



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

January 30, 2024

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

Re: Baldwin Power Plant Bottom Ash Pond (IEPA ID W1578510001-06) 2023 Annual Consolidated Report

Dear Mr. LeCrone:

In accordance with 35 IAC § 845.550, Dynegy Midwest Generation, LLC (DMG) is submitting the annual consolidated report for the Baldwin Power Plant Bottom Ash Pond (IEPA ID W1578510001-06), as enclosed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Phil Morris", is written over a light blue horizontal line.

Phil Morris
Senior Environmental Director

Enclosures

Annual Consolidated Report
Dynergy Midwest Generation, LLC
Baldwin Power Plant
Bottom Ash Pond; IEPA ID W1578510001-06

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 Baldwin Power Plant

Prepared for:



Illinois Power Generating Company

**Baldwin Power Plant
10901 Baldwin Rd
Baldwin, IL 62217**


November 2023

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

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

Completed by: Kimberly Edminston 11-28-2023

Name Title



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

Section 1 Actions Taken to Control CCR Fugitive Dust

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

CCR Activity	Actions Taken to Control CCR Fugitive Dust
Management of CCR in the facility's CCR units	Wet management of CCR bottom ash and CCR fly ash in CCR surface impoundments.
	Apply water and/or apply dust suppressant to areas of exposed CCR in CCR units, as necessary.
	Naturally occurring grass vegetation in areas of exposed CCR in CCR surface impoundments.
	Reduce or halt operations during high wind events as necessary.
Handling of CCR at the facility	Wet sluice CCR bottom ash and fly ash to CCR surface impoundments.
	Pneumatically convey dry CCR fly ash and CCR FGD materials to storage silos in an enclosed system.
	CCR scrubber ash to be emplaced in offsite third-party owned/operated landfill is conditioned before loading into trucks for transport to the landfill.
	Water is added to CCR fly ash at the loadout silos for on-site transport in a partially enclosed area.
	Load CCR transport trucks from the CCR fly ash and CCR FGD materials silos in a partially enclosed area.

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

CCR Activity	Actions Taken to Control CCR Fugitive Dust
Handling of CCR at the facility	Load CCR transport trucks from the CCR fly ash silos using a telescoping chute.
	Transfer CCR dry fly ash into rail cars using a railcar loading spout and associated dust filter collection system.
	Perform housekeeping, as necessary, in the fly ash loading area.
	Operate fly ash and CCR FGD materials handling system in accordance with good operating practices.
	Maintain and repair as necessary dust controls on the CCR fly ash handling system and the CCR fly ash rail load-out system.
	Reduce or halt operations during high wind events as necessary.
Transportation of CCR at the facility for onsite and offsite disposal	CCR fly ash to be transported offsite may be loaded into a fully-enclosed truck.
	Water is added to CCR fly ash at the loadout for on-site transport.
	CCR scrubber ash to be emplaced in offsite third-party owned/operated landfill is conditioned before loading into trucks for transport to the landfill.
	Cover or enclose trucks used to transport CCR material, as necessary.
	Limit the speed of vehicles to no more than 15 mph on facility roads.
	Sweep or rinse off the outside of the trucks transporting CCR, as necessary.
	Remove CCR, as necessary, deposited on facility road surfaces during transport.

Based on a review of the Plan and inspections associated with CCR fugitive dust control performed in the reporting year, the control measures identified in the Plan as implemented at the facility effectively minimized CCR from becoming airborne at the facility. This included application of water on areas outside the silos and on unpaved roads. The addition of a chemical dust suppressant in June and September was used in anticipation of increased vehicle travel on limited unpaved roads. The old East/East and West FA ponds are closed, capped and have vegetation now. A revision to control measures was identified in the Plan and included reducing or halting operations during high wind events.

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.

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

Section 2 Record of Citizen Complaints

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

Section 2

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

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

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

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

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

ANNUAL INSPECTION BY A QUALIFIED PROFESSIONAL ENGINEER
35 IAC § 845.540

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

A) A review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections);

B) A visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;

C) A visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation;

D) The annual hazard potential classification certification, if applicable (see Section 845.440);

E) The annual structural stability assessment certification, if applicable (see Section 845.450);

F) The annual safety factor assessment certification, if applicable (see Section 845.460); and

G) The inflow design flood control system plan certification (see Section 845.510(c)).

SITE INFORMATION

Site Name / Address / Date of Inspection	Baldwin Energy Complex Randolph County, Illinois 62217 10/10/2023
Operator Name / Address	Luminant Generation Company LLC 6555 Sierra Drive, Irving, TX 75039
CCR unit	Bottom 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, the only change to the geometry of the structure was an approximate 18" raise of the emergency spillway crest elevation to provide additional freeboard for a design storm event.
(b)(2)(B) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection	See the attached.
b)(2)(C) The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;	See the attached.
b)(2)(D) The storage capacity of the impounding structure at the time of the inspection	Approximately 5900 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 1800 acre-feet
(b)(2)(F) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Based on a review of the CCR unit's records and visual observation during the on-site inspection, there was no appearance of an actual or potential structural weakness of the CCR unit, nor an existing condition that is disrupting or would disrupt the operation and safety of the unit.

INSPECTION REPORT 35 IAC § 845.540

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

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

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



James Knutelski, PE
Illinois PE No. 062-054206, Expires: 11/30/2025
Date: 01/10/2024

Site Name: Baldwin Energy Complex

CCR Unit: Bottom Ash Pond

35 IAC § 845.540 (b)(2)(B)		
Instrument ID #	Type	Maximum recorded reading since previous annual inspection (ft)
P003	Piezometer	abandoned
P006	Piezometer	abandoned
P007	Piezometer	433.96'

35 IAC § 845.540 (b)(2)(C)						
Since previous inspection:	Approximate Depth / Elevation					
	Elevation (ft)			Depth (ft)		
	Minimum	Present	Maximum	Minimum	Present	Maximum
Impounded Water		417			19	
CCR	415		460	17		62

Section 3

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

Prepared for
Dynegy Midwest Generation, LLC

Date
January 31, 2024

Project No.
1940103649-001

**2023 35 I.A.C. § 845 ANNUAL
GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
BOTTOM ASH POND
BALDWIN POWER PLANT
BALDWIN, ILLINOIS
IEPA ID NO. W1578510001-06**

**2023 35 I.A.C. § 845 ANNUAL GROUNDWATER
MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN POWER PLANT BOTTOM ASH POND**

Project name **Baldwin Power Plant Bottom Ash Pond**
Project no. **1940103649-001**
Recipient **Dynegy Midwest Generation, LLC**
Document type **Annual Groundwater Monitoring and Corrective Action Report**
Version **FINAL**
Date **January 31, 2024**
Prepared by **Evvan G. Plank**
Checked by **Lauren D. Cook**
Approved by **Brian G. Hennings, PG**
Description **Annual Report required by 35 I.A.C. § 845**

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

TABLES (ATTACHED)

Table 1	Field Parameters and Analytical Results – Quarter 2, 2023 Field Parameters and Analytical Results – Quarter 3, 2023 Field Parameters and Analytical Results – Quarter 4, 2023
Table 2	Comparison of Statistical Results to GWPS – Quarter 2, 2023 Comparison of Statistical Results to GWPS – Quarter 3, 2023

FIGURES (ATTACHED)

Figure 1	Monitoring Well Location Map
Figure 2	GWPS Exceedance Map Uppermost Aquifer, Quarters 2-3, 2023
Figure 3	GWPS Exceedance Map Upper Unit, Quarters 2-3, 2023
Figure 4	Potentiometric Surface Map, April 16, 2023
Figure 5	Potentiometric Surface Map, May 15-17, 2023
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Figure 10	Potentiometric Surface Map, October 30, 2023
Figure 11	Potentiometric Surface Map, November 6-7, 2023
Figure 12	Potentiometric Surface Map, December 13, 2023

ATTACHMENTS

Attachment A	Groundwater Elevation Data
Attachment B	Alternative Source Demonstration and IEPA Approval Letter
Attachment C	Comparison of Statistical Results to Background – Quarter 2, 2023 Comparison of Statistical Results to Background – Quarter 3, 2023

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
ASD	Alternative Source Demonstration
BAP	Bottom Ash Pond
BPP	Baldwin Power Plant
CCA	compliance commitment agreement
CCR	coal combustion residuals
CMA	assessment of corrective measures
DMG	Dynegy Midwest Generation, LLC
E001	Quarter 2, 2023 sampling event
E001R	Quarter 2, 2023 resampling event
E002	Quarter 3, 2023 sampling event
E003	Quarter 4, 2023 sampling event
GMP	Groundwater Monitoring Plan
GWPS	groundwater protection standard
ID	identification
IEPA	Illinois Environmental Protection Agency
NID	National Inventory of Dams
No.	number
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SI	surface impoundment
SSI	statistically significant increase

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.610(e) (*Annual Groundwater Monitoring and Corrective Action Report*) for the Bottom Ash Pond (BAP) located at Baldwin Power Plant (BPP) near Baldwin, Illinois. The BAP is recognized by coal combustion residuals (CCR) unit identification (ID) number (No.) 601, Illinois Environmental Protection Agency (IEPA) ID No. W1578510001-06, and National Inventory of Dams (NID) No. IL50721.

As required by 35 I.A.C. § 845, an operating permit application for the BAP was submitted by Dynegy Midwest Generation, LLC (DMG) to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. DMG entered into a compliance commitment agreement (CCA) with IEPA on December 28, 2022. As specified in the CCA, groundwater monitoring for the BAP commenced in the second quarter of 2023. The proposed monitoring system provided in the operating permit application for the BAP was revised and expanded in 2023 to incorporate additional background and compliance wells as documented in the revised Groundwater Monitoring Plan, dated August 1, 2023, which was provided in the 2023 closure permit application for the BAP. Monitoring of the expanded monitoring system at the BAP commenced in the second quarter of 2023 in accordance with the revised Groundwater Monitoring Plan (Ramboll Americas Engineering Solutions, Inc. [Ramboll], 2023a). All available groundwater monitoring data collected in 2023 is summarized in **Table 1** (field parameters and analytical results) and **Attachment A** (groundwater elevation data). After the BAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

A construction permit application for the BAP was also submitted by DMG to IEPA on August 1, 2023 in accordance with the requirements specified in 35 I.A.C. § 845.220(a) and (d) and is pending approval.

In accordance with 35 I.A.C. § 845.610(b)(3)(C) and the statistical analysis plan submitted with the construction permit application (Appendix A of the Groundwater Monitoring Plan Revision 1 (Ramboll, 2023a), statistically derived values for constituent concentrations observed at compliance monitoring wells were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS (**Table 2**). The following GWPS exceedances were determined in 2023¹:

- Chloride in MW-370
- Fluoride in MW-393
- pH (field) in PZ-182

An Alternative Source Demonstration (ASD) was completed for the chloride and fluoride GWPS exceedances in Q2 listed above. The ASD was approved by IEPA on November 28, 2023 (**Attachment B**). An ASD will also be completed for the pH exceedance in Q3 and will be submitted to IEPA by February 8, 2024.

¹ GWPS exceedances determined after January 31, 2024 will be reported in the Quarter 4, 2023 Groundwater Monitoring Data and Detected Exceedances Report.

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

1. INTRODUCTION

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

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

- A. A map, aerial image, or diagram showing the CCR SI and all background (or upgradient) and [downgradient] compliance monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program for the CCR SI (**Figure 1**) and a visual delineation of any exceedances of the [groundwater protection standard] GWPS (**Figures 2 and 3**).
- B. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken (**Section 3**, paragraph 1).
- C. A potentiometric surface map for each groundwater elevation sampling event required by 35 I.A.C. § 845.650(b)(2) (**Figures 4 through 12**).
- D. In addition to all the monitoring data obtained under 35 I.A.C. §§ 845.600-680, a summary including the number of groundwater samples that were collected for analysis for each background and [downgradient] compliance well, and the dates the samples were collected (**Section 3.1** and **Table A**).
- E. A narrative discussion of any statistically significant increases (SSIs) over background levels for the constituents listed in 35 I.A.C. § 845.600 (**Section 3.3** and **Attachment C**).
- F. Other information required to be included in the annual report as specified in 35 I.A.C. §§ 845.600-680.

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

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

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

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

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

An operating permit application for the BAP was submitted by DMG to IEPA by October 31, 2021 in accordance with the requirements specified in 35 I.A.C. § 845.230(d) and is pending approval. DMG entered into a CCA with IEPA on December 28, 2022. As specified in the CCA, groundwater monitoring at the BAP commenced in the second quarter of 2023. The proposed monitoring network provided in the operating permit application for the BAP was revised and expanded in 2023 to incorporate additional background and compliance wells as documented in the revised GMP dated August 1, 2023 which was provided in the 2023 closure permit application for the BAP. Monitoring of the expanded well network commenced in the second quarter of 2023 in accordance with the revised GMP (Ramboll, 2023a). After the BAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit. As specified in the CCA, groundwater sampling requirements that apply to the CCR SI under other existing permit programs will become void upon issuance of an approved operating permit pursuant to 35 I.A.C § 845.

A construction permit application for the BAP was also submitted by DMG to IEPA in 2023 in accordance with the requirements specified in 35 I.A.C. § 845.220(a) and (d) and is pending approval.

As noted in the **Executive Summary** and **Section 3.2**, GWPS exceedances were determined for the BAP in 2023. An ASD was completed for the chloride and fluoride GWPS exceedances in Q2. The ASD was approved by IEPA on November 28, 2023. An ASD will also be completed for the pH exceedance in Q3 and will be submitted to IEPA by February 8, 2024.

3. KEY ACTIONS COMPLETED IN 2023

The proposed 35 I.A.C. § 845 monitoring system is presented in **Figure 1**. No wells were installed or decommissioned in 2023. The 2021 Groundwater Monitoring Plan was revised in 2023 (Ramboll, 2023a) to incorporate additional background and compliance wells that were installed in 2022. The groundwater monitoring system was expanded in 2023 to incorporate additional background and compliance wells as documented in the revised Groundwater Monitoring Plan, dated August 1, 2023 and provided with the 2023 closure permit application. Monitoring of the expanded monitoring system commenced in the second quarter of 2023. Updates to the monitoring system are summarized in **Table A** below.

Table A. Groundwater Monitoring System Updates

Well type	40 C.F.R. § 257 (2015-2021)	40 C.F.R. § 257/ 35 I.A.C. § 845 (2022)	40 C.F.R. § 257/ 35 I.A.C. § 845 (after July 2023)
Background	MW-304	MW-304	MW-304
Background	MW-306	MW-306	MW-306
Compliance	MW-356	MW-356	MW-356
Compliance	MW-369	MW-369	MW-369
Compliance	MW-370	MW-370	MW-370
Compliance	MW-382	MW-382	MW-382
WLO	TZP-164	TZP-164	TZP-164
Compliance		OW-256	OW-256
Compliance		OW-257	OW-257
Compliance		PZ-170	PZ-170
Compliance		PZ-182	PZ-182
Compliance			MW-192
Compliance			MW-193
Background			MW-358
Compliance			MW-392
Compliance			MW-393
Compliance			MW-394
WLO			XPW01
WLO			XWP05
WLO			XPW06

Notes:

WLO: water level only

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

Pressure transducers equipped with data loggers were deployed in monitoring system monitoring wells for measurement of monthly water level elevations as required by 35 I.A.C. § 845.650(b)(2). **Attachment A** summarizes the groundwater elevation data collected in 2023. Potentiometric surfaces for April through December 2023 are included in **Figures 4 through 12**.

A summary of the samples collected in 2023 is included in **Section 3.1**. Narrative discussions of exceedances of GWPSs and background are included in **Section 3.2** and **Section 3.3**, respectively. Statistical procedures used to evaluate groundwater results are provided in Appendix A of the Groundwater Monitoring Plan Revision 1 (Ramboll, 2023a).

