Background	E007	10/21/2024	Temperature	16.0	degrees C
10	Background	E007	10/21/2024	Thallium, total	0.00057 U	mg/L
10	Background	E007	10/21/2024	Total Dissolved Solids	930	mg/L
10	Background	E007	10/21/2024	Turbidity, field	45.5	NTU
22	Background	E007	10/24/2024	Antimony, total	0.0013 U	mg/L
22	Background	E007	10/24/2024	Arsenic, total	0.00023 U	mg/L
22	Background	E007	10/24/2024	Barium, total	0.0850	mg/L
22	Background	E007	10/24/2024	Beryllium, total	0.00053 U	mg/L
22	Background	E007	10/24/2024	Boron, total	0.410	mg/L
22	Background	E007	10/24/2024	Cadmium, total	0.00017 U	mg/L
22	Background	E007	10/24/2024	Calcium, total	47.0	mg/L
22	Background	E007	10/24/2024	Chloride, total	6.30	mg/L
22	Background	E007	10/24/2024	Chromium, total	0.0011 U	mg/L
22	Background	E007	10/24/2024	Cobalt, total	0.0004 U	mg/L
22	Background	E007	10/24/2024	Dissolved Oxygen	0.590	mg/L
22	Background	E007	10/24/2024	Fluoride, total	0.350	mg/L
22	Background	E007	10/24/2024	Lead, total	0.00019 U	mg/L
22	Background	E007	10/24/2024	Lithium, total	0.0310	mg/L
22	Background	E007	10/24/2024	Mercury, total	0.000076 U	mg/L
22	Background	E007	10/24/2024	Molybdenum, total	0.0025 U	mg/L
22	Background	E007	10/24/2024	Oxidation Reduction Potential	58.6	mV
22	Background	E007	10/24/2024	pH (field)	7.5	SU
22	Background	E007	10/24/2024	Radium 226 + Radium 228, total	1.1	pCi/L
22	Background	E007	10/24/2024	Selenium, total	0.00098 U	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
22	Background	E007	10/24/2024	Specific Conductance @ 25C (field)	710	micromhos/cm
22	Background	E007	10/24/2024	Sulfate, total	27.0	mg/L
22	Background	E007	10/24/2024	Temperature	12.7	degrees C
22	Background	E007	10/24/2024	Thallium, total	0.00057 U	mg/L
22	Background	E007	10/24/2024	Total Dissolved Solids	510	mg/L
22	Background	E007	10/24/2024	Turbidity, field	0.0200	NTU
16B	Compliance	E007	--	Antimony, total	NS ⁷	mg/L
16B	Compliance	E007	--	Arsenic, total	NS ⁷	mg/L
16B	Compliance	E007	--	Barium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Beryllium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Boron, total	NS ⁷	mg/L
16B	Compliance	E007	--	Cadmium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Calcium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Chloride, total	NS ⁷	mg/L
16B	Compliance	E007	--	Chromium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Cobalt, total	NS ⁷	mg/L
16B	Compliance	E007	--	Dissolved Oxygen	NS ⁷	mg/L
16B	Compliance	E007	--	Fluoride, total	NS ⁷	mg/L
16B	Compliance	E007	--	Lead, total	NS ⁷	mg/L
16B	Compliance	E007	--	Lithium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Mercury, total	NS ⁷	mg/L
16B	Compliance	E007	--	Molybdenum, total	NS ⁷	mg/L
16B	Compliance	E007	--	Oxidation Reduction Potential	NS ⁷	mV
16B	Compliance	E007	--	pH (field)	NS ⁷	SU
16B	Compliance	E007	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
16B	Compliance	E007	--	Selenium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
16B	Compliance	E007	--	Sulfate, total	NS ⁷	mg/L
16B	Compliance	E007	--	Temperature	NS ⁷	degrees C
16B	Compliance	E007	--	Thallium, total	NS ⁷	mg/L
16B	Compliance	E007	--	Total Dissolved Solids	NS ⁷	mg/L
16B	Compliance	E007	--	Turbidity, field	NS ⁷	NTU
16A	Compliance	E007	10/22/2024	Antimony, total	0.0013 U	mg/L
16A	Compliance	E007	10/22/2024	Arsenic, total	0.00110	mg/L
16A	Compliance	E007	10/22/2024	Barium, total	0.310	mg/L
16A	Compliance	E007	10/22/2024	Beryllium, total	0.00053 U	mg/L
16A	Compliance	E007	10/22/2024	Boron, total	0.810	mg/L
16A	Compliance	E007	10/22/2024	Cadmium, total	0.00017 U	mg/L
16A	Compliance	E007	10/22/2024	Calcium, total	36.0	mg/L
16A	Compliance	E007	10/22/2024	Chloride, total	150	mg/L
16A	Compliance	E007	10/22/2024	Chromium, total	0.0011 U	mg/L
16A	Compliance	E007	10/22/2024	Cobalt, total	0.0004 U	mg/L
16A	Compliance	E007	10/22/2024	Dissolved Oxygen	0.370	mg/L
16A	Compliance	E007	10/22/2024	Fluoride, total	0.800	mg/L
16A	Compliance	E007	10/22/2024	Lead, total	0.00044 J	mg/L
16A	Compliance	E007	10/22/2024	Lithium, total	0.0310	mg/L

TABLE 1.
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Well ID	Well Type	Event	Date	Parameter	Result	Unit
16A	Compliance	E007	10/22/2024	Mercury, total	0.000076 U	mg/L
16A	Compliance	E007	10/22/2024	Molybdenum, total	0.0025 U	mg/L
16A	Compliance	E007	10/22/2024	Oxidation Reduction Potential	-149	mV
16A	Compliance	E007	10/22/2024	pH (field)	7.6	SU
16A	Compliance	E007	10/22/2024	Radium 226 + Radium 228, total	1.68	pCi/L
16A	Compliance	E007	10/22/2024	Selenium, total	0.00098 U	mg/L
16A	Compliance	E007	10/22/2024	Specific Conductance @ 25C (field)	1,087	micromhos/cm
16A	Compliance	E007	10/22/2024	Sulfate, total	3.10	mg/L
16A	Compliance	E007	10/22/2024	Temperature	12.6	degrees C
16A	Compliance	E007	10/22/2024	Thallium, total	0.00057 U	mg/L
16A	Compliance	E007	10/22/2024	Total Dissolved Solids	690	mg/L
16A	Compliance	E007	10/22/2024	Turbidity, field	94.3	NTU
35S	Compliance	E007	--	Antimony, total	NS ⁷	mg/L
35S	Compliance	E007	--	Arsenic, total	NS ⁷	mg/L
35S	Compliance	E007	--	Barium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Beryllium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Boron, total	NS ⁷	mg/L
35S	Compliance	E007	--	Cadmium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Calcium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Chloride, total	NS ⁷	mg/L
35S	Compliance	E007	--	Chromium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Cobalt, total	NS ⁷	mg/L
35S	Compliance	E007	--	Dissolved Oxygen	NS ⁷	mg/L
35S	Compliance	E007	--	Fluoride, total	NS ⁷	mg/L
35S	Compliance	E007	--	Lead, total	NS ⁷	mg/L
35S	Compliance	E007	--	Lithium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Mercury, total	NS ⁷	mg/L
35S	Compliance	E007	--	Molybdenum, total	NS ⁷	mg/L
35S	Compliance	E007	--	Oxidation Reduction Potential	NS ⁷	mV
35S	Compliance	E007	--	pH (field)	NS ⁷	SU
35S	Compliance	E007	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
35S	Compliance	E007	--	Selenium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
35S	Compliance	E007	--	Sulfate, total	NS ⁷	mg/L
35S	Compliance	E007	--	Temperature	NS ⁷	degrees C
35S	Compliance	E007	--	Thallium, total	NS ⁷	mg/L
35S	Compliance	E007	--	Total Dissolved Solids	NS ⁷	mg/L
35S	Compliance	E007	--	Turbidity, field	NS ⁷	NTU
35D	Compliance	E007	10/22/2024	Antimony, total	0.0013 U	mg/L
35D	Compliance	E007	10/22/2024	Arsenic, total	0.0031 J	mg/L
35D	Compliance	E007	10/22/2024	Barium, total	0.0250	mg/L
35D	Compliance	E007	10/22/2024	Beryllium, total	0.00053 U	mg/L
35D	Compliance	E007	10/22/2024	Boron, total	1.90	mg/L
35D	Compliance	E007	10/22/2024	Cadmium, total	0.00017 U	mg/L
35D	Compliance	E007	10/22/2024	Calcium, total	100	mg/L
35D	Compliance	E007	10/22/2024	Chloride, total	370	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
35D	Compliance	E007	10/22/2024	Chromium, total	0.0011 U	mg/L
35D	Compliance	E007	10/22/2024	Cobalt, total	0.0004 U	mg/L
35D	Compliance	E007	10/22/2024	Dissolved Oxygen	0.610	mg/L
35D	Compliance	E007	10/22/2024	Fluoride, total	0.660	mg/L
35D	Compliance	E007	10/22/2024	Lead, total	0.00019 U	mg/L
35D	Compliance	E007	10/22/2024	Lithium, total	0.120	mg/L
35D	Compliance	E007	10/22/2024	Mercury, total	0.000076 U	mg/L
35D	Compliance	E007	10/22/2024	Molybdenum, total	0.0026 J	mg/L
35D	Compliance	E007	10/22/2024	Oxidation Reduction Potential	153	mV
35D	Compliance	E007	10/22/2024	pH (field)	7.4	SU
35D	Compliance	E007	10/22/2024	Radium 226 + Radium 228, total	0.767	pCi/L
35D	Compliance	E007	10/22/2024	Selenium, total	0.0049 U	mg/L
35D	Compliance	E007	10/22/2024	Specific Conductance @ 25C (field)	4,229	micromhos/cm
35D	Compliance	E007	10/22/2024	Sulfate, total	1,300	mg/L
35D	Compliance	E007	10/22/2024	Temperature	14.6	degrees C
35D	Compliance	E007	10/22/2024	Thallium, total	0.00057 U	mg/L
35D	Compliance	E007	10/22/2024	Total Dissolved Solids	3,300	mg/L
35D	Compliance	E007	10/22/2024	Turbidity, field	118	NTU
70S	Compliance	E007	10/22/2024	Antimony, total	0.0013 U	mg/L
70S	Compliance	E007	10/22/2024	Arsenic, total	0.00024 J	mg/L
70S	Compliance	E007	10/22/2024	Barium, total	0.0170	mg/L
70S	Compliance	E007	10/22/2024	Beryllium, total	0.00053 U	mg/L
70S	Compliance	E007	10/22/2024	Boron, total	0.600	mg/L
70S	Compliance	E007	10/22/2024	Cadmium, total	0.00017 U	mg/L
70S	Compliance	E007	10/22/2024	Calcium, total	220	mg/L
70S	Compliance	E007	10/22/2024	Chloride, total	13.0	mg/L
70S	Compliance	E007	10/22/2024	Chromium, total	0.0011 U	mg/L
70S	Compliance	E007	10/22/2024	Cobalt, total	0.0004 U	mg/L
70S	Compliance	E007	10/22/2024	Dissolved Oxygen	0.460	mg/L
70S	Compliance	E007	10/22/2024	Fluoride, total	0.140	mg/L
70S	Compliance	E007	10/22/2024	Lead, total	0.00019 U	mg/L
70S	Compliance	E007	10/22/2024	Lithium, total	0.0180	mg/L
70S	Compliance	E007	10/22/2024	Mercury, total	0.000076 U	mg/L
70S	Compliance	E007	10/22/2024	Molybdenum, total	0.0035 J	mg/L
70S	Compliance	E007	10/22/2024	Oxidation Reduction Potential	45.1	mV
70S	Compliance	E007	10/22/2024	pH (field)	7.1	SU
70S	Compliance	E007	10/22/2024	Radium 226 + Radium 228, total	0.225	pCi/L
70S	Compliance	E007	10/22/2024	Selenium, total	0.00098 U	mg/L
70S	Compliance	E007	10/22/2024	Specific Conductance @ 25C (field)	1,269	micromhos/cm
70S	Compliance	E007	10/22/2024	Sulfate, total	510	mg/L
70S	Compliance	E007	10/22/2024	Temperature	13.9	degrees C
70S	Compliance	E007	10/22/2024	Thallium, total	0.00057 U	mg/L
70S	Compliance	E007	10/22/2024	Total Dissolved Solids	1,200	mg/L
70S	Compliance	E007	10/22/2024	Turbidity, field	26.2	NTU
70D	Compliance	E007	10/22/2024	Antimony, total	0.0013 U	mg/L
70D	Compliance	E007	10/22/2024	Arsenic, total	0.0012 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
70D	Compliance	E007	10/22/2024	Barium, total	0.450	mg/L
70D	Compliance	E007	10/22/2024	Beryllium, total	0.00053 U	mg/L
70D	Compliance	E007	10/22/2024	Boron, total	1.40	mg/L
70D	Compliance	E007	10/22/2024	Cadmium, total	0.00017 U	mg/L
70D	Compliance	E007	10/22/2024	Calcium, total	93.0	mg/L
70D	Compliance	E007	10/22/2024	Chloride, total	610	mg/L
70D	Compliance	E007	10/22/2024	Chromium, total	0.0011 U	mg/L
70D	Compliance	E007	10/22/2024	Cobalt, total	0.00059 J	mg/L
70D	Compliance	E007	10/22/2024	Dissolved Oxygen	1.39	mg/L
70D	Compliance	E007	10/22/2024	Fluoride, total	0.460	mg/L
70D	Compliance	E007	10/22/2024	Lead, total	0.00021 J	mg/L
70D	Compliance	E007	10/22/2024	Lithium, total	0.0840	mg/L
70D	Compliance	E007	10/22/2024	Mercury, total	0.000076 U	mg/L
70D	Compliance	E007	10/22/2024	Molybdenum, total	0.0026 J	mg/L
70D	Compliance	E007	10/22/2024	Oxidation Reduction Potential	49.1	mV
70D	Compliance	E007	10/22/2024	pH (field)	7.0	SU
70D	Compliance	E007	10/22/2024	Radium 226 + Radium 228, total	1.53	pCi/L
70D	Compliance	E007	10/22/2024	Selenium, total	0.0049 U	mg/L
70D	Compliance	E007	10/22/2024	Specific Conductance @ 25C (field)	2,777	micromhos/cm
70D	Compliance	E007	10/22/2024	Sulfate, total	26.0	mg/L
70D	Compliance	E007	10/22/2024	Temperature	13.7	degrees C
70D	Compliance	E007	10/22/2024	Thallium, total	0.00057 U	mg/L
70D	Compliance	E007	10/22/2024	Total Dissolved Solids	1,600	mg/L
70D	Compliance	E007	10/22/2024	Turbidity, field	90.6	NTU
71S	Compliance	E007	--	Antimony, total	NS ⁷	mg/L
71S	Compliance	E007	--	Arsenic, total	NS ⁷	mg/L
71S	Compliance	E007	--	Barium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Beryllium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Boron, total	NS ⁷	mg/L
71S	Compliance	E007	--	Cadmium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Calcium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Chloride, total	NS ⁷	mg/L
71S	Compliance	E007	--	Chromium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Cobalt, total	NS ⁷	mg/L
71S	Compliance	E007	--	Dissolved Oxygen	NS ⁷	mg/L
71S	Compliance	E007	--	Fluoride, total	NS ⁷	mg/L
71S	Compliance	E007	--	Lead, total	NS ⁷	mg/L
71S	Compliance	E007	--	Lithium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Mercury, total	NS ⁷	mg/L
71S	Compliance	E007	--	Molybdenum, total	NS ⁷	mg/L
71S	Compliance	E007	--	Oxidation Reduction Potential	NS ⁷	mV
71S	Compliance	E007	--	pH (field)	NS ⁷	SU
71S	Compliance	E007	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
71S	Compliance	E007	--	Selenium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
71S	Compliance	E007	--	Sulfate, total	NS ⁷	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2024