3.1 Sample and Analysis Summary

One groundwater sample was collected from each background and compliance well during each quarterly monitoring event beginning in the second quarter of 2023². All samples were collected and analyzed in accordance with the Groundwater Monitoring Plan Revision 1 (Ramboll, 2023a). A summary of the samples collected from background and compliance monitoring wells in 2023 is included in **Table B** on the following page. **Table 1** is a summary of the field parameters and analytical results from the 2023 sampling events. Laboratory analytical reports and field data sheets are attached to the quarterly Groundwater Monitoring Data and Detected Exceedances Reports for Quarter 2 and Quarter 3 (Ramboll, 2023b; Ramboll, 2023c); therefore, these reports are not attached to this annual report to avoid reproduction of lengthy data transmittals that have been previously provided in hardcopy.

² OW-257 was dry in Quarter 3 and a sample was not collected.

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

Event ID	Sampling Dates ^{1, 2, 3}	Analytical Data Receipt Date	Exceedance Determination Date ⁴	ASD Completion Date	Required CMA Initiation Date
E001	May 15 - 23, 2023	June 29, 2023	August 28, 2023	October 26, 2023	NA
E001R ⁵	July 10, 2023	July 24, 2023	NA	NA	NA
E002 ⁶	August 3,4,7, and 15, 2023	October 11, 2023	December 10, 2023	TBD	TBD
E003	October 31 – November 3, 2023	December 15, 2023	TBD	TBD	TBD

Notes:

ASD: Alternative Source Demonstration

CMA: assessment of corrective measures

NA: not applicable

TBD: to be determined in 2024

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

² The following background wells were sampled for each event: MW-304, MW-306, MW-358

³ The following compliance wells were sampled for each event: MW-192, MW-193, MW-356, MW-369, MW-370, MW-382, MW-392, MW-393, MW-394, OW-256, OW-257, PZ-170, and PZ-182

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

⁵ OW-257 resample for the parameters listed in 35 I.A.C. § 845.600, calcium, and turbidity.

⁶ OW-257 was dry in Quarter 3 and a sample was not collected.

3.2 Exceedances of GWPS

In accordance with 35 I.A.C. § 845.610(b)(3)(C), the statistically derived values identified as Statistical Results in **Table 2** were compared with the GWPSs described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS. The following statistical exceedances of the GWPSs were determined in 2023 and are shown on **Figures 2 and 3**³:

- Chloride in MW-370
- Fluoride in MW-393
- pH (field) in PZ-182

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

An ASD was completed for the chloride and fluoride GWPS exceedances in Q2. The ASD was approved by IEPA on November 28, 2023 (**Attachment B**). An ASD will also be completed for the pH exceedance in Q3 and will be submitted to IEPA by February 8, 2024.

3.3 Exceedances of Background

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

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

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

Groundwater monitoring commenced in the second quarter of 2023. Groundwater samples were collected and analyzed in accordance with the Groundwater Monitoring Plan Revision 1 (Ramboll, 2023a) and all data were accepted. After the BAP has been issued an approved operating permit, groundwater monitoring shall be conducted in accordance with that operating permit.

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

5. KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

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

6. REFERENCES

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

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. *Groundwater Monitoring Plan Revision 1*. Baldwin Power Plant, Bottom Ash Pond, Baldwin, Illinois. Dynegy Midwest Generation, LLC. August 1, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023b. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 2, Bottom Ash Pond, Baldwin Power Plant, Baldwin, Illinois. August 28, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023c. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances, 2023 Quarter 3, Bottom Ash Pond, Baldwin Power Plant, Baldwin, Illinois. December 10, 2023.

TABLES

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

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-304	Background	E001	05/22/2023	Antimony, total	0.0006 J	mg/L
MW-304	Background	E001	05/22/2023	Arsenic, total	0.0087 U	mg/L
MW-304	Background	E001	05/22/2023	Barium, total	0.0199	mg/L
MW-304	Background	E001	05/22/2023	Beryllium, total	0.0002 U	mg/L
MW-304	Background	E001	05/22/2023	Boron, total	1.68 J+	mg/L
MW-304	Background	E001	05/22/2023	Cadmium, total	0.0005 U	mg/L
MW-304	Background	E001	05/22/2023	Calcium, total	9.63	mg/L
MW-304	Background	E001	05/22/2023	Chloride, total	162	mg/L
MW-304	Background	E001	05/22/2023	Chromium, total	0.0028 U	mg/L
MW-304	Background	E001	05/22/2023	Cobalt, total	0.0001 U	mg/L
MW-304	Background	E001	05/22/2023	Dissolved Oxygen	0.810	mg/L
MW-304	Background	E001	05/22/2023	Fluoride, total	1.72	mg/L
MW-304	Background	E001	05/22/2023	Lead, total	0.004 U	mg/L
MW-304	Background	E001	05/22/2023	Lithium, total	0.0603	mg/L
MW-304	Background	E001	05/22/2023	Mercury, total	0.0001 J	mg/L
MW-304	Background	E001	05/22/2023	Molybdenum, total	0.0037 U	mg/L
MW-304	Background	E001	05/22/2023	Oxidation Reduction Potential	116	mV
MW-304	Background	E001	05/22/2023	pH (field)	7.5	SU
MW-304	Background	E001	05/22/2023	Radium 226 + Radium 228, total	0.381 <0	pCi/L
MW-304	Background	E001	05/22/2023	Selenium, total	0.0006 U	mg/L
MW-304	Background	E001	05/22/2023	Specific Conductance @ 25C (field)	1,690	micromhos/cm
MW-304	Background	E001	05/22/2023	Sulfate, total	208	mg/L
MW-304	Background	E001	05/22/2023	Temperature	15.2	degrees C
MW-304	Background	E001	05/22/2023	Thallium, total	0.001 U	mg/L
MW-304	Background	E001	05/22/2023	Total Dissolved Solids	1,420	mg/L
MW-304	Background	E001	05/22/2023	Turbidity, field	1 U	NTU
MW-306	Background	E001	05/23/2023	Antimony, total	0.00140	mg/L
MW-306	Background	E001	05/23/2023	Arsenic, total	0.0087 U	mg/L
MW-306	Background	E001	05/23/2023	Barium, total	0.0139	mg/L
MW-306	Background	E001	05/23/2023	Beryllium, total	0.0002 U	mg/L
MW-306	Background	E001	05/23/2023	Boron, total	0.190 J+	mg/L
MW-306	Background	E001	05/23/2023	Cadmium, total	0.0005 U	mg/L
MW-306	Background	E001	05/23/2023	Calcium, total	34.6	mg/L
MW-306	Background	E001	05/23/2023	Chloride, total	53.0	mg/L
MW-306	Background	E001	05/23/2023	Chromium, total	0.0028 U	mg/L
MW-306	Background	E001	05/23/2023	Cobalt, total	0.0004 J	mg/L
MW-306	Background	E001	05/23/2023	Dissolved Oxygen	2.30	mg/L
MW-306	Background	E001	05/23/2023	Fluoride, total	0.540	mg/L
MW-306	Background	E001	05/23/2023	Lead, total	0.004 U	mg/L
MW-306	Background	E001	05/23/2023	Lithium, total	0.0118	mg/L
MW-306	Background	E001	05/23/2023	Mercury, total	0.00006 U	mg/L
MW-306	Background	E001	05/23/2023	Molybdenum, total	0.0233	mg/L
MW-306	Background	E001	05/23/2023	Oxidation Reduction Potential	-30.0	mV
MW-306	Background	E001	05/23/2023	pH (field)	11.1	SU
MW-306	Background	E001	05/23/2023	Radium 226 + Radium 228, total	0.133	pCi/L
MW-306	Background	E001	05/23/2023	Selenium, total	0.0007 J	mg/L

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

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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-306	Background	E001	05/23/2023	Specific Conductance @ 25C (field)	490	micromhos/cm
MW-306	Background	E001	05/23/2023	Sulfate, total	46.0 J+	mg/L
MW-306	Background	E001	05/23/2023	Temperature	15.4	degrees C
MW-306	Background	E001	05/23/2023	Thallium, total	0.001 U	mg/L
MW-306	Background	E001	05/23/2023	Total Dissolved Solids	300	mg/L
MW-306	Background	E001	05/23/2023	Turbidity, field	1 U	NTU
MW-358	Background	E001	05/19/2023	Antimony, total	0.0004 U	mg/L
MW-358	Background	E001	05/19/2023	Arsenic, total	0.0087 U	mg/L
MW-358	Background	E001	05/19/2023	Barium, total	0.192	mg/L
MW-358	Background	E001	05/19/2023	Beryllium, total	0.0002 U	mg/L
MW-358	Background	E001	05/19/2023	Boron, total	1.60 J+	mg/L
MW-358	Background	E001	05/19/2023	Cadmium, total	0.0005 U	mg/L
MW-358	Background	E001	05/19/2023	Calcium, total	12.5	mg/L
MW-358	Background	E001	05/19/2023	Chloride, total	1,300	mg/L
MW-358	Background	E001	05/19/2023	Chromium, total	0.0028 U	mg/L
MW-358	Background	E001	05/19/2023	Cobalt, total	0.0003 J	mg/L
MW-358	Background	E001	05/19/2023	Dissolved Oxygen	1.20	mg/L
MW-358	Background	E001	05/19/2023	Fluoride, total	3.31	mg/L
MW-358	Background	E001	05/19/2023	Lead, total	0.004 U	mg/L
MW-358	Background	E001	05/19/2023	Lithium, total	0.0778 J+	mg/L
MW-358	Background	E001	05/19/2023	Mercury, total	0.00009 U	mg/L
MW-358	Background	E001	05/19/2023	Molybdenum, total	0.0139	mg/L
MW-358	Background	E001	05/19/2023	Oxidation Reduction Potential	-91.0	mV
MW-358	Background	E001	05/19/2023	pH (field)	7.6	SU
MW-358	Background	E001	05/19/2023	Radium 226 + Radium 228, total	0.816 J+	pCi/L
MW-358	Background	E001	05/19/2023	Selenium, total	0.0006 U	mg/L
MW-358	Background	E001	05/19/2023	Specific Conductance @ 25C (field)	5,640	micromhos/cm
MW-358	Background	E001	05/19/2023	Sulfate, total	10 U	mg/L
MW-358	Background	E001	05/19/2023	Temperature	18.2	degrees C
MW-358	Background	E001	05/19/2023	Thallium, total	0.001 U	mg/L
MW-358	Background	E001	05/19/2023	Total Dissolved Solids	3,040	mg/L
MW-358	Background	E001	05/19/2023	Turbidity, field	2.80	NTU
MW-192	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-192	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L
MW-192	Compliance	E001	05/16/2023	Barium, total	0.120	mg/L
MW-192	Compliance	E001	05/16/2023	Beryllium, total	0.0002 U	mg/L
MW-192	Compliance	E001	05/16/2023	Boron, total	0.0227 J+	mg/L
MW-192	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-192	Compliance	E001	05/16/2023	Calcium, total	69.7	mg/L
MW-192	Compliance	E001	05/16/2023	Chloride, total	26.0	mg/L
MW-192	Compliance	E001	05/16/2023	Chromium, total	0.0028 U	mg/L
MW-192	Compliance	E001	05/16/2023	Cobalt, total	0.00230	mg/L
MW-192	Compliance	E001	05/16/2023	Dissolved Oxygen	1.09	mg/L
MW-192	Compliance	E001	05/16/2023	Fluoride, total	0.420	mg/L
MW-192	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-192	Compliance	E001	05/16/2023	Lithium, total	0.005 U	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-192	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-192	Compliance	E001	05/16/2023	Molybdenum, total	0.0037 U	mg/L
MW-192	Compliance	E001	05/16/2023	Oxidation Reduction Potential	-72.0	mV
MW-192	Compliance	E001	05/16/2023	pH (field)	6.5	SU
MW-192	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	0.732 J+	pCi/L
MW-192	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-192	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	809	micromhos/cm
MW-192	Compliance	E001	05/16/2023	Sulfate, total	25.0 J+	mg/L
MW-192	Compliance	E001	05/16/2023	Temperature	16.1	degrees C
MW-192	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-192	Compliance	E001	05/16/2023	Total Dissolved Solids	450	mg/L
MW-192	Compliance	E001	05/16/2023	Turbidity, field	9.20	NTU
MW-193	Compliance	E001	05/15/2023	Antimony, total	0.0004 U	mg/L
MW-193	Compliance	E001	05/15/2023	Arsenic, total	0.0087 U	mg/L
MW-193	Compliance	E001	05/15/2023	Barium, total	0.0832	mg/L
MW-193	Compliance	E001	05/15/2023	Beryllium, total	0.0002 U	mg/L
MW-193	Compliance	E001	05/15/2023	Boron, total	0.0395 J+	mg/L
MW-193	Compliance	E001	05/15/2023	Cadmium, total	0.0005 U	mg/L
MW-193	Compliance	E001	05/15/2023	Calcium, total	92.3	mg/L
MW-193	Compliance	E001	05/15/2023	Chloride, total	37.0	mg/L
MW-193	Compliance	E001	05/15/2023	Chromium, total	0.0028 U	mg/L
MW-193	Compliance	E001	05/15/2023	Cobalt, total	0.0005 J	mg/L
MW-193	Compliance	E001	05/15/2023	Dissolved Oxygen	1.61	mg/L
MW-193	Compliance	E001	05/15/2023	Fluoride, total	0.240	mg/L
MW-193	Compliance	E001	05/15/2023	Lead, total	0.004 U	mg/L
MW-193	Compliance	E001	05/15/2023	Lithium, total	0.0019 U	mg/L
MW-193	Compliance	E001	05/15/2023	Mercury, total	0.00006 U	mg/L
MW-193	Compliance	E001	05/15/2023	Molybdenum, total	0.0037 U	mg/L
MW-193	Compliance	E001	05/15/2023	Oxidation Reduction Potential	-28.0	mV
MW-193	Compliance	E001	05/15/2023	pH (field)	6.8	SU
MW-193	Compliance	E001	05/15/2023	Radium 226 + Radium 228, total	1.06 J+	pCi/L
MW-193	Compliance	E001	05/15/2023	Selenium, total	0.0006 U	mg/L
MW-193	Compliance	E001	05/15/2023	Specific Conductance @ 25C (field)	974	micromhos/cm
MW-193	Compliance	E001	05/15/2023	Sulfate, total	153	mg/L
MW-193	Compliance	E001	05/15/2023	Temperature	17.2	degrees C
MW-193	Compliance	E001	05/15/2023	Thallium, total	0.001 U	mg/L
MW-193	Compliance	E001	05/15/2023	Total Dissolved Solids	582	mg/L
MW-193	Compliance	E001	05/15/2023	Turbidity, field	2.00	NTU
MW-356	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-356	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L
MW-356	Compliance	E001	05/16/2023	Barium, total	0.0326	mg/L
MW-356	Compliance	E001	05/16/2023	Beryllium, total	0.0002 U	mg/L
MW-356	Compliance	E001	05/16/2023	Boron, total	2.01 J+	mg/L
MW-356	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-356	Compliance	E001	05/16/2023	Calcium, total	11.5	mg/L
MW-356	Compliance	E001	05/16/2023	Chloride, total	31.0	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-356	Compliance	E001	05/16/2023	Chromium, total	0.0028 U	mg/L
MW-356	Compliance	E001	05/16/2023	Cobalt, total	0.0003 U	mg/L
MW-356	Compliance	E001	05/16/2023	Dissolved Oxygen	1.60	mg/L
MW-356	Compliance	E001	05/16/2023	Fluoride, total	1.97	mg/L
MW-356	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-356	Compliance	E001	05/16/2023	Lithium, total	0.0548	mg/L
MW-356	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-356	Compliance	E001	05/16/2023	Molybdenum, total	0.0037 U	mg/L
MW-356	Compliance	E001	05/16/2023	Oxidation Reduction Potential	5.00	mV
MW-356	Compliance	E001	05/16/2023	pH (field)	7.7	SU
MW-356	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	0.0477	pCi/L
MW-356	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-356	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	1,170	micromhos/cm
MW-356	Compliance	E001	05/16/2023	Sulfate, total	44.0 J+	mg/L
MW-356	Compliance	E001	05/16/2023	Temperature	15.3	degrees C
MW-356	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-356	Compliance	E001	05/16/2023	Total Dissolved Solids	688	mg/L
MW-356	Compliance	E001	05/16/2023	Turbidity, field	9.60	NTU
MW-369	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-369	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L
MW-369	Compliance	E001	05/16/2023	Barium, total	0.132	mg/L
MW-369	Compliance	E001	05/16/2023	Beryllium, total	0.0002 U	mg/L
MW-369	Compliance	E001	05/16/2023	Boron, total	0.232 J+	mg/L
MW-369	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-369	Compliance	E001	05/16/2023	Calcium, total	124	mg/L
MW-369	Compliance	E001	05/16/2023	Chloride, total	66.0	mg/L
MW-369	Compliance	E001	05/16/2023	Chromium, total	0.0028 U	mg/L
MW-369	Compliance	E001	05/16/2023	Cobalt, total	0.00210	mg/L
MW-369	Compliance	E001	05/16/2023	Dissolved Oxygen	1.61	mg/L
MW-369	Compliance	E001	05/16/2023	Fluoride, total	0.540	mg/L
MW-369	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-369	Compliance	E001	05/16/2023	Lithium, total	0.0024 J	mg/L
MW-369	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-369	Compliance	E001	05/16/2023	Molybdenum, total	0.0054 J	mg/L
MW-369	Compliance	E001	05/16/2023	Oxidation Reduction Potential	-21.0	mV
MW-369	Compliance	E001	05/16/2023	pH (field)	7.0	SU
MW-369	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	0.871 J+	pCi/L
MW-369	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-369	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	1,210	micromhos/cm
MW-369	Compliance	E001	05/16/2023	Sulfate, total	111	mg/L
MW-369	Compliance	E001	05/16/2023	Temperature	15.2	degrees C
MW-369	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-369	Compliance	E001	05/16/2023	Total Dissolved Solids	720	mg/L
MW-369	Compliance	E001	05/16/2023	Turbidity, field	3.30	NTU
MW-370	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-370	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L

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FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

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 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-370	Compliance	E001	05/16/2023	Barium, total	0.0321	mg/L
MW-370	Compliance	E001	05/16/2023	Beryllium, total	0.0002 U	mg/L
MW-370	Compliance	E001	05/16/2023	Boron, total	1.85 J+	mg/L
MW-370	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-370	Compliance	E001	05/16/2023	Calcium, total	37.0	mg/L
MW-370	Compliance	E001	05/16/2023	Chloride, total	1,360	mg/L
MW-370	Compliance	E001	05/16/2023	Chromium, total	0.0028 U	mg/L
MW-370	Compliance	E001	05/16/2023	Cobalt, total	0.0004 J	mg/L
MW-370	Compliance	E001	05/16/2023	Dissolved Oxygen	0.810	mg/L
MW-370	Compliance	E001	05/16/2023	Fluoride, total	3.07	mg/L
MW-370	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-370	Compliance	E001	05/16/2023	Lithium, total	0.120	mg/L
MW-370	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-370	Compliance	E001	05/16/2023	Molybdenum, total	0.0062 J	mg/L
MW-370	Compliance	E001	05/16/2023	Oxidation Reduction Potential	36.0	mV
MW-370	Compliance	E001	05/16/2023	pH (field)	7.5	SU
MW-370	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	1.25 J+	pCi/L
MW-370	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-370	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	5,460	micromhos/cm
MW-370	Compliance	E001	05/16/2023	Sulfate, total	253	mg/L
MW-370	Compliance	E001	05/16/2023	Temperature	15.7	degrees C
MW-370	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-370	Compliance	E001	05/16/2023	Total Dissolved Solids	2,940	mg/L
MW-370	Compliance	E001	05/16/2023	Turbidity, field	1.50	NTU
MW-382	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-382	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L
MW-382	Compliance	E001	05/16/2023	Barium, total	0.0268	mg/L
MW-382	Compliance	E001	05/16/2023	Beryllium, total	0.000500	mg/L
MW-382	Compliance	E001	05/16/2023	Boron, total	1.75 J+	mg/L
MW-382	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-382	Compliance	E001	05/16/2023	Calcium, total	27.0	mg/L
MW-382	Compliance	E001	05/16/2023	Chloride, total	42.0	mg/L
MW-382	Compliance	E001	05/16/2023	Chromium, total	0.00930	mg/L
MW-382	Compliance	E001	05/16/2023	Cobalt, total	0.00450	mg/L
MW-382	Compliance	E001	05/16/2023	Dissolved Oxygen	1.12	mg/L
MW-382	Compliance	E001	05/16/2023	Fluoride, total	2.75	mg/L
MW-382	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-382	Compliance	E001	05/16/2023	Lithium, total	0.0573	mg/L
MW-382	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-382	Compliance	E001	05/16/2023	Molybdenum, total	0.0037 U	mg/L
MW-382	Compliance	E001	05/16/2023	Oxidation Reduction Potential	49.0	mV
MW-382	Compliance	E001	05/16/2023	pH (field)	7.7	SU
MW-382	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	0.832 J+	pCi/L
MW-382	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-382	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	1,840	micromhos/cm
MW-382	Compliance	E001	05/16/2023	Sulfate, total	391	mg/L

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

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-382	Compliance	E001	05/16/2023	Temperature	15.4	degrees C
MW-382	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-382	Compliance	E001	05/16/2023	Total Dissolved Solids	1,170	mg/L
MW-382	Compliance	E001	05/16/2023	Turbidity, field	44.0	NTU
MW-392	Compliance	E001	05/16/2023	Antimony, total	0.0004 U	mg/L
MW-392	Compliance	E001	05/16/2023	Arsenic, total	0.0087 U	mg/L
MW-392	Compliance	E001	05/16/2023	Barium, total	0.0414	mg/L
MW-392	Compliance	E001	05/16/2023	Beryllium, total	0.0002 U	mg/L
MW-392	Compliance	E001	05/16/2023	Boron, total	1.92 J+	mg/L
MW-392	Compliance	E001	05/16/2023	Cadmium, total	0.0005 U	mg/L
MW-392	Compliance	E001	05/16/2023	Calcium, total	25.6	mg/L
MW-392	Compliance	E001	05/16/2023	Chloride, total	827	mg/L
MW-392	Compliance	E001	05/16/2023	Chromium, total	0.0028 U	mg/L
MW-392	Compliance	E001	05/16/2023	Cobalt, total	0.0003 J	mg/L
MW-392	Compliance	E001	05/16/2023	Dissolved Oxygen	1.67	mg/L
MW-392	Compliance	E001	05/16/2023	Fluoride, total	4.07	mg/L
MW-392	Compliance	E001	05/16/2023	Lead, total	0.004 U	mg/L
MW-392	Compliance	E001	05/16/2023	Lithium, total	0.0675	mg/L
MW-392	Compliance	E001	05/16/2023	Mercury, total	0.00006 U	mg/L
MW-392	Compliance	E001	05/16/2023	Molybdenum, total	0.0037 U	mg/L
MW-392	Compliance	E001	05/16/2023	Oxidation Reduction Potential	-121	mV
MW-392	Compliance	E001	05/16/2023	pH (field)	7.5	SU
MW-392	Compliance	E001	05/16/2023	Radium 226 + Radium 228, total	0.836 J+	pCi/L
MW-392	Compliance	E001	05/16/2023	Selenium, total	0.0006 U	mg/L
MW-392	Compliance	E001	05/16/2023	Specific Conductance @ 25C (field)	3,560	micromhos/cm
MW-392	Compliance	E001	05/16/2023	Sulfate, total	63.0 J+	mg/L
MW-392	Compliance	E001	05/16/2023	Temperature	16.5	degrees C
MW-392	Compliance	E001	05/16/2023	Thallium, total	0.001 U	mg/L
MW-392	Compliance	E001	05/16/2023	Total Dissolved Solids	1,830	mg/L
MW-392	Compliance	E001	05/16/2023	Turbidity, field	6.00	NTU
MW-393	Compliance	E001	05/15/2023	Antimony, total	0.0005 J	mg/L
MW-393	Compliance	E001	05/15/2023	Arsenic, total	0.0087 U	mg/L
MW-393	Compliance	E001	05/15/2023	Barium, total	0.0261	mg/L
MW-393	Compliance	E001	05/15/2023	Beryllium, total	0.0002 U	mg/L
MW-393	Compliance	E001	05/15/2023	Boron, total	1.72 J+	mg/L
MW-393	Compliance	E001	05/15/2023	Cadmium, total	0.0005 U	mg/L
MW-393	Compliance	E001	05/15/2023	Calcium, total	8.41	mg/L
MW-393	Compliance	E001	05/15/2023	Chloride, total	745	mg/L
MW-393	Compliance	E001	05/15/2023	Chromium, total	0.0028 U	mg/L
MW-393	Compliance	E001	05/15/2023	Cobalt, total	0.0001 U	mg/L
MW-393	Compliance	E001	05/15/2023	Dissolved Oxygen	1.12	mg/L
MW-393	Compliance	E001	05/15/2023	Fluoride, total	8.42	mg/L
MW-393	Compliance	E001	05/15/2023	Lead, total	0.004 U	mg/L
MW-393	Compliance	E001	05/15/2023	Lithium, total	0.0442 J+	mg/L
MW-393	Compliance	E001	05/15/2023	Mercury, total	0.00014 J	mg/L
MW-393	Compliance	E001	05/15/2023	Molybdenum, total	0.0037 U	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-393	Compliance	E001	05/15/2023	Oxidation Reduction Potential	-300 U	mV
MW-393	Compliance	E001	05/15/2023	pH (field)	8.3	SU
MW-393	Compliance	E001	05/15/2023	Radium 226 + Radium 228, total	0.192	pCi/L
MW-393	Compliance	E001	05/15/2023	Selenium, total	0.0006 U	mg/L
MW-393	Compliance	E001	05/15/2023	Specific Conductance @ 25C (field)	4,210	micromhos/cm
MW-393	Compliance	E001	05/15/2023	Sulfate, total	123	mg/L
MW-393	Compliance	E001	05/15/2023	Temperature	17.7	degrees C
MW-393	Compliance	E001	05/15/2023	Thallium, total	0.001 U	mg/L
MW-393	Compliance	E001	05/15/2023	Total Dissolved Solids	2,290	mg/L
MW-393	Compliance	E001	05/15/2023	Turbidity, field	1 U	NTU
MW-394	Compliance	E001	05/15/2023	Antimony, total	0.0005 J	mg/L
MW-394	Compliance	E001	05/15/2023	Arsenic, total	0.0087 U	mg/L
MW-394	Compliance	E001	05/15/2023	Barium, total	0.0315	mg/L
MW-394	Compliance	E001	05/15/2023	Beryllium, total	0.0002 U	mg/L
MW-394	Compliance	E001	05/15/2023	Boron, total	1.72 J+	mg/L
MW-394	Compliance	E001	05/15/2023	Cadmium, total	0.0005 U	mg/L
MW-394	Compliance	E001	05/15/2023	Calcium, total	20.8	mg/L
MW-394	Compliance	E001	05/15/2023	Chloride, total	614	mg/L
MW-394	Compliance	E001	05/15/2023	Chromium, total	0.0028 U	mg/L
MW-394	Compliance	E001	05/15/2023	Cobalt, total	0.0002 J	mg/L
MW-394	Compliance	E001	05/15/2023	Dissolved Oxygen	1.60	mg/L
MW-394	Compliance	E001	05/15/2023	Fluoride, total	4.13	mg/L
MW-394	Compliance	E001	05/15/2023	Lead, total	0.004 U	mg/L
MW-394	Compliance	E001	05/15/2023	Lithium, total	0.0373 J+	mg/L
MW-394	Compliance	E001	05/15/2023	Mercury, total	0.00006 U	mg/L
MW-394	Compliance	E001	05/15/2023	Molybdenum, total	0.0037 U	mg/L
MW-394	Compliance	E001	05/15/2023	Oxidation Reduction Potential	-286	mV
MW-394	Compliance	E001	05/15/2023	pH (field)	8.1	SU
MW-394	Compliance	E001	05/15/2023	Radium 226 + Radium 228, total	0.353 <0	pCi/L
MW-394	Compliance	E001	05/15/2023	Selenium, total	0.0006 U	mg/L
MW-394	Compliance	E001	05/15/2023	Specific Conductance @ 25C (field)	4,090	micromhos/cm
MW-394	Compliance	E001	05/15/2023	Sulfate, total	215	mg/L
MW-394	Compliance	E001	05/15/2023	Temperature	17.7	degrees C
MW-394	Compliance	E001	05/15/2023	Thallium, total	0.001 U	mg/L
MW-394	Compliance	E001	05/15/2023	Total Dissolved Solids	1,970	mg/L
MW-394	Compliance	E001	05/15/2023	Turbidity, field	1 U	NTU
OW-256	Compliance	E001	05/17/2023	Antimony, total	0.0004 U	mg/L
OW-256	Compliance	E001	05/17/2023	Arsenic, total	0.0087 U	mg/L
OW-256	Compliance	E001	05/17/2023	Barium, total	0.102	mg/L
OW-256	Compliance	E001	05/17/2023	Beryllium, total	0.0002 U	mg/L
OW-256	Compliance	E001	05/17/2023	Boron, total	0.187 J+	mg/L
OW-256	Compliance	E001	05/17/2023	Cadmium, total	0.0005 U	mg/L
OW-256	Compliance	E001	05/17/2023	Calcium, total	86.9	mg/L
OW-256	Compliance	E001	05/17/2023	Chloride, total	54.0	mg/L
OW-256	Compliance	E001	05/17/2023	Chromium, total	0.0028 U	mg/L
OW-256	Compliance	E001	05/17/2023	Cobalt, total	0.00150	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
OW-256	Compliance	E001	05/17/2023	Dissolved Oxygen	0.770	mg/L
OW-256	Compliance	E001	05/17/2023	Fluoride, total	0.250	mg/L
OW-256	Compliance	E001	05/17/2023	Lead, total	0.004 U	mg/L
OW-256	Compliance	E001	05/17/2023	Lithium, total	0.005 U	mg/L
OW-256	Compliance	E001	05/17/2023	Mercury, total	0.00006 U	mg/L
OW-256	Compliance	E001	05/17/2023	Molybdenum, total	0.0037 U	mg/L
OW-256	Compliance	E001	05/17/2023	Oxidation Reduction Potential	0	mV
OW-256	Compliance	E001	05/17/2023	pH (field)	6.7	SU
OW-256	Compliance	E001	05/17/2023	Radium 226 + Radium 228, total	0.717 J+	pCi/L
OW-256	Compliance	E001	05/17/2023	Selenium, total	0.0006 U	mg/L
OW-256	Compliance	E001	05/17/2023	Specific Conductance @ 25C (field)	901	micromhos/cm
OW-256	Compliance	E001	05/17/2023	Sulfate, total	64.0 J+	mg/L
OW-256	Compliance	E001	05/17/2023	Temperature	15.5	degrees C
OW-256	Compliance	E001	05/17/2023	Thallium, total	0.001 U	mg/L
OW-256	Compliance	E001	05/17/2023	Total Dissolved Solids	514	mg/L
OW-256	Compliance	E001	05/17/2023	Turbidity, field	5.40	NTU
OW-257	Compliance	E001	05/17/2023	Antimony, total	0.0022 U	mg/L
OW-257	Compliance	E001R	07/10/2023	Antimony, total	0.0009 J	mg/L
OW-257	Compliance	E001	05/17/2023	Arsenic, total	0.103	mg/L
OW-257	Compliance	E001R	07/10/2023	Arsenic, total	0.0087 U	mg/L
OW-257	Compliance	E001	05/17/2023	Barium, total	0.975	mg/L
OW-257	Compliance	E001R	07/10/2023	Barium, total	0.126	mg/L
OW-257	Compliance	E001	05/17/2023	Beryllium, total	0.00970	mg/L
OW-257	Compliance	E001R	07/10/2023	Beryllium, total	0.0002 U	mg/L
OW-257	Compliance	E001	05/17/2023	Boron, total	0.490 J+	mg/L
OW-257	Compliance	E001R	07/10/2023	Boron, total	0.463	mg/L
OW-257	Compliance	E001	05/17/2023	Cadmium, total	0.00450	mg/L
OW-257	Compliance	E001R	07/10/2023	Cadmium, total	0.0005 U	mg/L
OW-257	Compliance	E001	05/17/2023	Calcium, total	366	mg/L
OW-257	Compliance	E001R	07/10/2023	Calcium, total	136	mg/L
OW-257	Compliance	E001	05/17/2023	Chloride, total	7.00	mg/L
OW-257	Compliance	E001R	07/10/2023	Chloride, total	8.00	mg/L
OW-257	Compliance	E001	05/17/2023	Chromium, total	0.214	mg/L
OW-257	Compliance	E001R	07/10/2023	Chromium, total	0.0041 J	mg/L
OW-257	Compliance	E001	05/17/2023	Cobalt, total	0.203	mg/L
OW-257	Compliance	E001R	07/10/2023	Cobalt, total	0.00320	mg/L
OW-257	Compliance	E001	05/17/2023	Dissolved Oxygen	0.900	mg/L
OW-257	Compliance	E001R	07/10/2023	Dissolved Oxygen	6.60	mg/L
OW-257	Compliance	E001	05/17/2023	Fluoride, total	0.370	mg/L
OW-257	Compliance	E001R	07/10/2023	Fluoride, total	0.440	mg/L
OW-257	Compliance	E001	05/17/2023	Lead, total	0.214	mg/L
OW-257	Compliance	E001R	07/10/2023	Lead, total	0.004 U	mg/L
OW-257	Compliance	E001	05/17/2023	Lithium, total	0.207 J+	mg/L
OW-257	Compliance	E001R	07/10/2023	Lithium, total	0.0333	mg/L
OW-257	Compliance	E001	05/17/2023	Mercury, total	0.00014 J	mg/L
OW-257	Compliance	E001R	07/10/2023	Mercury, total	0.00006 U	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
OW-257	Compliance	E001	05/17/2023	Molybdenum, total	0.0065 J	mg/L
OW-257	Compliance	E001R	07/10/2023	Molybdenum, total	0.0043 J	mg/L
OW-257	Compliance	E001	05/17/2023	Oxidation Reduction Potential	-66.0	mV
OW-257	Compliance	E001R	07/10/2023	Oxidation Reduction Potential	130	mV
OW-257	Compliance	E001	05/17/2023	pH (field)	6.8	SU
OW-257	Compliance	E001R	07/10/2023	pH (field)	6.8	SU
OW-257	Compliance	E001	05/17/2023	Radium 226 + Radium 228, total	25.3	pCi/L
OW-257	Compliance	E001R	07/10/2023	Radium 226 + Radium 228, total	1.33 J+	pCi/L
OW-257	Compliance	E001	05/17/2023	Selenium, total	0.0006 U	mg/L
OW-257	Compliance	E001R	07/10/2023	Selenium, total	0.0006 U	mg/L
OW-257	Compliance	E001	05/17/2023	Specific Conductance @ 25C (field)	1,210	micromhos/cm
OW-257	Compliance	E001R	07/10/2023	Specific Conductance @ 25C (field)	1,110	micromhos/cm
OW-257	Compliance	E001	05/17/2023	Sulfate, total	118	mg/L
OW-257	Compliance	E001R	07/10/2023	Sulfate, total	115	mg/L
OW-257	Compliance	E001	05/17/2023	Temperature	14.7	degrees C
OW-257	Compliance	E001R	07/10/2023	Temperature	15.9	degrees C
OW-257	Compliance	E001	05/17/2023	Thallium, total	0.0048 U	mg/L
OW-257	Compliance	E001R	07/10/2023	Thallium, total	0.001 U	mg/L
OW-257	Compliance	E001	05/17/2023	Total Dissolved Solids	1,270	mg/L
OW-257	Compliance	E001R	07/10/2023	Total Dissolved Solids	710	mg/L
OW-257	Compliance	E001	05/17/2023	Turbidity, field	110	NTU
OW-257	Compliance	E001R	07/10/2023	Turbidity, field	21.0	NTU
PZ-170	Compliance	E001	05/17/2023	Antimony, total	0.0007 J	mg/L
PZ-170	Compliance	E001	05/17/2023	Arsenic, total	0.0087 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Barium, total	0.0975	mg/L
PZ-170	Compliance	E001	05/17/2023	Beryllium, total	0.0002 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Boron, total	0.267 J+	mg/L
PZ-170	Compliance	E001	05/17/2023	Cadmium, total	0.0005 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Calcium, total	200	mg/L
PZ-170	Compliance	E001	05/17/2023	Chloride, total	35.0	mg/L
PZ-170	Compliance	E001	05/17/2023	Chromium, total	0.0028 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Cobalt, total	0.00460	mg/L
PZ-170	Compliance	E001	05/17/2023	Dissolved Oxygen	0.930	mg/L
PZ-170	Compliance	E001	05/17/2023	Fluoride, total	0.180	mg/L
PZ-170	Compliance	E001	05/17/2023	Lead, total	0.004 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Lithium, total	0.0291	mg/L
PZ-170	Compliance	E001	05/17/2023	Mercury, total	0.00006 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Molybdenum, total	0.0037 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Oxidation Reduction Potential	-67.0	mV
PZ-170	Compliance	E001	05/17/2023	pH (field)	6.5	SU
PZ-170	Compliance	E001	05/17/2023	Radium 226 + Radium 228, total	0.181	pCi/L
PZ-170	Compliance	E001	05/17/2023	Selenium, total	0.0006 U	mg/L
PZ-170	Compliance	E001	05/17/2023	Specific Conductance @ 25C (field)	1,750	micromhos/cm
PZ-170	Compliance	E001	05/17/2023	Sulfate, total	170	mg/L
PZ-170	Compliance	E001	05/17/2023	Temperature	15.9	degrees C
PZ-170	Compliance	E001	05/17/2023	Thallium, total	0.001 U	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
PZ-170	Compliance	E001	05/17/2023	Total Dissolved Solids	730	mg/L
PZ-170	Compliance	E001	05/17/2023	Turbidity, field	3.70	NTU
PZ-182	Compliance	E001	05/17/2023	Antimony, total	0.0004 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Arsenic, total	0.0087 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Barium, total	0.0692	mg/L
PZ-182	Compliance	E001	05/17/2023	Beryllium, total	0.0002 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Boron, total	0.484 J+	mg/L
PZ-182	Compliance	E001	05/17/2023	Cadmium, total	0.0005 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Calcium, total	143	mg/L
PZ-182	Compliance	E001	05/17/2023	Chloride, total	88.0	mg/L
PZ-182	Compliance	E001	05/17/2023	Chromium, total	0.0028 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Cobalt, total	0.0008 J	mg/L
PZ-182	Compliance	E001	05/17/2023	Dissolved Oxygen	0.730	mg/L
PZ-182	Compliance	E001	05/17/2023	Fluoride, total	0.190	mg/L
PZ-182	Compliance	E001	05/17/2023	Lead, total	0.004 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Lithium, total	0.00690 J+	mg/L
PZ-182	Compliance	E001	05/17/2023	Mercury, total	0.00006 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Molybdenum, total	0.0037 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Oxidation Reduction Potential	-67.0	mV
PZ-182	Compliance	E001	05/17/2023	pH (field)	6.6	SU
PZ-182	Compliance	E001	05/17/2023	Radium 226 + Radium 228, total	0.925 J+	pCi/L
PZ-182	Compliance	E001	05/17/2023	Selenium, total	0.0006 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Specific Conductance @ 25C (field)	1,160	micromhos/cm
PZ-182	Compliance	E001	05/17/2023	Sulfate, total	254	mg/L
PZ-182	Compliance	E001	05/17/2023	Temperature	15.4	degrees C
PZ-182	Compliance	E001	05/17/2023	Thallium, total	0.001 U	mg/L
PZ-182	Compliance	E001	05/17/2023	Total Dissolved Solids	1,120	mg/L
PZ-182	Compliance	E001	05/17/2023	Turbidity, field	36.0	NTU