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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
71S	Compliance	E007	--	Temperature	NS ⁷	degrees C
71S	Compliance	E007	--	Thallium, total	NS ⁷	mg/L
71S	Compliance	E007	--	Total Dissolved Solids	NS ⁷	mg/L
71S	Compliance	E007	--	Turbidity, field	NS ⁷	NTU
71D	Compliance	E007	--	Antimony, total	NS ⁷	mg/L
71D	Compliance	E007	--	Arsenic, total	NS ⁷	mg/L
71D	Compliance	E007	--	Barium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Beryllium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Boron, total	NS ⁷	mg/L
71D	Compliance	E007	--	Cadmium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Calcium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Chloride, total	NS ⁷	mg/L
71D	Compliance	E007	--	Chromium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Cobalt, total	NS ⁷	mg/L
71D	Compliance	E007	--	Dissolved Oxygen	NS ⁷	mg/L
71D	Compliance	E007	--	Fluoride, total	NS ⁷	mg/L
71D	Compliance	E007	--	Lead, total	NS ⁷	mg/L
71D	Compliance	E007	--	Lithium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Mercury, total	NS ⁷	mg/L
71D	Compliance	E007	--	Molybdenum, total	NS ⁷	mg/L
71D	Compliance	E007	--	Oxidation Reduction Potential	NS ⁷	mV
71D	Compliance	E007	--	pH (field)	NS ⁷	SU
71D	Compliance	E007	--	Radium 226 + Radium 228, total	NS ⁷	pCi/L
71D	Compliance	E007	--	Selenium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Specific Conductance @ 25C (field)	NS ⁷	micromhos/cm
71D	Compliance	E007	--	Sulfate, total	NS ⁷	mg/L
71D	Compliance	E007	--	Temperature	NS ⁷	degrees C
71D	Compliance	E007	--	Thallium, total	NS ⁷	mg/L
71D	Compliance	E007	--	Total Dissolved Solids	NS ⁷	mg/L
71D	Compliance	E007	--	Turbidity, field	NS ⁷	NTU

Notes:

C = Celsius
cm = centimeter
Events:

E007 = Quarter 4, 2024 sampling event

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

Result Code (if applicable):

NR¹ = Parameter not analyzed.

NS¹ = Well has been, or will be, abandoned; therefore, a sample was not collected.

NS² = Well either needs or was undergoing maintenance; therefore, a sample was not collected.

NS³ = The location was not accessible; therefore, a sample was not collected.

NS⁴ = The location could not be found; therefore, a sample was not collected.

NS⁵ = The location was damaged; therefore, a sample was not collected.

NS⁶ = Sampling pump could not yield a sample.

NS⁷ = Well was either dry or purged dry and did not recover sufficiently to yield adequate volume for a sample.

NS⁸ = A sample was not collected.

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

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

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

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.

SU = Standard Units

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
16B	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
16B	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
16B	UU	E004	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
16B	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
16B	UU	E004	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
16B	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
16B	UU	E004	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
16B	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
16B	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
16B	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
16B	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
16B	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
16B	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
16B	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
16B	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
16B	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
16B	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
16B	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
16B	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
16B	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
16A	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.001	0.006	Standard	No Exceedance
16A	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	11	0	CI around geomean	0.00117	0.010	Standard	No Exceedance
16A	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	0.25	2.0	Standard	No Exceedance
16A	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
16A	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	0.674	2	Standard	No Exceedance
16A	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
16A	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	126	200	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 1, 2024
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VERMILION POWER PLANT
NEW 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
16A	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	11	91	CB around T-S line	0.0015	0.1	Standard	No Exceedance
16A	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.001	0.0900	Background	No Exceedance
16A	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	11	9	CI around mean	0.663	4.0	Standard	No Exceedance
16A	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.0005	0.0075	Standard	No Exceedance
16A	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	11	0	CB around linear reg	0.0289	0.04	Standard	No Exceedance
16A	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
16A	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.005	0.1	Standard	No Exceedance
16A	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	16	0	CI around mean	7.2/7.5	6.3/9.0	Background/Standard	No Exceedance
16A	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	10	0	CI around mean	0.465	7.00	Background	No Exceedance
16A	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
16A	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	16	5	CB around linear reg	-24	400	Standard	No Exceedance
16A	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.002	0.002	Standard	No Exceedance
16A	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	16	0	CI around mean	646	1,200	Standard	No Exceedance
35S	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
35S	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
35S	UU	E004	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
35S	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
35S	UU	E004	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
35S	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
35S	UU	E004	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
35S	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
35S	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
35S	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
35S	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
35S	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
35S	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
35S	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 1, 2024
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VERMILION POWER PLANT
NEW 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
35S	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
35S	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
35S	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
35S	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
35S	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
35S	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
35D	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.001	0.006	Standard	No Exceedance
35D	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	17	CI around geomean	0.00164	0.010	Standard	No Exceedance
35D	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around median	0.026	2.0	Standard	No Exceedance
35D	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.004	Standard	No Exceedance
35D	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	1.64	2	Standard	No Exceedance
35D	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
35D	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	302	200	Standard	Exceedance
35D	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.0015	0.1	Standard	No Exceedance
35D	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	42	CI around median	0.001	0.0900	Background	No Exceedance
35D	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CI around mean	0.642	4.0	Standard	No Exceedance
35D	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	50	CI around geomean	0.000579	0.0075	Standard	No Exceedance
35D	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.112	0.04	Standard	Exceedance
35D	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
35D	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	25	CB around linear reg	-0.00104	0.1	Standard	No Exceedance
35D	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	16	0	CI around median	7.3/7.4	6.3/9.0	Background/Standard	No Exceedance
35D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around mean	0.333	7.00	Background	No Exceedance
35D	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
35D	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	17	0	CI around mean	1,100	400	Standard	Exceedance
35D	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002	Standard	No Exceedance
35D	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	17	0	CI around mean	2,710	1,200	Standard	Exceedance
70S	UU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
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845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
70S	UU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.010	Standard	No Exceedance
70S	UU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0166	2.0	Standard	No Exceedance
70S	UU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.004	Standard	No Exceedance
70S	UU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.366	2	Standard	No Exceedance
70S	UU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70S	UU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	13.2	200	Standard	No Exceedance
70S	UU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.005	0.1	Standard	No Exceedance
70S	UU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.0900	Background	No Exceedance
70S	UU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CI around median	0.14	4.0	Standard	No Exceedance
70S	UU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
70S	UU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0112	0.04	Standard	No Exceedance
70S	UU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70S	UU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	25	CI around median	0.005	0.1	Standard	No Exceedance
70S	UU	E004	pH (field)	SU	04/01/21 - 02/21/24	12	0	CI around mean	6.9/7.0	6.3/9.0	Background/Standard	No Exceedance
70S	UU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around geomean	0.0972	7.00	Background	No Exceedance
70S	UU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
70S	UU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	605	400	Standard	Exceedance
70S	UU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70S	UU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	1,230	1,200	Standard	Exceedance
70D	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	83	CI around median	0.001	0.006	Standard	No Exceedance
70D	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	58	CI around median	0.001	0.010	Standard	No Exceedance
70D	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.461	2.0	Standard	No Exceedance
70D	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.001	0.004	Standard	No Exceedance
70D	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around median	1.01	2	Standard	No Exceedance
70D	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70D	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	525	200	Standard	Exceedance
70D	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	33	CI around geomean	0.00292	0.1	Standard	No Exceedance