Notes:

C = Celsius

cm = centimeter

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

R = resample

SU = Standard Units

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

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

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

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-304	Background	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-304	Background	E002	08/03/2023	Arsenic, total	0.00220	mg/L
MW-304	Background	E002	08/03/2023	Barium, total	0.0201	mg/L
MW-304	Background	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-304	Background	E002	08/03/2023	Boron, total	1.61	mg/L
MW-304	Background	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-304	Background	E002	08/03/2023	Calcium, total	11.4	mg/L
MW-304	Background	E002	08/03/2023	Chloride, total	160	mg/L
MW-304	Background	E002	08/03/2023	Chromium, total	0.0007 U	mg/L
MW-304	Background	E002	08/03/2023	Cobalt, total	0.0001 U	mg/L
MW-304	Background	E002	08/03/2023	Dissolved Oxygen	0.690	mg/L
MW-304	Background	E002	08/03/2023	Fluoride, total	1.70	mg/L
MW-304	Background	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-304	Background	E002	08/03/2023	Lithium, total	0.0779	mg/L
MW-304	Background	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-304	Background	E002	08/03/2023	Molybdenum, total	0.0008 J	mg/L
MW-304	Background	E002	08/03/2023	Oxidation Reduction Potential	78.0	mV
MW-304	Background	E002	08/03/2023	pH (field)	7.9	SU
MW-304	Background	E002	08/03/2023	Radium 226 + Radium 228, total	0.937	pCi/L
MW-304	Background	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-304	Background	E002	08/03/2023	Specific Conductance @ 25C (field)	3,000	micromhos/cm
MW-304	Background	E002	08/03/2023	Sulfate, total	188	mg/L
MW-304	Background	E002	08/03/2023	Temperature	16.2	degrees C
MW-304	Background	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-304	Background	E002	08/03/2023	Total Dissolved Solids	1,380	mg/L
MW-304	Background	E002	08/03/2023	Turbidity, field	2.80	NTU
MW-306	Background	E002	08/04/2023	Antimony, total	0.0005 J	mg/L
MW-306	Background	E002	08/04/2023	Arsenic, total	0.00820 J	mg/L
MW-306	Background	E002	08/04/2023	Barium, total	0.00340	mg/L
MW-306	Background	E002	08/04/2023	Beryllium, total	0.0002 U	mg/L
MW-306	Background	E002	08/04/2023	Boron, total	0.400	mg/L
MW-306	Background	E002	08/04/2023	Cadmium, total	0.0002 U	mg/L
MW-306	Background	E002	08/04/2023	Calcium, total	2.49	mg/L
MW-306	Background	E002	08/04/2023	Chloride, total	50.0	mg/L
MW-306	Background	E002	08/04/2023	Chromium, total	0.0007 U	mg/L
MW-306	Background	E002	08/04/2023	Cobalt, total	0.0001 U	mg/L
MW-306	Background	E002	08/04/2023	Dissolved Oxygen	0.650	mg/L
MW-306	Background	E002	08/04/2023	Fluoride, total	0.610	mg/L
MW-306	Background	E002	08/04/2023	Lead, total	0.0006 U	mg/L
MW-306	Background	E002	08/04/2023	Lithium, total	0.0212	mg/L
MW-306	Background	E002	08/04/2023	Mercury, total	0.00012 U	mg/L
MW-306	Background	E002	08/04/2023	Molybdenum, total	0.0153	mg/L
MW-306	Background	E002	08/04/2023	Oxidation Reduction Potential	78.0	mV
MW-306	Background	E002	08/04/2023	pH (field)	10.6	SU
MW-306	Background	E002	08/04/2023	Radium 226 + Radium 228, total	0.652	pCi/L
MW-306	Background	E002	08/04/2023	Selenium, total	0.0006 U	mg/L

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

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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-306	Background	E002	08/04/2023	Specific Conductance @ 25C (field)	738	micromhos/cm
MW-306	Background	E002	08/04/2023	Sulfate, total	41.0	mg/L
MW-306	Background	E002	08/04/2023	Temperature	16.2	degrees C
MW-306	Background	E002	08/04/2023	Thallium, total	0.001 U	mg/L
MW-306	Background	E002	08/04/2023	Total Dissolved Solids	302	mg/L
MW-306	Background	E002	08/04/2023	Turbidity, field	2.50	NTU
MW-358	Background	E002	08/07/2023	Antimony, total	0.0004 U	mg/L
MW-358	Background	E002	08/07/2023	Arsenic, total	0.00380	mg/L
MW-358	Background	E002	08/07/2023	Barium, total	0.235	mg/L
MW-358	Background	E002	08/07/2023	Beryllium, total	0.0002 U	mg/L
MW-358	Background	E002	08/07/2023	Boron, total	1.60	mg/L
MW-358	Background	E002	08/07/2023	Cadmium, total	0.0002 U	mg/L
MW-358	Background	E002	08/07/2023	Calcium, total	9.87	mg/L
MW-358	Background	E002	08/07/2023	Chloride, total	1,290	mg/L
MW-358	Background	E002	08/07/2023	Chromium, total	0.001 J	mg/L
MW-358	Background	E002	08/07/2023	Cobalt, total	0.0001 U	mg/L
MW-358	Background	E002	08/07/2023	Dissolved Oxygen	1.37	mg/L
MW-358	Background	E002	08/07/2023	Fluoride, total	3.36	mg/L
MW-358	Background	E002	08/07/2023	Lead, total	0.0006 U	mg/L
MW-358	Background	E002	08/07/2023	Lithium, total	0.0961	mg/L
MW-358	Background	E002	08/07/2023	Mercury, total	0.00006 U	mg/L
MW-358	Background	E002	08/07/2023	Molybdenum, total	0.0175	mg/L
MW-358	Background	E002	08/07/2023	Oxidation Reduction Potential	-42.0	mV
MW-358	Background	E002	08/07/2023	pH (field)	8.0	SU
MW-358	Background	E002	08/07/2023	Radium 226 + Radium 228, total	0.908	pCi/L
MW-358	Background	E002	08/07/2023	Selenium, total	0.0006 U	mg/L
MW-358	Background	E002	08/07/2023	Specific Conductance @ 25C (field)	6,940	micromhos/cm
MW-358	Background	E002	08/07/2023	Sulfate, total	9 J	mg/L
MW-358	Background	E002	08/07/2023	Temperature	16.1	degrees C
MW-358	Background	E002	08/07/2023	Thallium, total	0.001 U	mg/L
MW-358	Background	E002	08/07/2023	Total Dissolved Solids	3,160	mg/L
MW-358	Background	E002	08/07/2023	Turbidity, field	8.40	NTU
MW-192	Compliance	E002	08/04/2023	Antimony, total	0.0004 U	mg/L
MW-192	Compliance	E002	08/04/2023	Arsenic, total	0.00300	mg/L
MW-192	Compliance	E002	08/04/2023	Barium, total	0.139	mg/L
MW-192	Compliance	E002	08/04/2023	Beryllium, total	0.0003 J	mg/L
MW-192	Compliance	E002	08/04/2023	Boron, total	0.0397	mg/L
MW-192	Compliance	E002	08/04/2023	Cadmium, total	0.0002 U	mg/L
MW-192	Compliance	E002	08/04/2023	Calcium, total	74.2	mg/L
MW-192	Compliance	E002	08/04/2023	Chloride, total	24.0	mg/L
MW-192	Compliance	E002	08/04/2023	Chromium, total	0.00290	mg/L
MW-192	Compliance	E002	08/04/2023	Cobalt, total	0.00140	mg/L
MW-192	Compliance	E002	08/04/2023	Dissolved Oxygen	0.460	mg/L
MW-192	Compliance	E002	08/04/2023	Fluoride, total	0.450	mg/L
MW-192	Compliance	E002	08/04/2023	Lead, total	0.00250	mg/L
MW-192	Compliance	E002	08/04/2023	Lithium, total	0.00700	mg/L

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

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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-192	Compliance	E002	08/04/2023	Mercury, total	0.00012 U	mg/L
MW-192	Compliance	E002	08/04/2023	Molybdenum, total	0.0013 J	mg/L
MW-192	Compliance	E002	08/04/2023	Oxidation Reduction Potential	-102	mV
MW-192	Compliance	E002	08/04/2023	pH (field)	6.6	SU
MW-192	Compliance	E002	08/04/2023	Radium 226 + Radium 228, total	2.61	pCi/L
MW-192	Compliance	E002	08/04/2023	Selenium, total	0.0006 U	mg/L
MW-192	Compliance	E002	08/04/2023	Specific Conductance @ 25C (field)	906	micromhos/cm
MW-192	Compliance	E002	08/04/2023	Sulfate, total	19.0	mg/L
MW-192	Compliance	E002	08/04/2023	Temperature	18.7	degrees C
MW-192	Compliance	E002	08/04/2023	Thallium, total	0.001 U	mg/L
MW-192	Compliance	E002	08/04/2023	Total Dissolved Solids	192	mg/L
MW-192	Compliance	E002	08/04/2023	Turbidity, field	290	NTU
MW-193	Compliance	E002	08/04/2023	Antimony, total	0.0004 U	mg/L
MW-193	Compliance	E002	08/04/2023	Arsenic, total	0.00140	mg/L
MW-193	Compliance	E002	08/04/2023	Barium, total	0.0736	mg/L
MW-193	Compliance	E002	08/04/2023	Beryllium, total	0.0002 U	mg/L
MW-193	Compliance	E002	08/04/2023	Boron, total	0.0505	mg/L
MW-193	Compliance	E002	08/04/2023	Cadmium, total	0.0002 U	mg/L
MW-193	Compliance	E002	08/04/2023	Calcium, total	89.8	mg/L
MW-193	Compliance	E002	08/04/2023	Chloride, total	35.0	mg/L
MW-193	Compliance	E002	08/04/2023	Chromium, total	0.0007 U	mg/L
MW-193	Compliance	E002	08/04/2023	Cobalt, total	0.0006 J	mg/L
MW-193	Compliance	E002	08/04/2023	Dissolved Oxygen	0.910	mg/L
MW-193	Compliance	E002	08/04/2023	Fluoride, total	0.270	mg/L
MW-193	Compliance	E002	08/04/2023	Lead, total	0.0006 U	mg/L
MW-193	Compliance	E002	08/04/2023	Lithium, total	0.00450	mg/L
MW-193	Compliance	E002	08/04/2023	Mercury, total	0.00012 U	mg/L
MW-193	Compliance	E002	08/04/2023	Molybdenum, total	0.0008 J	mg/L
MW-193	Compliance	E002	08/04/2023	Oxidation Reduction Potential	-13.0	mV
MW-193	Compliance	E002	08/04/2023	pH (field)	6.5	SU
MW-193	Compliance	E002	08/04/2023	Radium 226 + Radium 228, total	0.612	pCi/L
MW-193	Compliance	E002	08/04/2023	Selenium, total	0.0006 U	mg/L
MW-193	Compliance	E002	08/04/2023	Specific Conductance @ 25C (field)	1,080	micromhos/cm
MW-193	Compliance	E002	08/04/2023	Sulfate, total	150	mg/L
MW-193	Compliance	E002	08/04/2023	Temperature	17.4	degrees C
MW-193	Compliance	E002	08/04/2023	Thallium, total	0.001 U	mg/L
MW-193	Compliance	E002	08/04/2023	Total Dissolved Solids	600	mg/L
MW-193	Compliance	E002	08/04/2023	Turbidity, field	4.90	NTU
MW-356	Compliance	E002	08/03/2023	Antimony, total	0.0007 J	mg/L
MW-356	Compliance	E002	08/03/2023	Arsenic, total	0.0005 J	mg/L
MW-356	Compliance	E002	08/03/2023	Barium, total	0.0329	mg/L
MW-356	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-356	Compliance	E002	08/03/2023	Boron, total	1.94	mg/L
MW-356	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-356	Compliance	E002	08/03/2023	Calcium, total	12.5	mg/L
MW-356	Compliance	E002	08/03/2023	Chloride, total	28.0	mg/L

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

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 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-356	Compliance	E002	08/03/2023	Chromium, total	0.0011 J	mg/L
MW-356	Compliance	E002	08/03/2023	Cobalt, total	0.0005 J	mg/L
MW-356	Compliance	E002	08/03/2023	Dissolved Oxygen	1.53	mg/L
MW-356	Compliance	E002	08/03/2023	Fluoride, total	2.05	mg/L
MW-356	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-356	Compliance	E002	08/03/2023	Lithium, total	0.0518	mg/L
MW-356	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-356	Compliance	E002	08/03/2023	Molybdenum, total	0.0011 J	mg/L
MW-356	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-56.0	mV
MW-356	Compliance	E002	08/03/2023	pH (field)	7.9	SU
MW-356	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.53	pCi/L
MW-356	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-356	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	1,330	micromhos/cm
MW-356	Compliance	E002	08/03/2023	Sulfate, total	43.0	mg/L
MW-356	Compliance	E002	08/03/2023	Temperature	17.5	degrees C
MW-356	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-356	Compliance	E002	08/03/2023	Total Dissolved Solids	596	mg/L
MW-356	Compliance	E002	08/03/2023	Turbidity, field	2.20	NTU
MW-369	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-369	Compliance	E002	08/03/2023	Arsenic, total	0.0008 J	mg/L
MW-369	Compliance	E002	08/03/2023	Barium, total	0.104	mg/L
MW-369	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-369	Compliance	E002	08/03/2023	Boron, total	0.259	mg/L
MW-369	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-369	Compliance	E002	08/03/2023	Calcium, total	121	mg/L
MW-369	Compliance	E002	08/03/2023	Chloride, total	59.0	mg/L
MW-369	Compliance	E002	08/03/2023	Chromium, total	0.0007 U	mg/L
MW-369	Compliance	E002	08/03/2023	Cobalt, total	0.0005 J	mg/L
MW-369	Compliance	E002	08/03/2023	Dissolved Oxygen	0.670	mg/L
MW-369	Compliance	E002	08/03/2023	Fluoride, total	0.500	mg/L
MW-369	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-369	Compliance	E002	08/03/2023	Lithium, total	0.0138	mg/L
MW-369	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-369	Compliance	E002	08/03/2023	Molybdenum, total	0.00520	mg/L
MW-369	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-76.0	mV
MW-369	Compliance	E002	08/03/2023	pH (field)	8.3	SU
MW-369	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.845	pCi/L
MW-369	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-369	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	2,620	micromhos/cm
MW-369	Compliance	E002	08/03/2023	Sulfate, total	121	mg/L
MW-369	Compliance	E002	08/03/2023	Temperature	15.8	degrees C
MW-369	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-369	Compliance	E002	08/03/2023	Total Dissolved Solids	684	mg/L
MW-369	Compliance	E002	08/03/2023	Turbidity, field	17.0	NTU
MW-370	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-370	Compliance	E002	08/03/2023	Arsenic, total	0.0007 J	mg/L

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

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 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-370	Compliance	E002	08/03/2023	Barium, total	0.0330	mg/L
MW-370	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-370	Compliance	E002	08/03/2023	Boron, total	1.73	mg/L
MW-370	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-370	Compliance	E002	08/03/2023	Calcium, total	41.4	mg/L
MW-370	Compliance	E002	08/03/2023	Chloride, total	1,310	mg/L
MW-370	Compliance	E002	08/03/2023	Chromium, total	0.0009 J	mg/L
MW-370	Compliance	E002	08/03/2023	Cobalt, total	0.0002 J	mg/L
MW-370	Compliance	E002	08/03/2023	Dissolved Oxygen	0.680	mg/L
MW-370	Compliance	E002	08/03/2023	Fluoride, total	3.06	mg/L
MW-370	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-370	Compliance	E002	08/03/2023	Lithium, total	0.134	mg/L
MW-370	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-370	Compliance	E002	08/03/2023	Molybdenum, total	0.00740	mg/L
MW-370	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-17.0	mV
MW-370	Compliance	E002	08/03/2023	pH (field)	7.8	SU
MW-370	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.843	pCi/L
MW-370	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-370	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	6,670	micromhos/cm
MW-370	Compliance	E002	08/03/2023	Sulfate, total	243	mg/L
MW-370	Compliance	E002	08/03/2023	Temperature	16.1	degrees C
MW-370	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-370	Compliance	E002	08/03/2023	Total Dissolved Solids	2,870	mg/L
MW-370	Compliance	E002	08/03/2023	Turbidity, field	3.30	NTU
MW-382	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-382	Compliance	E002	08/03/2023	Arsenic, total	0.00200	mg/L
MW-382	Compliance	E002	08/03/2023	Barium, total	0.0256	mg/L
MW-382	Compliance	E002	08/03/2023	Beryllium, total	0.0004 J	mg/L
MW-382	Compliance	E002	08/03/2023	Boron, total	1.61	mg/L
MW-382	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-382	Compliance	E002	08/03/2023	Calcium, total	27.1	mg/L
MW-382	Compliance	E002	08/03/2023	Chloride, total	28.0	mg/L
MW-382	Compliance	E002	08/03/2023	Chromium, total	0.0135	mg/L
MW-382	Compliance	E002	08/03/2023	Cobalt, total	0.00270	mg/L
MW-382	Compliance	E002	08/03/2023	Dissolved Oxygen	0.510	mg/L
MW-382	Compliance	E002	08/03/2023	Fluoride, total	2.83	mg/L
MW-382	Compliance	E002	08/03/2023	Lead, total	0.00350	mg/L
MW-382	Compliance	E002	08/03/2023	Lithium, total	0.0560	mg/L
MW-382	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-382	Compliance	E002	08/03/2023	Molybdenum, total	0.00260	mg/L
MW-382	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-36.0	mV
MW-382	Compliance	E002	08/03/2023	pH (field)	7.9	SU
MW-382	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	1.44	pCi/L
MW-382	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-382	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	1,910	micromhos/cm
MW-382	Compliance	E002	08/03/2023	Sulfate, total	337	mg/L

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

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BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-382	Compliance	E002	08/03/2023	Temperature	16.0	degrees C
MW-382	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-382	Compliance	E002	08/03/2023	Total Dissolved Solids	980	mg/L
MW-382	Compliance	E002	08/03/2023	Turbidity, field	180	NTU
MW-392	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-392	Compliance	E002	08/03/2023	Arsenic, total	0.0004 J	mg/L
MW-392	Compliance	E002	08/03/2023	Barium, total	0.0407	mg/L
MW-392	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-392	Compliance	E002	08/03/2023	Boron, total	1.82	mg/L
MW-392	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-392	Compliance	E002	08/03/2023	Calcium, total	26.0	mg/L
MW-392	Compliance	E002	08/03/2023	Chloride, total	878	mg/L
MW-392	Compliance	E002	08/03/2023	Chromium, total	0.0008 J	mg/L
MW-392	Compliance	E002	08/03/2023	Cobalt, total	0.0001 U	mg/L
MW-392	Compliance	E002	08/03/2023	Dissolved Oxygen	0.810	mg/L
MW-392	Compliance	E002	08/03/2023	Fluoride, total	4.07	mg/L
MW-392	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-392	Compliance	E002	08/03/2023	Lithium, total	0.0733	mg/L
MW-392	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-392	Compliance	E002	08/03/2023	Molybdenum, total	0.0008 J	mg/L
MW-392	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-170	mV
MW-392	Compliance	E002	08/03/2023	pH (field)	7.9	SU
MW-392	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	1.19	pCi/L
MW-392	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-392	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	4,020	micromhos/cm
MW-392	Compliance	E002	08/03/2023	Sulfate, total	55.0	mg/L
MW-392	Compliance	E002	08/03/2023	Temperature	18.2	degrees C
MW-392	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-392	Compliance	E002	08/03/2023	Total Dissolved Solids	1,810	mg/L
MW-392	Compliance	E002	08/03/2023	Turbidity, field	3.20	NTU
MW-393	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
MW-393	Compliance	E002	08/03/2023	Arsenic, total	0.0004 U	mg/L
MW-393	Compliance	E002	08/03/2023	Barium, total	0.0269	mg/L
MW-393	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-393	Compliance	E002	08/03/2023	Boron, total	1.66	mg/L
MW-393	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-393	Compliance	E002	08/03/2023	Calcium, total	6.00	mg/L
MW-393	Compliance	E002	08/03/2023	Chloride, total	610	mg/L
MW-393	Compliance	E002	08/03/2023	Chromium, total	0.0009 J	mg/L
MW-393	Compliance	E002	08/03/2023	Cobalt, total	0.0001 U	mg/L
MW-393	Compliance	E002	08/03/2023	Dissolved Oxygen	0.570	mg/L
MW-393	Compliance	E002	08/03/2023	Fluoride, total	7.32	mg/L
MW-393	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-393	Compliance	E002	08/03/2023	Lithium, total	0.0593	mg/L
MW-393	Compliance	E002	08/03/2023	Mercury, total	0.00012 U	mg/L
MW-393	Compliance	E002	08/03/2023	Molybdenum, total	0.0012 J	mg/L