TABLE 2.
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VERMILION POWER PLANT
NEW 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
70D	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	8	CI around geomean	0.00161	0.0900	Background	No Exceedance
70D	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CB around linear reg	0.234	4.0	Standard	No Exceedance
70D	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	17	CI around geomean	0.00137	0.0075	Standard	No Exceedance
70D	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0761	0.04	Standard	Exceedance
70D	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70D	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	33	CB around linear reg	-0.0201	0.1	Standard	No Exceedance
70D	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	12	0	CI around mean	6.9/7.2	6.3/9.0	Background/Standard	No Exceedance
70D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around mean	0.993	7.00	Background	No Exceedance
70D	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	83	CI around median	0.001	0.05	Standard	No Exceedance
70D	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	46.5	400	Standard	No Exceedance
70D	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70D	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	12	0	CB around linear reg	1,270	1,200	Standard	Exceedance
71S	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
71S	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
71S	UU	E004	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
71S	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
71S	UU	E004	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
71S	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
71S	UU	E004	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
71S	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
71S	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
71S	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
71S	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
71S	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
71S	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
71S	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
71S	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--

TABLE 2.
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NEW 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
71S	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
71S	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
71S	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
71S	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
71S	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
71D	BCU	E004	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
71D	BCU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
71D	BCU	E004	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
71D	BCU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
71D	BCU	E004	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
71D	BCU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
71D	BCU	E004	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
71D	BCU	E004	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
71D	BCU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
71D	BCU	E004	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
71D	BCU	E004	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
71D	BCU	E004	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
71D	BCU	E004	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
71D	BCU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
71D	BCU	E004	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
71D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
71D	BCU	E004	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
71D	BCU	E004	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
71D	BCU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
71D	BCU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--

TABLE 2.
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Notes:

- = no data available

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

BCU = Bedrock Confining Unit

UU = Upper Unit

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

GWPS = Groundwater Protection Standard

GWPS Source:

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

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

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 2, 2024
845 QUARTERLY REPORT
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NEW 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
16B	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
16B	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
16B	UU	E005	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
16B	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
16B	UU	E005	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
16B	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
16B	UU	E005	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
16B	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
16B	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
16B	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
16B	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
16B	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
16B	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
16B	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
16B	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
16B	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
16B	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
16B	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
16B	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
16B	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
16A	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	12	92	CI around median	0.001	0.006	Standard	No Exceedance
16A	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	12	0	CI around geomean	0.00125	0.010	Standard	No Exceedance
16A	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	0.254	2.0	Standard	No Exceedance
16A	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.001	0.004	Standard	No Exceedance
16A	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	0.682	2	Standard	No Exceedance
16A	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
16A	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	124	200	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
16A	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	12	83	CB around T-S line	0.0015	0.1	Standard	No Exceedance
16A	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	12	83	CI around median	0.001	0.0900	Background	No Exceedance
16A	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	12	8	CI around mean	0.669	4.0	Standard	No Exceedance
16A	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	12	83	CI around median	0.0005	0.0075	Standard	No Exceedance
16A	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	12	0	CB around linear reg	0.0306	0.04	Standard	No Exceedance
16A	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
16A	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.005	0.1	Standard	No Exceedance
16A	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	17	0	CI around mean	7.2/7.5	6.3/9.0	Background/Standard	No Exceedance
16A	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	11	0	CI around mean	0.52	7.00	Background	No Exceedance
16A	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
16A	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	17	5	CI around mean	14	400	Standard	No Exceedance
16A	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.002	0.002	Standard	No Exceedance
16A	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	17	0	CI around mean	649	1,200	Standard	No Exceedance
35S	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
35S	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
35S	UU	E005	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
35S	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
35S	UU	E005	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
35S	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
35S	UU	E005	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
35S	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
35S	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
35S	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
35S	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
35S	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
35S	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
35S	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--

TABLE 2.
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VERMILION POWER PLANT
NEW 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
35S	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
35S	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
35S	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
35S	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
35S	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
35S	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
35D	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.001	0.006	Standard	No Exceedance
35D	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	15	CI around geomean	0.00169	0.010	Standard	No Exceedance
35D	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around median	0.026	2.0	Standard	No Exceedance
35D	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.004	Standard	No Exceedance
35D	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1.67	2	Standard	No Exceedance
35D	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
35D	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	314	200	Standard	Exceedance
35D	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.0015	0.1	Standard	No Exceedance
35D	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	46	CI around median	0.001	0.0900	Background	No Exceedance
35D	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CI around mean	0.649	4.0	Standard	No Exceedance
35D	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	54	CI around median	0.0005	0.0075	Standard	No Exceedance
35D	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.115	0.04	Standard	Exceedance
35D	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
35D	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	31	CB around linear reg	-0.00152	0.1	Standard	No Exceedance
35D	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	17	0	CI around median	7.3/7.7	6.3/9.0	Background/Standard	No Exceedance
35D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	0.382	7.00	Background	No Exceedance
35D	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
35D	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	18	0	CI around mean	1,120	400	Standard	Exceedance
35D	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002	Standard	No Exceedance
35D	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	18	0	CI around mean	2,750	1,200	Standard	Exceedance
70S	UU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
70S	UU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.010	Standard	No Exceedance
70S	UU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0165	2.0	Standard	No Exceedance
70S	UU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.004	Standard	No Exceedance
70S	UU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.375	2	Standard	No Exceedance
70S	UU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70S	UU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	12.7	200	Standard	No Exceedance
70S	UU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.005	0.1	Standard	No Exceedance
70S	UU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.0900	Background	No Exceedance
70S	UU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CI around median	0.14	4.0	Standard	No Exceedance
70S	UU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
70S	UU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0116	0.04	Standard	No Exceedance
70S	UU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70S	UU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	31	CI around median	0.005	0.1	Standard	No Exceedance
70S	UU	E005	pH (field)	SU	04/01/21 - 06/06/24	13	0	CI around mean	6.9/7.1	6.3/9.0	Background/Standard	No Exceedance
70S	UU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	0.0788	7.00	Background	No Exceedance
70S	UU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
70S	UU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	459	400	Standard	Exceedance
70S	UU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70S	UU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1,210	1,200	Standard	Exceedance
70D	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	85	CI around median	0.001	0.006	Standard	No Exceedance
70D	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	62	CI around median	0.001	0.010	Standard	No Exceedance
70D	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.462	2.0	Standard	No Exceedance
70D	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.001	0.004	Standard	No Exceedance
70D	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1.19	2	Standard	No Exceedance
70D	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70D	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	539	200	Standard	Exceedance
70D	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	38	CI around geomean	0.00276	0.1	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
70D	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	8	CI around geomean	0.00168	0.0900	Background	No Exceedance
70D	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CB around linear reg	0.257	4.0	Standard	No Exceedance
70D	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	15	CI around geomean	0.00129	0.0075	Standard	No Exceedance
70D	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0791	0.04	Standard	Exceedance
70D	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70D	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	38	CB around linear reg	-0.0184	0.1	Standard	No Exceedance
70D	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	13	0	CI around mean	6.9/7.2	6.3/9.0	Background/Standard	No Exceedance
70D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	1.02	7.00	Background	No Exceedance
70D	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	85	CI around median	0.001	0.05	Standard	No Exceedance
70D	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	39.9	400	Standard	No Exceedance
70D	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70D	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	1,350	1,200	Standard	Exceedance
71S	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
71S	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
71S	UU	E005	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
71S	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
71S	UU	E005	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
71S	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
71S	UU	E005	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
71S	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
71S	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
71S	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
71S	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
71S	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
71S	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
71S	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
71S	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 2, 2024
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VERMILION POWER PLANT
NEW 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
71S	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
71S	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
71S	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
71S	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
71S	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--
71D	BCU	E005	Antimony, total	mg/L	--	--	--	--	--	0.006	Standard	--
71D	BCU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.010	Standard	--
71D	BCU	E005	Barium, total	mg/L	--	--	--	--	--	2.0	Standard	--
71D	BCU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.004	Standard	--
71D	BCU	E005	Boron, total	mg/L	--	--	--	--	--	2	Standard	--
71D	BCU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.005	Standard	--
71D	BCU	E005	Chloride, total	mg/L	--	--	--	--	--	200	Standard	--
71D	BCU	E005	Chromium, total	mg/L	--	--	--	--	--	0.1	Standard	--
71D	BCU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900	Background	--
71D	BCU	E005	Fluoride, total	mg/L	--	--	--	--	--	4.0	Standard	--
71D	BCU	E005	Lead, total	mg/L	--	--	--	--	--	0.0075	Standard	--
71D	BCU	E005	Lithium, total	mg/L	--	--	--	--	--	0.04	Standard	--
71D	BCU	E005	Mercury, total	mg/L	--	--	--	--	--	0.002	Standard	--
71D	BCU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.1	Standard	--
71D	BCU	E005	pH (field)	SU	--	--	--	--	--	6.3/9.0	Background/Standard	--
71D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00	Background	--
71D	BCU	E005	Selenium, total	mg/L	--	--	--	--	--	0.05	Standard	--
71D	BCU	E005	Sulfate, total	mg/L	--	--	--	--	--	400	Standard	--
71D	BCU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002	Standard	--
71D	BCU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,200	Standard	--

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Notes:

- = no data available

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

BCU = Bedrock Confining Unit

UU = Upper Unit

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

GWPS = Groundwater Protection Standard

GWPS Source:

Background = background concentration

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

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
16B	UU	E006	Antimony, total	mg/L	--	--	--	--	NS ⁷	0.006	Standard	--
16B	UU	E006	Arsenic, total	mg/L	--	--	--	--	NS ⁷	0.010	Standard	--
16B	UU	E006	Barium, total	mg/L	--	--	--	--	NS ⁷	2.0	Standard	--
16B	UU	E006	Beryllium, total	mg/L	--	--	--	--	NS ⁷	0.004	Standard	--
16B	UU	E006	Boron, total	mg/L	--	--	--	--	NS ⁷	2	Standard	--
16B	UU	E006	Cadmium, total	mg/L	--	--	--	--	NS ⁷	0.005	Standard	--
16B	UU	E006	Chloride, total	mg/L	--	--	--	--	NS ⁷	200	Standard	--
16B	UU	E006	Chromium, total	mg/L	--	--	--	--	NS ⁷	0.1	Standard	--
16B	UU	E006	Cobalt, total	mg/L	--	--	--	--	NS ⁷	0.0900	Background	--
16B	UU	E006	Fluoride, total	mg/L	--	--	--	--	NS ⁷	4.0	Standard	--
16B	UU	E006	Lead, total	mg/L	--	--	--	--	NS ⁷	0.0075	Standard	--
16B	UU	E006	Lithium, total	mg/L	--	--	--	--	NS ⁷	0.04	Standard	--
16B	UU	E006	Mercury, total	mg/L	--	--	--	--	NS ⁷	0.002	Standard	--
16B	UU	E006	Molybdenum, total	mg/L	--	--	--	--	NS ⁷	0.1	Standard	--
16B	UU	E006	pH (field)	SU	--	--	--	--	NS ⁷	6.3/9.0	Background/Standard	--
16B	UU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00	Background	--
16B	UU	E006	Selenium, total	mg/L	--	--	--	--	NS ⁷	0.05	Standard	--
16B	UU	E006	Sulfate, total	mg/L	--	--	--	--	NS ⁷	400	Standard	--
16B	UU	E006	Thallium, total	mg/L	--	--	--	--	NS ⁷	0.002	Standard	--
16B	UU	E006	Total Dissolved Solids	mg/L	--	--	--	--	NS ⁷	1,200	Standard	--
16A	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/31/24	13	92	CB around T-S line	0.001	0.006	Standard	No Exceedance
16A	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/31/24	13	0	CI around geomean	0.00127	0.010	Standard	No Exceedance
16A	BCU	E006	Barium, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	0.258	2.0	Standard	No Exceedance
16A	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.001	0.004	Standard	No Exceedance
16A	BCU	E006	Boron, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	0.69	2	Standard	No Exceedance
16A	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
16A	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	124	200	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
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VERMILION POWER PLANT
NEW 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
16A	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/31/24	13	77	CB around T-S line	0.0015	0.1	Standard	No Exceedance
16A	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/31/24	13	77	CI around median	0.001	0.0900	Background	No Exceedance
16A	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/31/24	13	8	CI around mean	0.682	4.0	Standard	No Exceedance
16A	BCU	E006	Lead, total	mg/L	04/01/21 - 07/31/24	13	77	CI around median	0.001	0.0075	Standard	No Exceedance
16A	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/31/24	13	0	CB around linear reg	0.0315	0.04	Standard	No Exceedance
16A	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
16A	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.005	0.1	Standard	No Exceedance
16A	BCU	E006	pH (field)	SU	04/01/21 - 07/31/24	18	0	CI around mean	7.2/7.5	6.3/9.0	Background/Standard	No Exceedance
16A	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/31/24	12	0	CI around mean	0.59	7.00	Background	No Exceedance
16A	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
16A	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/31/24	18	5	CB around linear reg	-18	400	Standard	No Exceedance
16A	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.002	0.002	Standard	No Exceedance
16A	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/31/24	18	0	CI around mean	648	1,200	Standard	No Exceedance
35S	UU	E006	Antimony, total	mg/L	--	--	--	--	NS ⁷	0.006	Standard	--
35S	UU	E006	Arsenic, total	mg/L	--	--	--	--	NS ⁷	0.010	Standard	--
35S	UU	E006	Barium, total	mg/L	--	--	--	--	NS ⁷	2.0	Standard	--
35S	UU	E006	Beryllium, total	mg/L	--	--	--	--	NS ⁷	0.004	Standard	--
35S	UU	E006	Boron, total	mg/L	--	--	--	--	NS ⁷	2	Standard	--
35S	UU	E006	Cadmium, total	mg/L	--	--	--	--	NS ⁷	0.005	Standard	--
35S	UU	E006	Chloride, total	mg/L	--	--	--	--	NS ⁷	200	Standard	--
35S	UU	E006	Chromium, total	mg/L	--	--	--	--	NS ⁷	0.1	Standard	--
35S	UU	E006	Cobalt, total	mg/L	--	--	--	--	NS ⁷	0.0900	Background	--
35S	UU	E006	Fluoride, total	mg/L	--	--	--	--	NS ⁷	4.0	Standard	--
35S	UU	E006	Lead, total	mg/L	--	--	--	--	NS ⁷	0.0075	Standard	--
35S	UU	E006	Lithium, total	mg/L	--	--	--	--	NS ⁷	0.04	Standard	--
35S	UU	E006	Mercury, total	mg/L	--	--	--	--	NS ⁷	0.002	Standard	--
35S	UU	E006	Molybdenum, total	mg/L	--	--	--	--	NS ⁷	0.1	Standard	--

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
35S	UU	E006	pH (field)	SU	--	--	--	--	NS ⁷	6.3/9.0	Background/Standard	--
35S	UU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00	Background	--
35S	UU	E006	Selenium, total	mg/L	--	--	--	--	NS ⁷	0.05	Standard	--
35S	UU	E006	Sulfate, total	mg/L	--	--	--	--	NS ⁷	400	Standard	--
35S	UU	E006	Thallium, total	mg/L	--	--	--	--	NS ⁷	0.002	Standard	--
35S	UU	E006	Total Dissolved Solids	mg/L	--	--	--	--	NS ⁷	1,200	Standard	--
35D	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/31/24	14	79	CI around median	0.001	0.006	Standard	No Exceedance
35D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/31/24	14	14	CI around mean	0.00198	0.010	Standard	No Exceedance
35D	BCU	E006	Barium, total	mg/L	04/01/21 - 07/31/24	14	0	CB around T-S line	-0.0936	2.0	Standard	No Exceedance
35D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.001	0.004	Standard	No Exceedance
35D	BCU	E006	Boron, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	1.69	2	Standard	No Exceedance
35D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
35D	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	320	200	Standard	Exceedance
35D	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/31/24	14	79	CB around T-S line	0.0015	0.1	Standard	No Exceedance
35D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/31/24	14	50	CB around linear reg	-0.00064	0.0900	Background	No Exceedance
35D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/31/24	14	7	CI around median	0.65	4.0	Standard	No Exceedance
35D	BCU	E006	Lead, total	mg/L	04/01/21 - 07/31/24	14	57	CI around median	0.0005	0.0075	Standard	No Exceedance
35D	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	0.117	0.04	Standard	Exceedance
35D	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
35D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/31/24	14	36	CB around linear reg	-0.00122	0.1	Standard	No Exceedance
35D	BCU	E006	pH (field)	SU	04/01/21 - 07/31/24	18	0	CI around median	7.3/7.4	6.3/9.0	Background/Standard	No Exceedance
35D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/31/24	13	0	CI around mean	0.428	7.00	Background	No Exceedance
35D	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
35D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/31/24	19	0	CI around mean	1,140	400	Standard	Exceedance
35D	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.002	0.002	Standard	No Exceedance
35D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/31/24	19	0	CI around mean	2,790	1,200	Standard	Exceedance
70S	UU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
70S	UU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.010	Standard	No Exceedance
70S	UU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0163	2.0	Standard	No Exceedance
70S	UU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.004	Standard	No Exceedance
70S	UU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.382	2	Standard	No Exceedance
70S	UU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70S	UU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	8.12	200	Standard	No Exceedance
70S	UU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.005	0.1	Standard	No Exceedance
70S	UU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.0900	Background	No Exceedance
70S	UU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	14	7	CI around median	0.14	4.0	Standard	No Exceedance
70S	UU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.0075	Standard	No Exceedance
70S	UU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0119	0.04	Standard	No Exceedance
70S	UU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70S	UU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	14	36	CI around median	0.005	0.1	Standard	No Exceedance
70S	UU	E006	pH (field)	SU	04/01/21 - 07/30/24	14	0	CI around mean	6.9/7.1	6.3/9.0	Background/Standard	No Exceedance
70S	UU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	13	0	CI around geomean	0.125	7.00	Background	No Exceedance
70S	UU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0025	0.05	Standard	No Exceedance
70S	UU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	449	400	Standard	Exceedance
70S	UU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70S	UU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	1,020	1,200	Standard	No Exceedance
70D	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	14	86	CI around median	0.001	0.006	Standard	No Exceedance
70D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	14	64	CI around median	0.001	0.010	Standard	No Exceedance
70D	BCU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.443	2.0	Standard	No Exceedance
70D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	14	79	CI around median	0.001	0.004	Standard	No Exceedance
70D	BCU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	1.2	2	Standard	No Exceedance
70D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
70D	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	522	200	Standard	Exceedance
70D	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	14	43	CB around linear reg	-0.0359	0.1	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
70D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	14	7	CB around linear reg	-0.0302	0.0900	Background	No Exceedance
70D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	14	7	CI around mean	0.41	4.0	Standard	No Exceedance
70D	BCU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	14	14	CB around linear reg	-0.0226	0.0075	Standard	No Exceedance
70D	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0803	0.04	Standard	Exceedance
70D	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
70D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	14	43	CB around linear reg	-0.0158	0.1	Standard	No Exceedance
70D	BCU	E006	pH (field)	SU	04/01/21 - 07/30/24	14	0	CI around mean	6.9/7.2	6.3/9.0	Background/Standard	No Exceedance
70D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	13	0	CI around geomean	1.29	7.00	Background	No Exceedance
70D	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	14	86	CI around median	0.001	0.05	Standard	No Exceedance
70D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	45.7	400	Standard	No Exceedance
70D	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.002	0.002	Standard	No Exceedance
70D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	1,370	1,200	Standard	Exceedance
71S	UU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.003	0.006	Standard	No Exceedance
71S	UU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.00244	0.010	Standard	No Exceedance
71S	UU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.0428	2.0	Standard	No Exceedance
71S	UU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
71S	UU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.192	2	Standard	No Exceedance
71S	UU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.005	Standard	No Exceedance
71S	UU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	9	0	CI around geomean	1.75	200	Standard	No Exceedance
71S	UU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
71S	UU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	9	56	CI around median	0.001	0.0900	Background	No Exceedance
71S	UU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	9	0	CB around linear reg	0.183	4.0	Standard	No Exceedance
71S	UU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.0075	Standard	No Exceedance
71S	UU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.00454	0.04	Standard	No Exceedance
71S	UU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
71S	UU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	9	11	CI around mean	0.00228	0.1	Standard	No Exceedance
71S	UU	E006	pH (field)	SU	04/01/21 - 07/30/24	9	0	CI around mean	6.7/6.9	6.3/9.0	Background/Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW 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
71S	UU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	9	0	CI around mean	0.217	7.00	Background	No Exceedance
71S	UU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.05	Standard	No Exceedance
71S	UU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	55.9	400	Standard	No Exceedance
71S	UU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.002	0.002	Standard	No Exceedance
71S	UU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	479	1,200	Standard	No Exceedance
71D	BCU	E006	Antimony, total	mg/L	04/01/21 - 08/01/24	7	71	CI around median	0.001	0.006	Standard	No Exceedance
71D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 08/01/24	7	57	CI around median	0.001	0.010	Standard	No Exceedance
71D	BCU	E006	Barium, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.162	2.0	Standard	No Exceedance
71D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 08/01/24	7	86	CI around median	0.0005	0.004	Standard	No Exceedance
71D	BCU	E006	Boron, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.683	2	Standard	No Exceedance
71D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.0005	0.005	Standard	No Exceedance
71D	BCU	E006	Chloride, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	310	200	Standard	Exceedance
71D	BCU	E006	Chromium, total	mg/L	04/01/21 - 08/01/24	7	43	CI around median	0.0028	0.1	Standard	No Exceedance
71D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 08/01/24	7	43	CI around geomean	0.000539	0.0900	Background	No Exceedance
71D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.442	4.0	Standard	No Exceedance
71D	BCU	E006	Lead, total	mg/L	04/01/21 - 08/01/24	7	14	CI around geomean	0.000754	0.0075	Standard	No Exceedance
71D	BCU	E006	Lithium, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.0405	0.04	Standard	Exceedance
71D	BCU	E006	Mercury, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.0005	0.002	Standard	No Exceedance
71D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 08/01/24	7	43	CI around mean	0.00308	0.1	Standard	No Exceedance
71D	BCU	E006	pH (field)	SU	04/01/21 - 08/01/24	7	0	CI around mean	6.8/7.4	6.3/9.0	Background/Standard	No Exceedance
71D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00	Background	--
71D	BCU	E006	Selenium, total	mg/L	04/01/21 - 08/01/24	7	86	CI around median	0.001	0.05	Standard	No Exceedance
71D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	39.8	400	Standard	No Exceedance
71D	BCU	E006	Thallium, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.002	0.002	Standard	No Exceedance
71D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	1,030	1,200	Standard	No Exceedance

TABLE 2.
EVALUATION OF COMPLIANCE - QUARTER 3, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Notes:

Compliance Result:
 No Exceedance: the statistical result did not exceed the GWPS.
 Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:
 BCU = Bedrock Confining Unit
 UU = Upper Unit

mg/L = milligrams per liter

Missing Code (if applicable):
 NR¹ = Select parameters were not analyzed.
 NS¹ = This well has been, or will be, abandoned; therefore, a sample was not collected.
 NS² = Well either needs or was undergoing maintenance, therefore, a sample was not collected.
 NS³ = A sample was not collected because the location was inaccessible.
 NS⁴ = The location could not be found, therefore a sample was not collected.
 NS⁵ = A sample was not collected because of damage to the well.
 NS⁶ = A sample was not collected because of pump issues.
 NS⁷ = A sample was not collected because the well was either dry or was purged dry and did not recover.
 PM¹ = Select parameters were not analyzed as the well purged dry during sample collection and did not sufficiently recover to sample for all parameters.