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-393	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-300 U	mV
MW-393	Compliance	E002	08/03/2023	pH (field)	8.4	SU
MW-393	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.657	pCi/L
MW-393	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-393	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	4,700	micromhos/cm
MW-393	Compliance	E002	08/03/2023	Sulfate, total	134	mg/L
MW-393	Compliance	E002	08/03/2023	Temperature	18.0	degrees C
MW-393	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-393	Compliance	E002	08/03/2023	Total Dissolved Solids	2,070	mg/L
MW-393	Compliance	E002	08/03/2023	Turbidity, field	1.60	NTU
MW-394	Compliance	E002	08/03/2023	Antimony, total	0.0008 J	mg/L
MW-394	Compliance	E002	08/03/2023	Arsenic, total	0.0009 J	mg/L
MW-394	Compliance	E002	08/03/2023	Barium, total	0.0478	mg/L
MW-394	Compliance	E002	08/03/2023	Beryllium, total	0.0002 U	mg/L
MW-394	Compliance	E002	08/03/2023	Boron, total	1.39	mg/L
MW-394	Compliance	E002	08/03/2023	Cadmium, total	0.0002 U	mg/L
MW-394	Compliance	E002	08/03/2023	Calcium, total	36.7	mg/L
MW-394	Compliance	E002	08/03/2023	Chloride, total	324	mg/L
MW-394	Compliance	E002	08/03/2023	Chromium, total	0.0008 J	mg/L
MW-394	Compliance	E002	08/03/2023	Cobalt, total	0.0002 J	mg/L
MW-394	Compliance	E002	08/03/2023	Dissolved Oxygen	0.510	mg/L
MW-394	Compliance	E002	08/03/2023	Fluoride, total	2.36	mg/L
MW-394	Compliance	E002	08/03/2023	Lead, total	0.0006 U	mg/L
MW-394	Compliance	E002	08/03/2023	Lithium, total	0.0476	mg/L
MW-394	Compliance	E002	08/03/2023	Mercury, total	0.00006 U	mg/L
MW-394	Compliance	E002	08/03/2023	Molybdenum, total	0.0115	mg/L
MW-394	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-300 U	mV
MW-394	Compliance	E002	08/03/2023	pH (field)	8.0	SU
MW-394	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.681	pCi/L
MW-394	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
MW-394	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	3,660	micromhos/cm
MW-394	Compliance	E002	08/03/2023	Sulfate, total	202	mg/L
MW-394	Compliance	E002	08/03/2023	Temperature	17.4	degrees C
MW-394	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
MW-394	Compliance	E002	08/03/2023	Total Dissolved Solids	1,440	mg/L
MW-394	Compliance	E002	08/03/2023	Turbidity, field	16.0	NTU
OW-256	Compliance	E002	08/03/2023	Antimony, total	0.0004 U	mg/L
OW-256	Compliance	E002	08/03/2023	Arsenic, total	0.00130	mg/L
OW-256	Compliance	E002	08/03/2023	Barium, total	0.0915	mg/L
OW-256	Compliance	E002	08/03/2023	Beryllium, total	0.0007 J	mg/L
OW-256	Compliance	E002	08/03/2023	Boron, total	0.187	mg/L
OW-256	Compliance	E002	08/03/2023	Cadmium, total	0.0004 J	mg/L
OW-256	Compliance	E002	08/03/2023	Calcium, total	80.6	mg/L
OW-256	Compliance	E002	08/03/2023	Chloride, total	55.0	mg/L
OW-256	Compliance	E002	08/03/2023	Chromium, total	0.00200	mg/L
OW-256	Compliance	E002	08/03/2023	Cobalt, total	0.00110	mg/L

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

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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
OW-256	Compliance	E002	08/03/2023	Dissolved Oxygen	0.470	mg/L
OW-256	Compliance	E002	08/03/2023	Fluoride, total	0.250	mg/L
OW-256	Compliance	E002	08/03/2023	Lead, total	0.00230	mg/L
OW-256	Compliance	E002	08/03/2023	Lithium, total	0.00820	mg/L
OW-256	Compliance	E002	08/03/2023	Mercury, total	0.00006 U	mg/L
OW-256	Compliance	E002	08/03/2023	Molybdenum, total	0.00160	mg/L
OW-256	Compliance	E002	08/03/2023	Oxidation Reduction Potential	-43.0	mV
OW-256	Compliance	E002	08/03/2023	pH (field)	6.8	SU
OW-256	Compliance	E002	08/03/2023	Radium 226 + Radium 228, total	0.66	pCi/L
OW-256	Compliance	E002	08/03/2023	Selenium, total	0.0006 U	mg/L
OW-256	Compliance	E002	08/03/2023	Specific Conductance @ 25C (field)	987	micromhos/cm
OW-256	Compliance	E002	08/03/2023	Sulfate, total	69.0	mg/L
OW-256	Compliance	E002	08/03/2023	Temperature	17.1	degrees C
OW-256	Compliance	E002	08/03/2023	Thallium, total	0.001 U	mg/L
OW-256	Compliance	E002	08/03/2023	Total Dissolved Solids	478	mg/L
OW-256	Compliance	E002	08/03/2023	Turbidity, field	6.20	NTU
PZ-170	Compliance	E002	08/04/2023	Dissolved Oxygen	0.600	mg/L
PZ-170	Compliance	E002	08/04/2023	Oxidation Reduction Potential	-156	mV
PZ-170	Compliance	E002	08/04/2023	pH (field)	6.6	SU
PZ-170	Compliance	E002	08/04/2023	Radium 226 + Radium 228, total	1.16	pCi/L
PZ-170	Compliance	E002	08/04/2023	Specific Conductance @ 25C (field)	1,950	micromhos/cm
PZ-170	Compliance	E002	08/04/2023	Temperature	16.4	degrees C
PZ-170	Compliance	E002	08/04/2023	Turbidity, field	18.0	NTU
PZ-182	Compliance	E002	08/15/2023	Antimony, total	0.0008 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Arsenic, total	0.0004 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Barium, total	0.0712	mg/L
PZ-182	Compliance	E002	08/15/2023	Beryllium, total	0.0002 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Boron, total	0.476	mg/L
PZ-182	Compliance	E002	08/15/2023	Cadmium, total	0.0002 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Calcium, total	143	mg/L
PZ-182	Compliance	E002	08/15/2023	Chloride, total	40.0	mg/L
PZ-182	Compliance	E002	08/15/2023	Chromium, total	0.0007 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Cobalt, total	0.0003 J	mg/L
PZ-182	Compliance	E002	08/15/2023	Dissolved Oxygen	0.470	mg/L
PZ-182	Compliance	E002	08/15/2023	Fluoride, total	0.160	mg/L
PZ-182	Compliance	E002	08/15/2023	Lead, total	0.0006 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Lithium, total	0.0155	mg/L
PZ-182	Compliance	E002	08/15/2023	Mercury, total	0.00009 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Molybdenum, total	0.0006 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Oxidation Reduction Potential	27.0	mV
PZ-182	Compliance	E002	08/15/2023	pH (field)	6.4	SU
PZ-182	Compliance	E002	08/15/2023	Radium 226 + Radium 228, total	1.4 J+	pCi/L
PZ-182	Compliance	E002	08/15/2023	Selenium, total	0.0006 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Specific Conductance @ 25C (field)	1,770	micromhos/cm
PZ-182	Compliance	E002	08/15/2023	Sulfate, total	172	mg/L
PZ-182	Compliance	E002	08/15/2023	Temperature	15.2	degrees C

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

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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
PZ-182	Compliance	E002	08/15/2023	Thallium, total	0.001 U	mg/L
PZ-182	Compliance	E002	08/15/2023	Total Dissolved Solids	772	mg/L
PZ-182	Compliance	E002	08/15/2023	Turbidity, field	9.40	NTU

Notes:

C = Celsius

cm = centimeter

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

SU = Standard Units

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

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

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

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-304	Background	E003	11/01/2023	Antimony, total	0.0004 U	mg/L
MW-304	Background	E003	11/01/2023	Arsenic, total	0.00240	mg/L
MW-304	Background	E003	11/01/2023	Barium, total	0.0199	mg/L
MW-304	Background	E003	11/01/2023	Beryllium, total	0.0002 U	mg/L
MW-304	Background	E003	11/01/2023	Boron, total	1.67	mg/L
MW-304	Background	E003	11/01/2023	Cadmium, total	0.0002 U	mg/L
MW-304	Background	E003	11/01/2023	Calcium, total	12.0	mg/L
MW-304	Background	E003	11/01/2023	Chloride, total	166	mg/L
MW-304	Background	E003	11/01/2023	Chromium, total	0.0007 U	mg/L
MW-304	Background	E003	11/01/2023	Cobalt, total	0.0001 U	mg/L
MW-304	Background	E003	11/01/2023	Dissolved Oxygen	0.800	mg/L
MW-304	Background	E003	11/01/2023	Fluoride, total	1.91	mg/L
MW-304	Background	E003	11/01/2023	Lead, total	0.0006 U	mg/L
MW-304	Background	E003	11/01/2023	Lithium, total	0.0807	mg/L
MW-304	Background	E003	11/01/2023	Mercury, total	0.00006 U	mg/L
MW-304	Background	E003	11/01/2023	Molybdenum, total	0.0009 J	mg/L
MW-304	Background	E003	11/01/2023	Oxidation Reduction Potential	-56.0	mV
MW-304	Background	E003	11/01/2023	pH (field)	7.8	SU
MW-304	Background	E003	11/01/2023	Radium 226 + Radium 228, total	0.521	pCi/L
MW-304	Background	E003	11/01/2023	Selenium, total	0.0006 U	mg/L
MW-304	Background	E003	11/01/2023	Specific Conductance @ 25C (field)	2,370	micromhos/cm
MW-304	Background	E003	11/01/2023	Sulfate, total	191	mg/L
MW-304	Background	E003	11/01/2023	Temperature	15.3	degrees C
MW-304	Background	E003	11/01/2023	Thallium, total	0.001 U	mg/L
MW-304	Background	E003	11/01/2023	Total Dissolved Solids	1,470	mg/L
MW-304	Background	E003	11/01/2023	Turbidity, field	1.70	NTU
MW-306	Background	E003	11/03/2023	Antimony, total	0.0004 U	mg/L
MW-306	Background	E003	11/03/2023	Arsenic, total	0.00980	mg/L
MW-306	Background	E003	11/03/2023	Barium, total	0.00350	mg/L
MW-306	Background	E003	11/03/2023	Beryllium, total	0.0002 U	mg/L
MW-306	Background	E003	11/03/2023	Boron, total	0.425	mg/L
MW-306	Background	E003	11/03/2023	Cadmium, total	0.0002 U	mg/L
MW-306	Background	E003	11/03/2023	Calcium, total	1.89	mg/L
MW-306	Background	E003	11/03/2023	Chloride, total	71.0	mg/L
MW-306	Background	E003	11/03/2023	Chromium, total	0.0007 U	mg/L
MW-306	Background	E003	11/03/2023	Cobalt, total	0.0001 U	mg/L
MW-306	Background	E003	11/03/2023	Dissolved Oxygen	1.41	mg/L
MW-306	Background	E003	11/03/2023	Fluoride, total	0.890	mg/L
MW-306	Background	E003	11/03/2023	Lead, total	0.0006 U	mg/L
MW-306	Background	E003	11/03/2023	Lithium, total	0.0199	mg/L
MW-306	Background	E003	11/03/2023	Mercury, total	0.00006 U	mg/L
MW-306	Background	E003	11/03/2023	Molybdenum, total	0.0179	mg/L
MW-306	Background	E003	11/03/2023	Oxidation Reduction Potential	-173	mV
MW-306	Background	E003	11/03/2023	pH (field)	10.5	SU
MW-306	Background	E003	11/03/2023	Radium 226 + Radium 228, total	0.631	pCi/L
MW-306	Background	E003	11/03/2023	Selenium, total	0.0008 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-306	Background	E003	11/03/2023	Specific Conductance @ 25C (field)	622	micromhos/cm
MW-306	Background	E003	11/03/2023	Sulfate, total	50.0	mg/L
MW-306	Background	E003	11/03/2023	Temperature	14.9	degrees C
MW-306	Background	E003	11/03/2023	Thallium, total	0.001 U	mg/L
MW-306	Background	E003	11/03/2023	Total Dissolved Solids	440	mg/L
MW-306	Background	E003	11/03/2023	Turbidity, field	8.90	NTU
MW-358	Background	E003	11/01/2023	Antimony, total	0.0004 U	mg/L
MW-358	Background	E003	11/01/2023	Arsenic, total	0.00510	mg/L
MW-358	Background	E003	11/01/2023	Barium, total	0.162	mg/L
MW-358	Background	E003	11/01/2023	Beryllium, total	0.0002 U	mg/L
MW-358	Background	E003	11/01/2023	Boron, total	1.38	mg/L
MW-358	Background	E003	11/01/2023	Cadmium, total	0.0002 U	mg/L
MW-358	Background	E003	11/01/2023	Calcium, total	11.3	mg/L
MW-358	Background	E003	11/01/2023	Chloride, total	1,310	mg/L
MW-358	Background	E003	11/01/2023	Chromium, total	0.0007 U	mg/L
MW-358	Background	E003	11/01/2023	Cobalt, total	0.0001 U	mg/L
MW-358	Background	E003	11/01/2023	Dissolved Oxygen	1.65	mg/L
MW-358	Background	E003	11/01/2023	Fluoride, total	3.59	mg/L
MW-358	Background	E003	11/01/2023	Lead, total	0.0162	mg/L
MW-358	Background	E003	11/01/2023	Lithium, total	0.0921	mg/L
MW-358	Background	E003	11/01/2023	Mercury, total	0.00012 J	mg/L
MW-358	Background	E003	11/01/2023	Molybdenum, total	0.0131	mg/L
MW-358	Background	E003	11/01/2023	Oxidation Reduction Potential	-162	mV
MW-358	Background	E003	11/01/2023	pH (field)	7.9	SU
MW-358	Background	E003	11/01/2023	Radium 226 + Radium 228, total	0.956 U*	pCi/L
MW-358	Background	E003	11/01/2023	Selenium, total	0.0006 U	mg/L
MW-358	Background	E003	11/01/2023	Specific Conductance @ 25C (field)	5,630	micromhos/cm
MW-358	Background	E003	11/01/2023	Sulfate, total	11.0	mg/L
MW-358	Background	E003	11/01/2023	Temperature	14.6	degrees C
MW-358	Background	E003	11/01/2023	Thallium, total	0.001 U	mg/L
MW-358	Background	E003	11/01/2023	Total Dissolved Solids	3,140	mg/L
MW-358	Background	E003	11/01/2023	Turbidity, field	55.0	NTU
MW-192	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
MW-192	Compliance	E003	10/31/2023	Arsenic, total	0.00300	mg/L
MW-192	Compliance	E003	10/31/2023	Barium, total	0.118	mg/L
MW-192	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L
MW-192	Compliance	E003	10/31/2023	Boron, total	0.0293	mg/L
MW-192	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
MW-192	Compliance	E003	10/31/2023	Calcium, total	74.8	mg/L
MW-192	Compliance	E003	10/31/2023	Chloride, total	22.0	mg/L
MW-192	Compliance	E003	10/31/2023	Chromium, total	0.00170	mg/L
MW-192	Compliance	E003	10/31/2023	Cobalt, total	0.00130	mg/L
MW-192	Compliance	E003	10/31/2023	Dissolved Oxygen	1.26	mg/L
MW-192	Compliance	E003	10/31/2023	Fluoride, total	0.490	mg/L
MW-192	Compliance	E003	10/31/2023	Lead, total	0.00120	mg/L
MW-192	Compliance	E003	10/31/2023	Lithium, total	0.00450	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

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BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-192	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
MW-192	Compliance	E003	10/31/2023	Molybdenum, total	0.00160	mg/L
MW-192	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-115	mV
MW-192	Compliance	E003	10/31/2023	pH (field)	6.8	SU
MW-192	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	1.28 U*	pCi/L
MW-192	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
MW-192	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	774	micromhos/cm
MW-192	Compliance	E003	10/31/2023	Sulfate, total	20.0	mg/L
MW-192	Compliance	E003	10/31/2023	Temperature	16.3	degrees C
MW-192	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L
MW-192	Compliance	E003	10/31/2023	Total Dissolved Solids	420	mg/L
MW-192	Compliance	E003	10/31/2023	Turbidity, field	23.0	NTU
MW-193	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
MW-193	Compliance	E003	10/31/2023	Arsenic, total	0.00140	mg/L
MW-193	Compliance	E003	10/31/2023	Barium, total	0.0779	mg/L
MW-193	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L
MW-193	Compliance	E003	10/31/2023	Boron, total	0.0511 J+	mg/L
MW-193	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
MW-193	Compliance	E003	10/31/2023	Calcium, total	87.1	mg/L
MW-193	Compliance	E003	10/31/2023	Chloride, total	34.0	mg/L
MW-193	Compliance	E003	10/31/2023	Chromium, total	0.0007 U	mg/L
MW-193	Compliance	E003	10/31/2023	Cobalt, total	0.0007 J	mg/L
MW-193	Compliance	E003	10/31/2023	Dissolved Oxygen	1.13	mg/L
MW-193	Compliance	E003	10/31/2023	Fluoride, total	0.290	mg/L
MW-193	Compliance	E003	10/31/2023	Lead, total	0.0006 U	mg/L
MW-193	Compliance	E003	10/31/2023	Lithium, total	0.00450	mg/L
MW-193	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
MW-193	Compliance	E003	10/31/2023	Molybdenum, total	0.0007 J	mg/L
MW-193	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-54.0	mV
MW-193	Compliance	E003	10/31/2023	pH (field)	6.8	SU
MW-193	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.582	pCi/L
MW-193	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
MW-193	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	942	micromhos/cm
MW-193	Compliance	E003	10/31/2023	Sulfate, total	157	mg/L
MW-193	Compliance	E003	10/31/2023	Temperature	17.1	degrees C
MW-193	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L
MW-193	Compliance	E003	10/31/2023	Total Dissolved Solids	578	mg/L
MW-193	Compliance	E003	10/31/2023	Turbidity, field	7.00	NTU
MW-356	Compliance	E003	11/02/2023	Antimony, total	0.0006 J	mg/L
MW-356	Compliance	E003	11/02/2023	Arsenic, total	0.0005 J	mg/L
MW-356	Compliance	E003	11/02/2023	Barium, total	0.0382	mg/L
MW-356	Compliance	E003	11/02/2023	Beryllium, total	0.0002 U	mg/L
MW-356	Compliance	E003	11/02/2023	Boron, total	2.34	mg/L
MW-356	Compliance	E003	11/02/2023	Cadmium, total	0.0002 U	mg/L
MW-356	Compliance	E003	11/02/2023	Calcium, total	12.9	mg/L
MW-356	Compliance	E003	11/02/2023	Chloride, total	28.0	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-356	Compliance	E003	11/02/2023	Chromium, total	0.0007 U	mg/L
MW-356	Compliance	E003	11/02/2023	Cobalt, total	0.0001 U	mg/L
MW-356	Compliance	E003	11/02/2023	Dissolved Oxygen	1.22	mg/L
MW-356	Compliance	E003	11/02/2023	Fluoride, total	2.38	mg/L
MW-356	Compliance	E003	11/02/2023	Lead, total	0.0006 U	mg/L
MW-356	Compliance	E003	11/02/2023	Lithium, total	0.0509	mg/L
MW-356	Compliance	E003	11/02/2023	Mercury, total	0.00006 U	mg/L
MW-356	Compliance	E003	11/02/2023	Molybdenum, total	0.002 UJ	mg/L
MW-356	Compliance	E003	11/02/2023	Oxidation Reduction Potential	-21.0	mV
MW-356	Compliance	E003	11/02/2023	pH (field)	7.6	SU
MW-356	Compliance	E003	11/02/2023	Radium 226 + Radium 228, total	0.679	pCi/L
MW-356	Compliance	E003	11/02/2023	Selenium, total	0.0006 U	mg/L
MW-356	Compliance	E003	11/02/2023	Specific Conductance @ 25C (field)	1,160	micromhos/cm
MW-356	Compliance	E003	11/02/2023	Sulfate, total	41.0	mg/L
MW-356	Compliance	E003	11/02/2023	Temperature	14.8	degrees C
MW-356	Compliance	E003	11/02/2023	Thallium, total	0.001 U	mg/L
MW-356	Compliance	E003	11/02/2023	Total Dissolved Solids	688	mg/L
MW-356	Compliance	E003	11/02/2023	Turbidity, field	2.40	NTU
MW-369	Compliance	E003	11/02/2023	Antimony, total	0.0005 J	mg/L
MW-369	Compliance	E003	11/02/2023	Arsenic, total	0.00800	mg/L
MW-369	Compliance	E003	11/02/2023	Barium, total	0.00740	mg/L
MW-369	Compliance	E003	11/02/2023	Beryllium, total	0.0002 U	mg/L
MW-369	Compliance	E003	11/02/2023	Boron, total	0.888	mg/L
MW-369	Compliance	E003	11/02/2023	Cadmium, total	0.0002 U	mg/L
MW-369	Compliance	E003	11/02/2023	Calcium, total	6.90	mg/L
MW-369	Compliance	E003	11/02/2023	Chloride, total	212	mg/L
MW-369	Compliance	E003	11/02/2023	Chromium, total	0.0007 U	mg/L
MW-369	Compliance	E003	11/02/2023	Cobalt, total	0.0001 U	mg/L
MW-369	Compliance	E003	11/02/2023	Dissolved Oxygen	1.83	mg/L
MW-369	Compliance	E003	11/02/2023	Fluoride, total	3.30	mg/L
MW-369	Compliance	E003	11/02/2023	Lead, total	0.0006 U	mg/L
MW-369	Compliance	E003	11/02/2023	Lithium, total	0.0423	mg/L
MW-369	Compliance	E003	11/02/2023	Mercury, total	0.00009 J	mg/L
MW-369	Compliance	E003	11/02/2023	Molybdenum, total	0.00600	mg/L
MW-369	Compliance	E003	11/02/2023	Oxidation Reduction Potential	-148	mV
MW-369	Compliance	E003	11/02/2023	pH (field)	8.3	SU
MW-369	Compliance	E003	11/02/2023	Radium 226 + Radium 228, total	0.92 U*	pCi/L
MW-369	Compliance	E003	11/02/2023	Selenium, total	0.0006 U	mg/L
MW-369	Compliance	E003	11/02/2023	Specific Conductance @ 25C (field)	2,670	micromhos/cm
MW-369	Compliance	E003	11/02/2023	Sulfate, total	144	mg/L
MW-369	Compliance	E003	11/02/2023	Temperature	15.9	degrees C
MW-369	Compliance	E003	11/02/2023	Thallium, total	0.001 U	mg/L
MW-369	Compliance	E003	11/02/2023	Total Dissolved Solids	1,390	mg/L
MW-369	Compliance	E003	11/02/2023	Turbidity, field	53.0	NTU
MW-370	Compliance	E003	11/02/2023	Antimony, total	0.0004 U	mg/L
MW-370	Compliance	E003	11/02/2023	Arsenic, total	0.0006 J	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-370	Compliance	E003	11/02/2023	Barium, total	0.0285	mg/L
MW-370	Compliance	E003	11/02/2023	Beryllium, total	0.0002 U	mg/L
MW-370	Compliance	E003	11/02/2023	Boron, total	1.98	mg/L
MW-370	Compliance	E003	11/02/2023	Cadmium, total	0.0002 U	mg/L
MW-370	Compliance	E003	11/02/2023	Calcium, total	41.1	mg/L
MW-370	Compliance	E003	11/02/2023	Chloride, total	1,420	mg/L
MW-370	Compliance	E003	11/02/2023	Chromium, total	0.0007 U	mg/L
MW-370	Compliance	E003	11/02/2023	Cobalt, total	0.0001 U	mg/L
MW-370	Compliance	E003	11/02/2023	Dissolved Oxygen	0.800	mg/L
MW-370	Compliance	E003	11/02/2023	Fluoride, total	3.70	mg/L
MW-370	Compliance	E003	11/02/2023	Lead, total	0.0006 U	mg/L
MW-370	Compliance	E003	11/02/2023	Lithium, total	0.124	mg/L
MW-370	Compliance	E003	11/02/2023	Mercury, total	0.00006 U	mg/L
MW-370	Compliance	E003	11/02/2023	Molybdenum, total	0.00700	mg/L
MW-370	Compliance	E003	11/02/2023	Oxidation Reduction Potential	-24.0	mV
MW-370	Compliance	E003	11/02/2023	pH (field)	7.6	SU
MW-370	Compliance	E003	11/02/2023	Radium 226 + Radium 228, total	1.58 U*	pCi/L
MW-370	Compliance	E003	11/02/2023	Selenium, total	0.0006 U	mg/L
MW-370	Compliance	E003	11/02/2023	Specific Conductance @ 25C (field)	5,860	micromhos/cm
MW-370	Compliance	E003	11/02/2023	Sulfate, total	273	mg/L
MW-370	Compliance	E003	11/02/2023	Temperature	15.8	degrees C
MW-370	Compliance	E003	11/02/2023	Thallium, total	0.001 U	mg/L
MW-370	Compliance	E003	11/02/2023	Total Dissolved Solids	3,180	mg/L
MW-370	Compliance	E003	11/02/2023	Turbidity, field	2.80	NTU
MW-382	Compliance	E003	11/02/2023	Antimony, total	0.0004 U	mg/L
MW-382	Compliance	E003	11/02/2023	Arsenic, total	0.00130	mg/L
MW-382	Compliance	E003	11/02/2023	Barium, total	0.0171	mg/L
MW-382	Compliance	E003	11/02/2023	Beryllium, total	0.0002 U	mg/L
MW-382	Compliance	E003	11/02/2023	Boron, total	1.72	mg/L
MW-382	Compliance	E003	11/02/2023	Cadmium, total	0.0002 U	mg/L
MW-382	Compliance	E003	11/02/2023	Calcium, total	21.9	mg/L
MW-382	Compliance	E003	11/02/2023	Chloride, total	32.0	mg/L
MW-382	Compliance	E003	11/02/2023	Chromium, total	0.00550	mg/L
MW-382	Compliance	E003	11/02/2023	Cobalt, total	0.00140	mg/L
MW-382	Compliance	E003	11/02/2023	Dissolved Oxygen	1.28	mg/L
MW-382	Compliance	E003	11/02/2023	Fluoride, total	3.24	mg/L
MW-382	Compliance	E003	11/02/2023	Lead, total	0.00170	mg/L
MW-382	Compliance	E003	11/02/2023	Lithium, total	0.0566	mg/L
MW-382	Compliance	E003	11/02/2023	Mercury, total	0.00006 U	mg/L
MW-382	Compliance	E003	11/02/2023	Molybdenum, total	0.0014 J	mg/L
MW-382	Compliance	E003	11/02/2023	Oxidation Reduction Potential	-68.0	mV
MW-382	Compliance	E003	11/02/2023	pH (field)	7.8	SU
MW-382	Compliance	E003	11/02/2023	Radium 226 + Radium 228, total	1.26 U*	pCi/L
MW-382	Compliance	E003	11/02/2023	Selenium, total	0.0006 U	mg/L
MW-382	Compliance	E003	11/02/2023	Specific Conductance @ 25C (field)	1,840	micromhos/cm
MW-382	Compliance	E003	11/02/2023	Sulfate, total	420	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-382	Compliance	E003	11/02/2023	Temperature	16.3	degrees C
MW-382	Compliance	E003	11/02/2023	Thallium, total	0.001 U	mg/L
MW-382	Compliance	E003	11/02/2023	Total Dissolved Solids	1,130	mg/L
MW-382	Compliance	E003	11/02/2023	Turbidity, field	32.0	NTU
MW-392	Compliance	E003	10/31/2023	Antimony, total	0.0018 U	mg/L
MW-392	Compliance	E003	10/31/2023	Arsenic, total	0.0016 U	mg/L
MW-392	Compliance	E003	10/31/2023	Barium, total	0.0615	mg/L
MW-392	Compliance	E003	10/31/2023	Beryllium, total	0.001 U	mg/L
MW-392	Compliance	E003	10/31/2023	Boron, total	1.91	mg/L
MW-392	Compliance	E003	10/31/2023	Cadmium, total	0.0006 U	mg/L
MW-392	Compliance	E003	10/31/2023	Calcium, total	50.8	mg/L
MW-392	Compliance	E003	10/31/2023	Chloride, total	871	mg/L
MW-392	Compliance	E003	10/31/2023	Chromium, total	0.0186	mg/L
MW-392	Compliance	E003	10/31/2023	Cobalt, total	0.0036 J	mg/L
MW-392	Compliance	E003	10/31/2023	Dissolved Oxygen	1.63	mg/L
MW-392	Compliance	E003	10/31/2023	Fluoride, total	4.52	mg/L
MW-392	Compliance	E003	10/31/2023	Lead, total	0.0038 J	mg/L
MW-392	Compliance	E003	10/31/2023	Lithium, total	0.114	mg/L
MW-392	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
MW-392	Compliance	E003	10/31/2023	Molybdenum, total	0.0024 U	mg/L
MW-392	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-144	mV
MW-392	Compliance	E003	10/31/2023	pH (field)	7.7	SU
MW-392	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.596 U*	pCi/L
MW-392	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
MW-392	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	3,380	micromhos/cm
MW-392	Compliance	E003	10/31/2023	Sulfate, total	66.0	mg/L
MW-392	Compliance	E003	10/31/2023	Temperature	15.7	degrees C
MW-392	Compliance	E003	10/31/2023	Thallium, total	0.0038 U	mg/L
MW-392	Compliance	E003	10/31/2023	Total Dissolved Solids	1,840	mg/L
MW-392	Compliance	E003	10/31/2023	Turbidity, field	6.90	NTU
MW-393	Compliance	E003	10/31/2023	Antimony, total	0.0018 U	mg/L
MW-393	Compliance	E003	10/31/2023	Arsenic, total	0.0016 U	mg/L
MW-393	Compliance	E003	10/31/2023	Barium, total	0.0582	mg/L
MW-393	Compliance	E003	10/31/2023	Beryllium, total	0.001 U	mg/L
MW-393	Compliance	E003	10/31/2023	Boron, total	1.59	mg/L
MW-393	Compliance	E003	10/31/2023	Cadmium, total	0.0006 U	mg/L
MW-393	Compliance	E003	10/31/2023	Calcium, total	7.92	mg/L
MW-393	Compliance	E003	10/31/2023	Chloride, total	723	mg/L
MW-393	Compliance	E003	10/31/2023	Chromium, total	0.0028 U	mg/L
MW-393	Compliance	E003	10/31/2023	Cobalt, total	0.0005 U	mg/L
MW-393	Compliance	E003	10/31/2023	Dissolved Oxygen	0.710	mg/L
MW-393	Compliance	E003	10/31/2023	Fluoride, total	9.63	mg/L
MW-393	Compliance	E003	10/31/2023	Lead, total	0.0024 U	mg/L
MW-393	Compliance	E003	10/31/2023	Lithium, total	0.0672	mg/L
MW-393	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
MW-393	Compliance	E003	10/31/2023	Molybdenum, total	0.0024 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
MW-393	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-259	mV
MW-393	Compliance	E003	10/31/2023	pH (field)	8.2	SU
MW-393	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.756	pCi/L
MW-393	Compliance	E003	10/31/2023	Selenium, total	0.0024 U	mg/L
MW-393	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	4,140	micromhos/cm
MW-393	Compliance	E003	10/31/2023	Sulfate, total	184	mg/L
MW-393	Compliance	E003	10/31/2023	Temperature	17.1	degrees C
MW-393	Compliance	E003	10/31/2023	Thallium, total	0.0038 U	mg/L
MW-393	Compliance	E003	10/31/2023	Total Dissolved Solids	2,390	mg/L
MW-393	Compliance	E003	10/31/2023	Turbidity, field	7.10	NTU
MW-394	Compliance	E003	11/01/2023	Antimony, total	0.0004 U	mg/L
MW-394	Compliance	E003	11/01/2023	Arsenic, total	0.0004 U	mg/L
MW-394	Compliance	E003	11/01/2023	Barium, total	0.0324	mg/L
MW-394	Compliance	E003	11/01/2023	Beryllium, total	0.0002 U	mg/L
MW-394	Compliance	E003	11/01/2023	Boron, total	1.90	mg/L
MW-394	Compliance	E003	11/01/2023	Cadmium, total	0.0002 U	mg/L
MW-394	Compliance	E003	11/01/2023	Calcium, total	13.4	mg/L
MW-394	Compliance	E003	11/01/2023	Chloride, total	854	mg/L
MW-394	Compliance	E003	11/01/2023	Chromium, total	0.0007 U	mg/L
MW-394	Compliance	E003	11/01/2023	Cobalt, total	0.0001 U	mg/L
MW-394	Compliance	E003	11/01/2023	Dissolved Oxygen	2.43	mg/L
MW-394	Compliance	E003	11/01/2023	Fluoride, total	5.66	mg/L
MW-394	Compliance	E003	11/01/2023	Lead, total	0.0006 U	mg/L
MW-394	Compliance	E003	11/01/2023	Lithium, total	0.0907	mg/L
MW-394	Compliance	E003	11/01/2023	Mercury, total	0.00006 U	mg/L
MW-394	Compliance	E003	11/01/2023	Molybdenum, total	0.0006 U	mg/L
MW-394	Compliance	E003	11/01/2023	Oxidation Reduction Potential	-258	mV
MW-394	Compliance	E003	11/01/2023	pH (field)	7.9	SU
MW-394	Compliance	E003	11/01/2023	Radium 226 + Radium 228, total	0.947 U*	pCi/L
MW-394	Compliance	E003	11/01/2023	Selenium, total	0.0006 U	mg/L
MW-394	Compliance	E003	11/01/2023	Specific Conductance @ 25C (field)	4,420	micromhos/cm
MW-394	Compliance	E003	11/01/2023	Sulfate, total	187	mg/L
MW-394	Compliance	E003	11/01/2023	Temperature	16.2	degrees C
MW-394	Compliance	E003	11/01/2023	Thallium, total	0.001 U	mg/L
MW-394	Compliance	E003	11/01/2023	Total Dissolved Solids	2,500	mg/L
MW-394	Compliance	E003	11/01/2023	Turbidity, field	2.70	NTU
OW-256	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
OW-256	Compliance	E003	10/31/2023	Arsenic, total	0.00210	mg/L
OW-256	Compliance	E003	10/31/2023	Barium, total	0.130	mg/L
OW-256	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L
OW-256	Compliance	E003	10/31/2023	Boron, total	0.267 J+	mg/L
OW-256	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
OW-256	Compliance	E003	10/31/2023	Calcium, total	83.0	mg/L
OW-256	Compliance	E003	10/31/2023	Chloride, total	59.0	mg/L
OW-256	Compliance	E003	10/31/2023	Chromium, total	0.0011 J	mg/L
OW-256	Compliance	E003	10/31/2023	Cobalt, total	0.00110	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
OW-256	Compliance	E003	10/31/2023	Dissolved Oxygen	1.25	mg/L
OW-256	Compliance	E003	10/31/2023	Fluoride, total	0.290	mg/L
OW-256	Compliance	E003	10/31/2023	Lead, total	0.0006 U	mg/L
OW-256	Compliance	E003	10/31/2023	Lithium, total	0.0136	mg/L
OW-256	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
OW-256	Compliance	E003	10/31/2023	Molybdenum, total	0.0014 J	mg/L
OW-256	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-65.0	mV
OW-256	Compliance	E003	10/31/2023	pH (field)	6.8	SU
OW-256	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.796 U*	pCi/L
OW-256	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
OW-256	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	831	micromhos/cm
OW-256	Compliance	E003	10/31/2023	Sulfate, total	80.0	mg/L
OW-256	Compliance	E003	10/31/2023	Temperature	14.7	degrees C
OW-256	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L
OW-256	Compliance	E003	10/31/2023	Total Dissolved Solids	490	mg/L
OW-256	Compliance	E003	10/31/2023	Turbidity, field	10.0	NTU
OW-257	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
OW-257	Compliance	E003	10/31/2023	Arsenic, total	0.00520	mg/L
OW-257	Compliance	E003	10/31/2023	Barium, total	0.144	mg/L
OW-257	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L
OW-257	Compliance	E003	10/31/2023	Boron, total	0.615	mg/L
OW-257	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
OW-257	Compliance	E003	10/31/2023	Calcium, total	118	mg/L
OW-257	Compliance	E003	10/31/2023	Chloride, total	7.00	mg/L
OW-257	Compliance	E003	10/31/2023	Chromium, total	0.00500	mg/L
OW-257	Compliance	E003	10/31/2023	Cobalt, total	0.00460	mg/L
OW-257	Compliance	E003	10/31/2023	Dissolved Oxygen	1.30	mg/L
OW-257	Compliance	E003	10/31/2023	Fluoride, total	0.460	mg/L
OW-257	Compliance	E003	10/31/2023	Lead, total	0.00190	mg/L
OW-257	Compliance	E003	10/31/2023	Lithium, total	0.0365	mg/L
OW-257	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
OW-257	Compliance	E003	10/31/2023	Molybdenum, total	0.00400	mg/L
OW-257	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-33.0	mV
OW-257	Compliance	E003	10/31/2023	pH (field)	6.8	SU
OW-257	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.797 U*	pCi/L
OW-257	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
OW-257	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	1,050	micromhos/cm
OW-257	Compliance	E003	10/31/2023	Sulfate, total	112	mg/L
OW-257	Compliance	E003	10/31/2023	Temperature	13.4	degrees C
OW-257	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L
OW-257	Compliance	E003	10/31/2023	Total Dissolved Solids	700	mg/L
OW-257	Compliance	E003	10/31/2023	Turbidity, field	78.0	NTU
PZ-170	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Arsenic, total	0.00120	mg/L
PZ-170	Compliance	E003	10/31/2023	Barium, total	0.155	mg/L
PZ-170	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
PZ-170	Compliance	E003	10/31/2023	Boron, total	0.426	mg/L
PZ-170	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Calcium, total	200	mg/L
PZ-170	Compliance	E003	10/31/2023	Chloride, total	82.0	mg/L
PZ-170	Compliance	E003	10/31/2023	Chromium, total	0.0007 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Cobalt, total	0.00370	mg/L
PZ-170	Compliance	E003	10/31/2023	Dissolved Oxygen	0.970	mg/L
PZ-170	Compliance	E003	10/31/2023	Fluoride, total	0.210	mg/L
PZ-170	Compliance	E003	10/31/2023	Lead, total	0.0006 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Lithium, total	0.0361	mg/L
PZ-170	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Molybdenum, total	0.0007 J	mg/L
PZ-170	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-108	mV
PZ-170	Compliance	E003	10/31/2023	pH (field)	6.5	SU
PZ-170	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.63 U*	pCi/L
PZ-170	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	1,620	micromhos/cm
PZ-170	Compliance	E003	10/31/2023	Sulfate, total	232	mg/L
PZ-170	Compliance	E003	10/31/2023	Temperature	15.0	degrees C
PZ-170	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L
PZ-170	Compliance	E003	10/31/2023	Total Dissolved Solids	1,100	mg/L
PZ-170	Compliance	E003	10/31/2023	Turbidity, field	4.30	NTU
PZ-182	Compliance	E003	10/31/2023	Antimony, total	0.0004 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Arsenic, total	0.0005 J	mg/L
PZ-182	Compliance	E003	10/31/2023	Barium, total	0.0886	mg/L
PZ-182	Compliance	E003	10/31/2023	Beryllium, total	0.0002 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Boron, total	0.684	mg/L
PZ-182	Compliance	E003	10/31/2023	Cadmium, total	0.0002 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Calcium, total	171	mg/L
PZ-182	Compliance	E003	10/31/2023	Chloride, total	40.0	mg/L
PZ-182	Compliance	E003	10/31/2023	Chromium, total	0.0007 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Cobalt, total	0.0006 J	mg/L
PZ-182	Compliance	E003	10/31/2023	Dissolved Oxygen	0.700	mg/L
PZ-182	Compliance	E003	10/31/2023	Fluoride, total	0.180	mg/L
PZ-182	Compliance	E003	10/31/2023	Lead, total	0.0006 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Lithium, total	0.0173	mg/L
PZ-182	Compliance	E003	10/31/2023	Mercury, total	0.00006 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Molybdenum, total	0.0006 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Oxidation Reduction Potential	-71.0	mV
PZ-182	Compliance	E003	10/31/2023	pH (field)	6.6	SU
PZ-182	Compliance	E003	10/31/2023	Radium 226 + Radium 228, total	0.582 U*	pCi/L
PZ-182	Compliance	E003	10/31/2023	Selenium, total	0.0006 U	mg/L
PZ-182	Compliance	E003	10/31/2023	Specific Conductance @ 25C (field)	1,260	micromhos/cm
PZ-182	Compliance	E003	10/31/2023	Sulfate, total	207	mg/L
PZ-182	Compliance	E003	10/31/2023	Temperature	15.5	degrees C
PZ-182	Compliance	E003	10/31/2023	Thallium, total	0.001 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 4, 2023