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:
 All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown
 CB around T-S line = Confidence band around Thiel-Sen line
 CB around linear reg = Confidence band around linear regression
 CI around geomean = Confidence interval around the geometric mean
 CI around mean = Confidence interval around the mean
 CI around median = Confidence interval around the median

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

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

GWPS = Groundwater Protection Standard

GWPS Source:
 Background = background concentration
 Standard = standard specified in 35 I.A.C. § 845.600(a)(1)

FIGURES



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- CLOSED MONITORING WELL
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTE:
MONITORING WELL 10 WAS ABANDONED ON DECEMBER 10, 2024 AND WAS REPLACED WITH MONITORING WELL 10R ON DECEMBER 19, 2024. THE LOCATION OF 10R IS APPROXIMATE.

0 150 300
Feet

MONITORING WELL LOCATION
MAP

PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL
2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





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

0 150 300
Feet

**GWPS EXCEEDANCE MAP
UPPER UNIT
QUARTER 4, 2023 AND
QUARTERS 1-3, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





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

0 150 300 Feet

GWPS EXCEEDANCE MAP
BEDROCK CONFINING UNIT
QUARTER 4, 2023 AND
QUARTERS 1-3, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 7/19/2024 | DESIGNER: GALARNIMC
Y:\Mapping\Projects\222285\MMX\GW_Contours\Round_2024\Verillion\NEAP_912\NEAP_Pot_Surface_2024\0124



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- 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).



**GROUNDWATER ELEVATION MAP
JANUARY 24, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (5-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).

0 150 300
Feet

**POTENTIOMETRIC SURFACE MAP
FEBRUARY 19, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 5

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 8/26/2024 | DESIGNER: GALARNIMC
Y:\Mapping\Projects\22\2285\MMDIGW_Contours\Round_2024\Verillion\NEAP_912\NEAP_Pot_Surface_20240306



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- 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).

0 150 300
Feet

**GROUNDWATER ELEVATION MAP
MARCH 6, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 6

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



Service Layer Credits: World Imagery: Maxar



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- 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).

0 150 300
Feet

**GROUNDWATER ELEVATION MAP
APRIL 6, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 7

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (5-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).

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP
MAY 6, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 8

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 10/25/2024 | DESIGNER: GALARNIC
Y:\Mapping\Projects\22\2285\MM\GW\Contours\Round_2024\Vermlion\NEAP_912\NEAP_2024.aprx\VER 912 NEAP Pot Surface 20240629



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

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



**GROUNDWATER ELEVATION MAP
JUNE 28-29, 2024**

**2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS**

FIGURE 9

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (5-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).



POTENTIOMETRIC SURFACE MAP
JULY 29, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 10

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.



GROUNDWATER ELEVATION MAP
AUGUST 21, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 11

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.

0 150 300
Feet

GROUNDWATER ELEVATION MAP
SEPTEMBER 21, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 12

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 1/8/2025 | DESIGNER: PWYSIATKO
Y:\Mapping\Projects\22\2285\MMDW\Contours\Round_2024\Verillion\NEAP_912\NEAP_Pot_Surface_2024\1021



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (5-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).



POTENTIOMETRIC SURFACE MAP
OCTOBER 21, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 13

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

NOTES:
1. ELEVATION SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

0 150 300
Feet

GROUNDWATER ELEVATION MAP NOVEMBER 12, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 14

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.





- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (5-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).

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP
DECEMBER 6, 2024

2024 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT
NEW EAST ASH POND
VERMILION POWER PLANT
OAKWOOD, ILLINOIS

FIGURE 15

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



ATTACHMENTS

ATTACHMENT A
GROUNDWATER ELEVATION DATA

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2024 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
10	Background	UCU	01/24/2024	50.20	609.06
10	Background	UCU	02/19/2024	49.41	609.85
10	Background	UCU	03/06/2024	49.36	609.92
10	Background	UCU	04/06/2024	49.50	NA
10	Background	UCU	05/06/2024	48.16	611.10
10	Background	UCU	06/29/2024	49.66	NA
10	Background	UCU	07/29/2024	49.09	610.17
10	Background	UCU	08/21/2024	50.13	609.14
10	Background	UCU	09/21/2024	50.21	609.05
10	Background	UCU	10/21/2024	51.08	608.18
16B	Compliance	UU	01/23/2024	DM ¹	
16B	Compliance	UU	02/19/2024	Dry	
16B	Compliance	UU	03/06/2024	DM ¹	
16B	Compliance	UU	04/06/2024	DM ¹	
16B	Compliance	UU	05/06/2024	Dry	
16B	Compliance	UU	06/29/2024	DM ¹	
16B	Compliance	UU	07/29/2024	Dry	
16B	Compliance	UU	08/21/2024	DM ¹	
16B	Compliance	UU	09/21/2024	DM ¹	
16B	Compliance	UU	10/21/2024	Dry	
16B	Compliance	UU	11/12/2024	DM ¹	
16B	Compliance	UU	12/06/2024	DM ¹	
16A	Compliance	BCU	01/23/2024	DM ¹	
16A	Compliance	BCU	02/19/2024	12.05	568.44
16A	Compliance	BCU	03/06/2024	DM ¹	
16A	Compliance	BCU	04/06/2024	DM ¹	
16A	Compliance	BCU	05/06/2024	10.82	569.67
16A	Compliance	BCU	06/29/2024	DM ¹	
16A	Compliance	BCU	07/29/2024	9.28	571.21
16A	Compliance	BCU	08/21/2024	DM ¹	
16A	Compliance	BCU	09/21/2024	DM ¹	
16A	Compliance	BCU	10/21/2024	9.51	570.98
16A	Compliance	BCU	11/12/2024	DM ¹	
16A	Compliance	BCU	12/06/2024	12.44	567.16
22	Background	BCU	01/24/2024	55.93	602.86
22	Background	BCU	02/19/2024	55.33	603.46
22	Background	BCU	03/06/2024	55.15	603.63
22	Background	BCU	04/06/2024	54.93	603.85
22	Background	BCU	05/06/2024	54.51	604.28
22	Background	BCU	06/29/2024	54.85	603.93
22	Background	BCU	07/29/2024	54.92	603.87
22	Background	BCU	08/21/2024	55.03	603.77
22	Background	BCU	09/21/2024	55.49	603.31
22	Background	BCU	10/23/2024	[56.02]	[602.77]
22	Background	BCU	11/12/2024	55.82	602.98
22	Background	BCU	12/06/2024	56.71	602.10

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2024 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
35S	Compliance	UU	01/23/2024	DM ¹	
35S	Compliance	UU	02/19/2024	Dry	
35S	Compliance	UU	03/06/2024	DM ¹	
35S	Compliance	UU	04/06/2024	DM ¹	
35S	Compliance	UU	05/06/2024	12.02	572.90
35S	Compliance	UU	06/29/2024	DM ¹	
35S	Compliance	UU	07/29/2024	12.05	572.87
35S	Compliance	UU	08/21/2024	DM ¹	
35S	Compliance	UU	09/21/2024	DM ¹	
35S	Compliance	UU	10/21/2024	Dry	
35S	Compliance	UU	11/12/2024	DM ¹	
35S	Compliance	UU	12/06/2024	DM ¹	
35D	Compliance	BCU	01/23/2024	DM ¹	
35D	Compliance	BCU	02/19/2024	10.11	574.20
35D	Compliance	BCU	03/06/2024	DM ¹	
35D	Compliance	BCU	04/06/2024	DM ¹	
35D	Compliance	BCU	05/06/2024	11.79	572.52
35D	Compliance	BCU	06/29/2024	DM ¹	
35D	Compliance	BCU	07/29/2024	12.57	571.74
35D	Compliance	BCU	08/21/2024	DM ¹	
35D	Compliance	BCU	09/21/2024	DM ¹	
35D	Compliance	BCU	10/21/2024	11.09	573.22
35D	Compliance	BCU	11/12/2024	DM ¹	
35D	Compliance	BCU	12/06/2024	10.75	573.12
70S	Compliance	UU	01/24/2024	10.05	583.86
70S	Compliance	UU	02/19/2024	10.99	582.92
70S	Compliance	UU	03/06/2024	11.59	582.31
70S	Compliance	UU	04/06/2024	10.28	583.62
70S	Compliance	UU	05/06/2024	9.08	584.83
70S	Compliance	UU	06/28/2024	13.80	580.10
70S	Compliance	UU	07/29/2024	14.05	579.86
70S	Compliance	UU	08/21/2024	DM ⁷	
70S	Compliance	UU	09/21/2024	DM ⁷	
70S	Compliance	UU	10/21/2024	15.46	578.45
70S	Compliance	UU	11/12/2024	DM ⁷	
70S	Compliance	UU	12/06/2024	14.44	579.42
70D	Compliance	BCU	01/24/2024	37.65	557.04
70D	Compliance	BCU	02/19/2024	32.12	562.57
70D	Compliance	BCU	03/06/2024	47.96	546.72
70D	Compliance	BCU	04/06/2024	44.69	549.99
70D	Compliance	BCU	05/06/2024	36.89	557.80
70D	Compliance	BCU	06/29/2024	45.46	549.22
70D	Compliance	BCU	07/29/2024	39.51	555.18
70D	Compliance	BCU	08/21/2024	45.09	549.67
70D	Compliance	BCU	09/21/2024	38.97	555.79
70D	Compliance	BCU	10/21/2024	33.78	560.91

ATTACHMENT A
GROUNDWATER ELEVATION DATA
2024 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
70D	Compliance	BCU	11/12/2024	40.53	554.23
70D	Compliance	BCU	12/06/2024	36.01	558.76
71S	Compliance	UU	01/24/2024	9.89	569.84
71S	Compliance	UU	02/19/2024	10.15	569.58
71S	Compliance	UU	03/06/2024	10.43	569.29
71S	Compliance	UU	04/06/2024	10.16	569.56
71S	Compliance	UU	05/06/2024	9.28	570.45
71S	Compliance	UU	06/29/2024	11.93	567.79
71S	Compliance	UU	07/29/2024	11.91	567.82
71S	Compliance	UU	08/21/2024	11.52	567.77
71S	Compliance	UU	09/21/2024	11.52	567.77
71S	Compliance	UU	10/21/2024	11.99	567.74
71S	Compliance	UU	11/12/2024	12.04	567.24
71S	Compliance	UU	12/06/2024	12.02	567.28
71D	Compliance	BCU	01/23/2024	39.05	541.01
71D	Compliance	BCU	02/19/2024	37.97	542.09
71D	Compliance	BCU	03/06/2024	40.55	539.50
71D	Compliance	BCU	04/06/2024	39.28	540.77
71D	Compliance	BCU	05/06/2024	38.22	541.84
71D	Compliance	BCU	06/29/2024	37.90	542.15
71D	Compliance	BCU	07/29/2024	36.91	543.15
71D	Compliance	BCU	08/21/2024	38.75	540.74
71D	Compliance	BCU	09/21/2024	37.58	541.91
71D	Compliance	BCU	10/21/2024	37.18	542.88
71D	Compliance	BCU	11/12/2024	36.56	542.93
71D	Compliance	BCU	12/06/2024	35.70	543.80
NED1	Water Level	CCR	01/23/2024	DM ¹	
NED1	Water Level	CCR	02/19/2024	2.40	597.84
NED1	Water Level	CCR	03/06/2024	DM ¹	
NED1	Water Level	CCR	04/06/2024	DM ¹	
NED1	Water Level	CCR	05/06/2024	DM ³	
NED1	Water Level	CCR	06/29/2024	DM ¹	
NED1	Water Level	CCR	07/29/2024	DM ³	
NED1	Water Level	CCR	08/21/2024	DM ¹	
NED1	Water Level	CCR	09/21/2024	DM ¹	
NED1	Water Level	CCR	10/21/2024	4.72	595.52
NED1	Water Level	CCR	11/12/2024	DM ¹	
NED1	Water Level	CCR	12/06/2024	4.31	595.93

Notes:
BMP = below measuring point
Bracketing [] indicates that the measurement was obtained outside of the episodic depth to groundwater measurements time frame.
Depth to Groundwater/Groundwater Elevation Code (if applicable):
DM¹ = Depth to water was not measured.
DM² = Depth to water was not measured because water was above or below the staff gage markings.
DM³ = Depth to water was not measured because the location was inaccessible.
DM⁴ = Depth to water was not measured because water level was below the top of the pump.
DM⁵ = Depth to water was not measured because water level was above the top of casing (artesian well).
DM⁶ = Depth to water was not measured because of damage to the well.
DM⁷ = Depth to water was not measured due to required pressure transducer maintenance.
DM⁸ = Lab provided groundwater elevation data and not depth to water.
NA = not available/not applicable
NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:
BCU = bedrock confining unit
CCR = coal combustion residuals
UCU = upper confining unit
UU = upper unit

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**ATTACHMENT B
ALTERNATIVE SOURCE DEMONSTRATION AND IEPA
DENIAL LETTER**



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217-782-1020

June 5, 2024

Dianna Tickner
Dynegy Midwest Generation, LLC
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Re: Vermilion Power Plant East Power Plant New East Ash Pond; W1838000002-4
Alternate Source Demonstration (ASD) Submittal

Dear Mrs. Tickner:

The purpose of this correspondence is to notify you that the Illinois Environmental Protection Agency (Illinois EPA) does not concur with the Vermilion New East Ash Pond System Alternative Source Demonstration (ASD) dated May 8, 2024.

The Illinois EPA does not concur due to the following data gaps:

- No assessment of the interaction between bedrock groundwater and the old east pond. Based on Fig.1 shows to be upgradient of the New East Ash Pond. The Agency is unable to review for fate and transport or related concepts without source characterization of total CCR solids.
- Lack of analysis of the leachable metals from the Coal Combustion Residuals in the New East Ash Pond. Source characterization of the CCR at New East Ash Pond must include total solids sampling in accordance with the waste characterization and/or fate and transport characterization required in 35 Ill. Adm. Code 845 and analyzed in accordance with SW846.

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

Sincerely,

Darin LeCrone
Permit Section Manager
Division of Water Pollution Control
Bureau of Water

cc: Justin Bierwagen
Lauren Hunt

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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

JB PRITZKER, GOVERNOR

JAMES JENNINGS, INTERIM DIRECTOR

217-782-1020

August 22, 2024

Dianna Tickner
Dynegy Midwest Generation, LLC
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Re: Vermilion Power Plant East Power Plant New East Ash Pond; W1838000002-4
Alternate Source Demonstration (ASD) Submittal

Dear Mrs. Tickner:

The purpose of this correspondence is to notify you that the Illinois Environmental Protection Agency (Illinois EPA) does not concur with the Vermilion New East Ash Pond System Alternative Source Demonstration (ASD) dated July 24, 2024.

The Illinois EPA does not concur due to the following data gap:

- Lack of analysis of Chloride from the Coal Combustion Residuals in the New East Ash Pond. Source characterization of the CCR at New East Ash Pond must include total solids leachate [synthetic precipitation leaching procedure (SPLP)] sampling in accordance with the waste characterization and/or fate and transport characterization required in 35 Ill. Adm. Code 845 and analyzed in accordance with SW846.

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

Sincerely,

Darin LeCrone
Permit Section Manager
Division of Water Pollution Control
Bureau of Water

cc: Justin Bierwagen
Lauren Hunt
Keegan MacDonna
Records 06M

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000

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2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

ATTACHMENT C
COMPARISON TO BACKGROUND

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16B	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.00500
16B	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.001
16B	UU	E004	Barium, total	mg/L	--	--	--	--	--	0.0820
16B	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E004	Boron, total	mg/L	--	--	--	--	--	0.430
16B	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E004	Chloride, total	mg/L	--	--	--	--	--	20.4
16B	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.00400
16B	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900
16B	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	0.430
16B	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.001
16B	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.0300
16B	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.0002
16B	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
16B	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/7.8
16B	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
16B	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	338
16B	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002
16B	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
16A	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.001	0.00500
16A	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	11	0	CI around geomean	0.00117	0.001
16A	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	0.25	0.0820
16A	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.001	0.001
16A	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	0.674	0.430
16A	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0005	0.001
16A	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	11	0	CI around mean	126	20.4

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16A	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	11	91	CB around T-S line	0.0015	0.00400
16A	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.001	0.0900
16A	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	11	9	CI around mean	0.663	0.430
16A	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	11	91	CI around median	0.0005	0.001
16A	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	11	0	CB around linear reg	0.0289	0.0300
16A	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0002	0.0002
16A	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.005	0.00400
16A	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	16	0	CI around mean	7.2/7.5	6.3/7.8
16A	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	10	0	CI around mean	0.465	7.00
16A	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.0025	0.001
16A	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	16	5	CB around linear reg	-24	338
16A	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	11	100	All ND - Last	0.002	0.002
16A	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	16	0	CI around mean	646	1,080
35S	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.00500
35S	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.001
35S	UU	E004	Barium, total	mg/L	--	--	--	--	--	0.0820
35S	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E004	Boron, total	mg/L	--	--	--	--	--	0.430
35S	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E004	Chloride, total	mg/L	--	--	--	--	--	20.4
35S	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.00400
35S	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900
35S	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	0.430
35S	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.001
35S	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.0300
35S	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.0002
35S	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.00400

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
35S	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/7.8
35S	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
35S	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	338
35S	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002
35S	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
35D	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.001	0.00500
35D	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	17	CI around geomean	0.00164	0.001
35D	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around median	0.026	0.0820
35D	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.001
35D	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	1.64	0.430
35D	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.001
35D	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	302	20.4
35D	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.0015	0.00400
35D	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	42	CI around median	0.001	0.0900
35D	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CI around mean	0.642	0.430
35D	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	50	CI around geomean	0.000579	0.001
35D	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.112	0.0300
35D	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.0002
35D	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	25	CB around linear reg	-0.00104	0.00400
35D	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	16	0	CI around median	7.3/7.4	6.3/7.8
35D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around mean	0.333	7.00
35D	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0025	0.001
35D	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	17	0	CI around mean	1,100	338
35D	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002
35D	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	17	0	CI around mean	2,710	1,080
70S	UU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.003	0.00500

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70S	UU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.001
70S	UU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0166	0.0820
70S	UU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.001
70S	UU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.366	0.430
70S	UU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.001
70S	UU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	13.2	20.4
70S	UU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.005	0.00400
70S	UU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.001	0.0900
70S	UU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CI around median	0.14	0.430
70S	UU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.001
70S	UU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0112	0.0300
70S	UU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.0002
70S	UU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	25	CI around median	0.005	0.00400
70S	UU	E004	pH (field)	SU	04/01/21 - 02/21/24	12	0	CI around mean	6.9/7.0	6.3/7.8
70S	UU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around geomean	0.0972	7.00
70S	UU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0025	0.001
70S	UU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	605	338
70S	UU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002
70S	UU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	1,230	1,080
70D	BCU	E004	Antimony, total	mg/L	04/01/21 - 02/21/24	12	83	CI around median	0.001	0.00500
70D	BCU	E004	Arsenic, total	mg/L	04/01/21 - 02/21/24	12	58	CI around median	0.001	0.001
70D	BCU	E004	Barium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.461	0.0820
70D	BCU	E004	Beryllium, total	mg/L	04/01/21 - 02/21/24	12	75	CI around median	0.001	0.001
70D	BCU	E004	Boron, total	mg/L	04/01/21 - 02/21/24	12	0	CI around median	1.01	0.430
70D	BCU	E004	Cadmium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0005	0.001
70D	BCU	E004	Chloride, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	525	20.4
70D	BCU	E004	Chromium, total	mg/L	04/01/21 - 02/21/24	12	33	CI around geomean	0.00292	0.00400

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70D	BCU	E004	Cobalt, total	mg/L	04/01/21 - 02/21/24	12	8	CI around geomean	0.00161	0.0900
70D	BCU	E004	Fluoride, total	mg/L	04/01/21 - 02/21/24	12	8	CB around linear reg	0.234	0.430
70D	BCU	E004	Lead, total	mg/L	04/01/21 - 02/21/24	12	17	CI around geomean	0.00137	0.001
70D	BCU	E004	Lithium, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	0.0761	0.0300
70D	BCU	E004	Mercury, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.0002	0.0002
70D	BCU	E004	Molybdenum, total	mg/L	04/01/21 - 02/21/24	12	33	CB around linear reg	-0.0201	0.00400
70D	BCU	E004	pH (field)	SU	04/01/21 - 02/21/24	12	0	CI around mean	6.9/7.2	6.3/7.8
70D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 02/21/24	11	0	CI around mean	0.993	7.00
70D	BCU	E004	Selenium, total	mg/L	04/01/21 - 02/21/24	12	83	CI around median	0.001	0.001
70D	BCU	E004	Sulfate, total	mg/L	04/01/21 - 02/21/24	12	0	CI around mean	46.5	338
70D	BCU	E004	Thallium, total	mg/L	04/01/21 - 02/21/24	12	100	All ND - Last	0.002	0.002
70D	BCU	E004	Total Dissolved Solids	mg/L	04/01/21 - 02/21/24	12	0	CB around linear reg	1,270	1,080
71S	UU	E004	Antimony, total	mg/L	--	--	--	--	--	0.00500
71S	UU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.001
71S	UU	E004	Barium, total	mg/L	--	--	--	--	--	0.0820
71S	UU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E004	Boron, total	mg/L	--	--	--	--	--	0.430
71S	UU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E004	Chloride, total	mg/L	--	--	--	--	--	20.4
71S	UU	E004	Chromium, total	mg/L	--	--	--	--	--	0.00400
71S	UU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900
71S	UU	E004	Fluoride, total	mg/L	--	--	--	--	--	0.430
71S	UU	E004	Lead, total	mg/L	--	--	--	--	--	0.001
71S	UU	E004	Lithium, total	mg/L	--	--	--	--	--	0.0300
71S	UU	E004	Mercury, total	mg/L	--	--	--	--	--	0.0002
71S	UU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
71S	UU	E004	pH (field)	SU	--	--	--	--	--	6.3/7.8

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 1, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
71S	UU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
71S	UU	E004	Selenium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E004	Sulfate, total	mg/L	--	--	--	--	--	338
71S	UU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002
71S	UU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
71D	BCU	E004	Antimony, total	mg/L	--	--	--	--	--	0.00500
71D	BCU	E004	Arsenic, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E004	Barium, total	mg/L	--	--	--	--	--	0.0820
71D	BCU	E004	Beryllium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E004	Boron, total	mg/L	--	--	--	--	--	0.430
71D	BCU	E004	Cadmium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E004	Chloride, total	mg/L	--	--	--	--	--	20.4
71D	BCU	E004	Chromium, total	mg/L	--	--	--	--	--	0.00400
71D	BCU	E004	Cobalt, total	mg/L	--	--	--	--	--	0.0900
71D	BCU	E004	Fluoride, total	mg/L	--	--	--	--	--	0.430
71D	BCU	E004	Lead, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E004	Lithium, total	mg/L	--	--	--	--	--	0.0300
71D	BCU	E004	Mercury, total	mg/L	--	--	--	--	--	0.0002
71D	BCU	E004	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
71D	BCU	E004	pH (field)	SU	--	--	--	--	--	6.3/7.8
71D	BCU	E004	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
71D	BCU	E004	Selenium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E004	Sulfate, total	mg/L	--	--	--	--	--	338
71D	BCU	E004	Thallium, total	mg/L	--	--	--	--	--	0.002
71D	BCU	E004	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080

Notes:
- = no data available
Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value
HSU = hydrostratigraphic unit:
BCU = Bedrock Confining Unit
UU = Upper Unit
mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:
All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown
CB around T-S line = Confidence band around Thiel-Sen line
CB around linear reg = Confidence band around linear regression
CI around geomean = Confidence interval around the geometric mean
CI around mean = Confidence interval around the mean
CI around median = Confidence interval around the median
Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range
For pH, the values presented are the lower / upper limits of the background determination

ATTACHMENT C.
COMPARISON TO BACKGROUND - QUARTER 2, 2024
845 QUARTERLY REPORT
VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16B	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.00500
16B	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.001
16B	UU	E005	Barium, total	mg/L	--	--	--	--	--	0.0820
16B	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E005	Boron, total	mg/L	--	--	--	--	--	0.430
16B	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E005	Chloride, total	mg/L	--	--	--	--	--	20.4
16B	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.00400
16B	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900
16B	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	0.430
16B	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.001
16B	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.0300
16B	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.0002
16B	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
16B	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/7.8
16B	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
16B	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.001
16B	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	338
16B	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002
16B	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
16A	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	12	92	CI around median	0.001	0.00500
16A	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	12	0	CI around geomean	0.00125	0.001
16A	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	0.254	0.0820
16A	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.001	0.001
16A	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	0.682	0.430
16A	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0005	0.001
16A	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	12	0	CI around mean	124	20.4

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COMPARISON TO BACKGROUND - QUARTER 2, 2024
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VERMILION POWER PLANT
NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16A	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	12	83	CB around T-S line	0.0015	0.00400
16A	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	12	83	CI around median	0.001	0.0900
16A	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	12	8	CI around mean	0.669	0.430
16A	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	12	83	CI around median	0.0005	0.001
16A	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	12	0	CB around linear reg	0.0306	0.0300
16A	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0002	0.0002
16A	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.005	0.00400
16A	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	17	0	CI around mean	7.2/7.5	6.3/7.8
16A	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	11	0	CI around mean	0.52	7.00
16A	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.0025	0.001
16A	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	17	5	CI around mean	14	338
16A	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	12	100	All ND - Last	0.002	0.002
16A	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	17	0	CI around mean	649	1,080
35S	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.00500
35S	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.001
35S	UU	E005	Barium, total	mg/L	--	--	--	--	--	0.0820
35S	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E005	Boron, total	mg/L	--	--	--	--	--	0.430
35S	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E005	Chloride, total	mg/L	--	--	--	--	--	20.4
35S	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.00400
35S	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900
35S	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	0.430
35S	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.001
35S	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.0300
35S	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.0002
35S	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.00400

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
35S	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/7.8
35S	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
35S	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.001
35S	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	338
35S	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002
35S	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
35D	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.001	0.00500
35D	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	15	CI around geomean	0.00169	0.001
35D	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around median	0.026	0.0820
35D	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.001
35D	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1.67	0.430
35D	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.001
35D	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	314	20.4
35D	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.0015	0.00400
35D	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	46	CI around median	0.001	0.0900
35D	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CI around mean	0.649	0.430
35D	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	54	CI around median	0.0005	0.001
35D	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.115	0.0300
35D	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.0002
35D	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	31	CB around linear reg	-0.00152	0.00400
35D	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	17	0	CI around median	7.3/7.7	6.3/7.8
35D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	0.382	7.00
35D	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0025	0.001
35D	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	18	0	CI around mean	1,120	338
35D	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002
35D	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	18	0	CI around mean	2,750	1,080
70S	UU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.003	0.00500

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70S	UU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.001
70S	UU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0165	0.0820
70S	UU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.001
70S	UU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.375	0.430
70S	UU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.001
70S	UU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	12.7	20.4
70S	UU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.005	0.00400
70S	UU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.001	0.0900
70S	UU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CI around median	0.14	0.430
70S	UU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.001
70S	UU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0116	0.0300
70S	UU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.0002
70S	UU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	31	CI around median	0.005	0.00400
70S	UU	E005	pH (field)	SU	04/01/21 - 06/06/24	13	0	CI around mean	6.9/7.1	6.3/7.8
70S	UU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	0.0788	7.00
70S	UU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0025	0.001
70S	UU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	459	338
70S	UU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002
70S	UU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1,210	1,080
70D	BCU	E005	Antimony, total	mg/L	04/01/21 - 06/06/24	13	85	CI around median	0.001	0.00500
70D	BCU	E005	Arsenic, total	mg/L	04/01/21 - 06/06/24	13	62	CI around median	0.001	0.001
70D	BCU	E005	Barium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.462	0.0820
70D	BCU	E005	Beryllium, total	mg/L	04/01/21 - 06/06/24	13	77	CI around median	0.001	0.001
70D	BCU	E005	Boron, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	1.19	0.430
70D	BCU	E005	Cadmium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0005	0.001
70D	BCU	E005	Chloride, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	539	20.4
70D	BCU	E005	Chromium, total	mg/L	04/01/21 - 06/06/24	13	38	CI around geomean	0.00276	0.00400

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70D	BCU	E005	Cobalt, total	mg/L	04/01/21 - 06/06/24	13	8	CI around geomean	0.00168	0.0900
70D	BCU	E005	Fluoride, total	mg/L	04/01/21 - 06/06/24	13	8	CB around linear reg	0.257	0.430
70D	BCU	E005	Lead, total	mg/L	04/01/21 - 06/06/24	13	15	CI around geomean	0.00129	0.001
70D	BCU	E005	Lithium, total	mg/L	04/01/21 - 06/06/24	13	0	CI around mean	0.0791	0.0300
70D	BCU	E005	Mercury, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.0002	0.0002
70D	BCU	E005	Molybdenum, total	mg/L	04/01/21 - 06/06/24	13	38	CB around linear reg	-0.0184	0.00400
70D	BCU	E005	pH (field)	SU	04/01/21 - 06/06/24	13	0	CI around mean	6.9/7.2	6.3/7.8
70D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 06/06/24	12	0	CI around mean	1.02	7.00
70D	BCU	E005	Selenium, total	mg/L	04/01/21 - 06/06/24	13	85	CI around median	0.001	0.001
70D	BCU	E005	Sulfate, total	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	39.9	338
70D	BCU	E005	Thallium, total	mg/L	04/01/21 - 06/06/24	13	100	All ND - Last	0.002	0.002
70D	BCU	E005	Total Dissolved Solids	mg/L	04/01/21 - 06/06/24	13	0	CB around linear reg	1,350	1,080
71S	UU	E005	Antimony, total	mg/L	--	--	--	--	--	0.00500
71S	UU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.001
71S	UU	E005	Barium, total	mg/L	--	--	--	--	--	0.0820
71S	UU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E005	Boron, total	mg/L	--	--	--	--	--	0.430
71S	UU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E005	Chloride, total	mg/L	--	--	--	--	--	20.4
71S	UU	E005	Chromium, total	mg/L	--	--	--	--	--	0.00400
71S	UU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900
71S	UU	E005	Fluoride, total	mg/L	--	--	--	--	--	0.430
71S	UU	E005	Lead, total	mg/L	--	--	--	--	--	0.001
71S	UU	E005	Lithium, total	mg/L	--	--	--	--	--	0.0300
71S	UU	E005	Mercury, total	mg/L	--	--	--	--	--	0.0002
71S	UU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
71S	UU	E005	pH (field)	SU	--	--	--	--	--	6.3/7.8

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
71S	UU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
71S	UU	E005	Selenium, total	mg/L	--	--	--	--	--	0.001
71S	UU	E005	Sulfate, total	mg/L	--	--	--	--	--	338
71S	UU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002
71S	UU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080
71D	BCU	E005	Antimony, total	mg/L	--	--	--	--	--	0.00500
71D	BCU	E005	Arsenic, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E005	Barium, total	mg/L	--	--	--	--	--	0.0820
71D	BCU	E005	Beryllium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E005	Boron, total	mg/L	--	--	--	--	--	0.430
71D	BCU	E005	Cadmium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E005	Chloride, total	mg/L	--	--	--	--	--	20.4
71D	BCU	E005	Chromium, total	mg/L	--	--	--	--	--	0.00400
71D	BCU	E005	Cobalt, total	mg/L	--	--	--	--	--	0.0900
71D	BCU	E005	Fluoride, total	mg/L	--	--	--	--	--	0.430
71D	BCU	E005	Lead, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E005	Lithium, total	mg/L	--	--	--	--	--	0.0300
71D	BCU	E005	Mercury, total	mg/L	--	--	--	--	--	0.0002
71D	BCU	E005	Molybdenum, total	mg/L	--	--	--	--	--	0.00400
71D	BCU	E005	pH (field)	SU	--	--	--	--	--	6.3/7.8
71D	BCU	E005	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	--	7.00
71D	BCU	E005	Selenium, total	mg/L	--	--	--	--	--	0.001
71D	BCU	E005	Sulfate, total	mg/L	--	--	--	--	--	338
71D	BCU	E005	Thallium, total	mg/L	--	--	--	--	--	0.002
71D	BCU	E005	Total Dissolved Solids	mg/L	--	--	--	--	--	1,080

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Notes:
- = no data available
Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value
HSU = hydrostratigraphic unit:
 BCU = Bedrock Confining Unit
 UU = Upper Unit
mg/L = milligrams per liter
ND = non-detect
pCi/L = picocuries per liter
SU = standard units
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:
 All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown
 CB around T-S line = Confidence band around Thiel-Sen line
 CB around linear reg = Confidence band around linear regression
 CI around geomean = Confidence interval around the geometric mean
 CI around mean = Confidence interval around the mean
 CI around median = Confidence interval around the median
Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range
For pH, the values presented are the lower / upper limits of the background determination

ATTACHMENT C.
COMPARISON TO BACKGROUND- QUARTER 3, 2024
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NEW EAST ASH POND
OAKWOOD, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16B	UU	E006	Antimony, total	mg/L	--	--	--	--	NS ⁷	0.00500
16B	UU	E006	Arsenic, total	mg/L	--	--	--	--	NS ⁷	0.001
16B	UU	E006	Barium, total	mg/L	--	--	--	--	NS ⁷	0.0820
16B	UU	E006	Beryllium, total	mg/L	--	--	--	--	NS ⁷	0.001
16B	UU	E006	Boron, total	mg/L	--	--	--	--	NS ⁷	0.430
16B	UU	E006	Cadmium, total	mg/L	--	--	--	--	NS ⁷	0.001
16B	UU	E006	Chloride, total	mg/L	--	--	--	--	NS ⁷	20.4
16B	UU	E006	Chromium, total	mg/L	--	--	--	--	NS ⁷	0.00400
16B	UU	E006	Cobalt, total	mg/L	--	--	--	--	NS ⁷	0.0900
16B	UU	E006	Fluoride, total	mg/L	--	--	--	--	NS ⁷	0.430
16B	UU	E006	Lead, total	mg/L	--	--	--	--	NS ⁷	0.001
16B	UU	E006	Lithium, total	mg/L	--	--	--	--	NS ⁷	0.0300
16B	UU	E006	Mercury, total	mg/L	--	--	--	--	NS ⁷	0.0002
16B	UU	E006	Molybdenum, total	mg/L	--	--	--	--	NS ⁷	0.00400
16B	UU	E006	pH (field)	SU	--	--	--	--	NS ⁷	6.3/7.8
16B	UU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00
16B	UU	E006	Selenium, total	mg/L	--	--	--	--	NS ⁷	0.001
16B	UU	E006	Sulfate, total	mg/L	--	--	--	--	NS ⁷	338
16B	UU	E006	Thallium, total	mg/L	--	--	--	--	NS ⁷	0.002
16B	UU	E006	Total Dissolved Solids	mg/L	--	--	--	--	NS ⁷	1,080
16A	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/31/24	13	92	CB around T-S line	0.001	0.00500
16A	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/31/24	13	0	CI around geomean	0.00127	0.001
16A	BCU	E006	Barium, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	0.258	0.0820
16A	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.001	0.001
16A	BCU	E006	Boron, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	0.69	0.430
16A	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0005	0.001
16A	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/31/24	13	0	CI around mean	124	20.4

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NEW EAST ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
16A	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/31/24	13	77	CB around T-S line	0.0015	0.00400
16A	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/31/24	13	77	CI around median	0.001	0.0900
16A	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/31/24	13	8	CI around mean	0.682	0.430
16A	BCU	E006	Lead, total	mg/L	04/01/21 - 07/31/24	13	77	CI around median	0.001	0.001
16A	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/31/24	13	0	CB around linear reg	0.0315	0.0300
16A	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0002	0.0002
16A	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.005	0.00400
16A	BCU	E006	pH (field)	SU	04/01/21 - 07/31/24	18	0	CI around mean	7.2/7.5	6.3/7.8
16A	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/31/24	12	0	CI around mean	0.59	7.00
16A	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.0025	0.001
16A	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/31/24	18	5	CB around linear reg	-18	338
16A	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/31/24	13	100	All ND - Last	0.002	0.002
16A	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/31/24	18	0	CI around mean	648	1,080
35S	UU	E006	Antimony, total	mg/L	--	--	--	--	NS ⁷	0.00500
35S	UU	E006	Arsenic, total	mg/L	--	--	--	--	NS ⁷	0.001
35S	UU	E006	Barium, total	mg/L	--	--	--	--	NS ⁷	0.0820
35S	UU	E006	Beryllium, total	mg/L	--	--	--	--	NS ⁷	0.001
35S	UU	E006	Boron, total	mg/L	--	--	--	--	NS ⁷	0.430
35S	UU	E006	Cadmium, total	mg/L	--	--	--	--	NS ⁷	0.001
35S	UU	E006	Chloride, total	mg/L	--	--	--	--	NS ⁷	20.4
35S	UU	E006	Chromium, total	mg/L	--	--	--	--	NS ⁷	0.00400
35S	UU	E006	Cobalt, total	mg/L	--	--	--	--	NS ⁷	0.0900
35S	UU	E006	Fluoride, total	mg/L	--	--	--	--	NS ⁷	0.430
35S	UU	E006	Lead, total	mg/L	--	--	--	--	NS ⁷	0.001
35S	UU	E006	Lithium, total	mg/L	--	--	--	--	NS ⁷	0.0300
35S	UU	E006	Mercury, total	mg/L	--	--	--	--	NS ⁷	0.0002
35S	UU	E006	Molybdenum, total	mg/L	--	--	--	--	NS ⁷	0.00400

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NEW EAST ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
35S	UU	E006	pH (field)	SU	--	--	--	--	NS ⁷	6.3/7.8
35S	UU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00
35S	UU	E006	Selenium, total	mg/L	--	--	--	--	NS ⁷	0.001
35S	UU	E006	Sulfate, total	mg/L	--	--	--	--	NS ⁷	338
35S	UU	E006	Thallium, total	mg/L	--	--	--	--	NS ⁷	0.002
35S	UU	E006	Total Dissolved Solids	mg/L	--	--	--	--	NS ⁷	1,080
35D	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/31/24	14	79	CI around median	0.001	0.00500
35D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/31/24	14	14	CI around mean	0.00198	0.001
35D	BCU	E006	Barium, total	mg/L	04/01/21 - 07/31/24	14	0	CB around T-S line	-0.0936	0.0820
35D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.001	0.001
35D	BCU	E006	Boron, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	1.69	0.430
35D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0005	0.001
35D	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	320	20.4
35D	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/31/24	14	79	CB around T-S line	0.0015	0.00400
35D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/31/24	14	50	CB around linear reg	-0.00064	0.0900
35D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/31/24	14	7	CI around median	0.65	0.430
35D	BCU	E006	Lead, total	mg/L	04/01/21 - 07/31/24	14	57	CI around median	0.0005	0.001
35D	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/31/24	14	0	CI around mean	0.117	0.0300
35D	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0002	0.0002
35D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/31/24	14	36	CB around linear reg	-0.00122	0.00400
35D	BCU	E006	pH (field)	SU	04/01/21 - 07/31/24	18	0	CI around median	7.3/7.4	6.3/7.8
35D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/31/24	13	0	CI around mean	0.428	7.00
35D	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.0025	0.001
35D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/31/24	19	0	CI around mean	1,140	338
35D	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/31/24	14	100	All ND - Last	0.002	0.002
35D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/31/24	19	0	CI around mean	2,790	1,080
70S	UU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.003	0.00500

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VERMILION POWER PLANT
NEW EAST ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70S	UU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.001
70S	UU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0163	0.0820
70S	UU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.001
70S	UU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.382	0.430
70S	UU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.001
70S	UU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	8.12	20.4
70S	UU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.005	0.00400
70S	UU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.001	0.0900
70S	UU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	14	7	CI around median	0.14	0.430
70S	UU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.001
70S	UU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0119	0.0300
70S	UU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0002	0.0002
70S	UU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	14	36	CI around median	0.005	0.00400
70S	UU	E006	pH (field)	SU	04/01/21 - 07/30/24	14	0	CI around mean	6.9/7.1	6.3/7.8
70S	UU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	13	0	CI around geomean	0.125	7.00
70S	UU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0025	0.001
70S	UU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	449	338
70S	UU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.002	0.002
70S	UU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	14	0	CB around linear reg	1,020	1,080
70D	BCU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	14	86	CI around median	0.001	0.00500
70D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	14	64	CI around median	0.001	0.001
70D	BCU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.443	0.0820
70D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	14	79	CI around median	0.001	0.001
70D	BCU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	1.2	0.430
70D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0005	0.001
70D	BCU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	522	20.4
70D	BCU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	14	43	CB around linear reg	-0.0359	0.00400

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NEW EAST ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
70D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	14	7	CB around linear reg	-0.0302	0.0900
70D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	14	7	CI around mean	0.41	0.430
70D	BCU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	14	14	CB around linear reg	-0.0226	0.001
70D	BCU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	0.0803	0.0300
70D	BCU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.0002	0.0002
70D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	14	43	CB around linear reg	-0.0158	0.00400
70D	BCU	E006	pH (field)	SU	04/01/21 - 07/30/24	14	0	CI around mean	6.9/7.2	6.3/7.8
70D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	13	0	CI around geomean	1.29	7.00
70D	BCU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	14	86	CI around median	0.001	0.001
70D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	45.7	338
70D	BCU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	14	100	All ND - Last	0.002	0.002
70D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	14	0	CI around mean	1,370	1,080
71S	UU	E006	Antimony, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.003	0.00500
71S	UU	E006	Arsenic, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.00244	0.001
71S	UU	E006	Barium, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.0428	0.0820
71S	UU	E006	Beryllium, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.001	0.001
71S	UU	E006	Boron, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.192	0.430
71S	UU	E006	Cadmium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.001
71S	UU	E006	Chloride, total	mg/L	04/01/21 - 07/30/24	9	0	CI around geomean	1.75	20.4
71S	UU	E006	Chromium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.0015	0.00400
71S	UU	E006	Cobalt, total	mg/L	04/01/21 - 07/30/24	9	56	CI around median	0.001	0.0900
71S	UU	E006	Fluoride, total	mg/L	04/01/21 - 07/30/24	9	0	CB around linear reg	0.183	0.430
71S	UU	E006	Lead, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.001
71S	UU	E006	Lithium, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	0.00454	0.0300
71S	UU	E006	Mercury, total	mg/L	04/01/21 - 07/30/24	9	100	All ND - Last	0.0002	0.0002
71S	UU	E006	Molybdenum, total	mg/L	04/01/21 - 07/30/24	9	11	CI around mean	0.00228	0.00400
71S	UU	E006	pH (field)	SU	04/01/21 - 07/30/24	9	0	CI around mean	6.7/6.9	6.3/7.8

ATTACHMENT C.
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NEW EAST ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
71S	UU	E006	Radium 226 + Radium 228, total	pCi/L	04/01/21 - 07/30/24	9	0	CI around mean	0.217	7.00
71S	UU	E006	Selenium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.001	0.001
71S	UU	E006	Sulfate, total	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	55.9	338
71S	UU	E006	Thallium, total	mg/L	04/01/21 - 07/30/24	9	89	CI around median	0.002	0.002
71S	UU	E006	Total Dissolved Solids	mg/L	04/01/21 - 07/30/24	9	0	CI around mean	479	1,080
71D	BCU	E006	Antimony, total	mg/L	04/01/21 - 08/01/24	7	71	CI around median	0.001	0.00500
71D	BCU	E006	Arsenic, total	mg/L	04/01/21 - 08/01/24	7	57	CI around median	0.001	0.001
71D	BCU	E006	Barium, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.162	0.0820
71D	BCU	E006	Beryllium, total	mg/L	04/01/21 - 08/01/24	7	86	CI around median	0.0005	0.001
71D	BCU	E006	Boron, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.683	0.430
71D	BCU	E006	Cadmium, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.0005	0.001
71D	BCU	E006	Chloride, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	310	20.4
71D	BCU	E006	Chromium, total	mg/L	04/01/21 - 08/01/24	7	43	CI around median	0.0028	0.00400
71D	BCU	E006	Cobalt, total	mg/L	04/01/21 - 08/01/24	7	43	CI around geomean	0.000539	0.0900
71D	BCU	E006	Fluoride, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.442	0.430
71D	BCU	E006	Lead, total	mg/L	04/01/21 - 08/01/24	7	14	CI around geomean	0.000754	0.001
71D	BCU	E006	Lithium, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	0.0405	0.0300
71D	BCU	E006	Mercury, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.0005	0.0002
71D	BCU	E006	Molybdenum, total	mg/L	04/01/21 - 08/01/24	7	43	CI around mean	0.00308	0.00400
71D	BCU	E006	pH (field)	SU	04/01/21 - 08/01/24	7	0	CI around mean	6.8/7.4	6.3/7.8
71D	BCU	E006	Radium 226 + Radium 228, total	pCi/L	--	--	--	--	NS ⁷	7.00
71D	BCU	E006	Selenium, total	mg/L	04/01/21 - 08/01/24	7	86	CI around median	0.001	0.001
71D	BCU	E006	Sulfate, total	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	39.8	338
71D	BCU	E006	Thallium, total	mg/L	04/01/21 - 08/01/24	7	100	All ND - Last	0.002	0.002
71D	BCU	E006	Total Dissolved Solids	mg/L	04/01/21 - 08/01/24	7	0	CI around mean	1,030	1,080

Notes:

- = no data available

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

HSU = hydrostratigraphic unit:

BCU = Bedrock Confining Unit

UU = Upper Unit

mg/L = milligrams per liter

Missing Code (if applicable):

NR¹ = Select parameters were not analyzed.

NS¹ = This well has been, or will be, abandoned; therefore, a sample was not collected.

NS² = Well either needs or was undergoing maintenance, therefore, a sample was not collected.

NS³ = A sample was not collected because the location was inaccessible.

NS⁴ = The location could not be found, therefore a sample was not collected.

NS⁵ = A sample was not collected because of damage to the well.

NS⁶ = A sample was not collected because of pump issues.

NS⁷ = A sample was not collected because the well was either dry or was purged dry and did not recover.

PM¹ = Select parameters were not analyzed as the well purged dry during sample collection and did not sufficiently recover to sample for all parameters.

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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