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
PZ-182	Compliance	E003	10/31/2023	Total Dissolved Solids	804	mg/L
PZ-182	Compliance	E003	10/31/2023	Turbidity, field	8.90	NTU

Notes:

C = Celsius

cm = centimeter

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

SU = Standard Units

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

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

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

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

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-192	UU	E001	Antimony, total	mg/L	10/27/22 - 05/16/23	8	75	CI around median	0.001	0.006	Standard	No Exceedance
MW-192	UU	E001	Arsenic, total	mg/L	10/27/22 - 05/16/23	8	25	CI around geomean	0.00146	0.0104	Background	No Exceedance
MW-192	UU	E001	Barium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0825	2	Standard	No Exceedance
MW-192	UU	E001	Beryllium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-192	UU	E001	Boron, total	mg/L	10/27/22 - 05/16/23	8	25	CI around mean	0.0241	2.16	Background	No Exceedance
MW-192	UU	E001	Cadmium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-192	UU	E001	Chloride, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	18.9	1,370	Background	No Exceedance
MW-192	UU	E001	Chromium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.005	0.1	Standard	No Exceedance
MW-192	UU	E001	Cobalt, total	mg/L	10/27/22 - 05/16/23	8	38	CI around mean	0.00091	0.006	Standard	No Exceedance
MW-192	UU	E001	Fluoride, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.403	4	Standard	No Exceedance
MW-192	UU	E001	Lead, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.0075	Standard	No Exceedance
MW-192	UU	E001	Lithium, total	mg/L	10/27/22 - 05/16/23	8	12	CI around mean	0.00725	0.14	Background	No Exceedance
MW-192	UU	E001	Mercury, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-192	UU	E001	Molybdenum, total	mg/L	10/27/22 - 05/16/23	8	12	CI around mean	0.00248	0.1	Standard	No Exceedance
MW-192	UU	E001	pH (field)	SU	10/27/22 - 05/16/23	8	0	CI around median	6.5/7.0	6.5/11.11	Background/Background	No Exceedance
MW-192	UU	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/16/23	8	0	CI around mean	0.244	5	Standard	No Exceedance
MW-192	UU	E001	Selenium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-192	UU	E001	Sulfate, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	11	762	Background	No Exceedance
MW-192	UU	E001	Thallium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-192	UU	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	432	3,260	Background	No Exceedance
MW-193	UU	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-193	UU	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.00124	0.0104	Background	No Exceedance
MW-193	UU	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0703	2	Standard	No Exceedance
MW-193	UU	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-193	UU	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.0287	2.16	Background	No Exceedance
MW-193	UU	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-193	UU	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	34.8	1,370	Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-193	UU	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	75	CI around median	0.0015	0.1	Standard	No Exceedance
MW-193	UU	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	88	Most recent sample	0.001	0.006	Standard	No Exceedance
MW-193	UU	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	0.191	4	Standard	No Exceedance
MW-193	UU	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
MW-193	UU	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	25	CI around mean	0.00474	0.14	Background	No Exceedance
MW-193	UU	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-193	UU	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.0015	0.1	Standard	No Exceedance
MW-193	UU	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	6.7/7.2	6.5/11.11	Background/Background	No Exceedance
MW-193	UU	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.376	5	Standard	No Exceedance
MW-193	UU	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-193	UU	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	152	762	Background	No Exceedance
MW-193	UU	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-193	UU	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	523	3,260	Background	No Exceedance
MW-356	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	23	91	CI around median	0.001	0.006	Standard	No Exceedance
MW-356	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	26	81	CI around median	0.001	0.0104	Background	No Exceedance
MW-356	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	26	0	CI around median	0.0297	2	Standard	No Exceedance
MW-356	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-356	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	27	0	CI around median	1.94	2.16	Background	No Exceedance
MW-356	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-356	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	28.6	1,370	Background	No Exceedance
MW-356	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	25	100	All ND - Last	0.005	0.1	Standard	No Exceedance
MW-356	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	24	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-356	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	1.9	4	Standard	No Exceedance
MW-356	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	24	96	CI around median	0.001	0.0075	Standard	No Exceedance
MW-356	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	26	0	CB around linear reg	0.0551	0.14	Background	No Exceedance
MW-356	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-356	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	26	58	CI around median	0.0015	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-356	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	27	0	CI around median	7.7/7.8	6.5/11.11	Background/Background	No Exceedance
MW-356	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	26	0	CI around median	0.1	5	Standard	No Exceedance
MW-356	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	23	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-356	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	44.4	762	Background	No Exceedance
MW-356	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-356	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	26	0	CI around mean	663	3,260	Background	No Exceedance
MW-369	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	17	76	CB around T-S line	-0.00196	0.006	Standard	No Exceedance
MW-369	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	20	10	CI around geomean	0.00151	0.0104	Background	No Exceedance
MW-369	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	20	0	CB around T-S line	0.073	2	Standard	No Exceedance
MW-369	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-369	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	-0.171	2.16	Background	No Exceedance
MW-369	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-369	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around geomean	84.1	1,370	Background	No Exceedance
MW-369	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	19	90	CB around T-S line	0.00145	0.1	Standard	No Exceedance
MW-369	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	18	83	CI around median	0.001	0.006	Standard	No Exceedance
MW-369	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	21	0	CB around T-S line	-1.07	4	Standard	No Exceedance
MW-369	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	18	94	CI around median	0.001	0.0075	Standard	No Exceedance
MW-369	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	20	5	CI around mean	0.0212	0.14	Background	No Exceedance
MW-369	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-369	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	20	5	CB around T-S line	-0.00666	0.1	Standard	No Exceedance
MW-369	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	21	0	CB around linear reg	6.5/8.1	6.5/11.11	Background/Background	No Exceedance
MW-369	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	20	0	CI around mean	0.376	5	Standard	No Exceedance
MW-369	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	17	59	CB around T-S line	-0.0273	0.05	Standard	No Exceedance
MW-369	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	21	0	CB around T-S line	-73.6	762	Background	No Exceedance
MW-369	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-369	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	21	0	CI around median	726	3,260	Background	No Exceedance
MW-370	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	23	74	CB around T-S line	-0.000389	0.006	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-370	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	26	54	CB around T-S line	0.000139	0.0104	Background	No Exceedance
MW-370	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	26	0	CB around T-S line	0.0241	2	Standard	No Exceedance
MW-370	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-370	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	27	0	CI around median	1.79	2.16	Background	No Exceedance
MW-370	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-370	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	1,380	1,370	Background	Determined
MW-370	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	25	96	CB around T-S line	0.00142	0.1	Standard	No Exceedance
MW-370	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	24	96	CI around median	0.001	0.006	Standard	No Exceedance
MW-370	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	2.97	4	Standard	No Exceedance
MW-370	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	24	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
MW-370	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	26	0	CI around mean	0.13	0.14	Background	No Exceedance
MW-370	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-370	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	26	4	CB around linear reg	0.00644	0.1	Standard	No Exceedance
MW-370	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	27	0	CB around linear reg	7.3/7.6	6.5/11.11	Background/Background	No Exceedance
MW-370	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	26	0	CI around geomean	0.517	5	Standard	No Exceedance
MW-370	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	23	96	Most recent sample	0.001	0.05	Standard	No Exceedance
MW-370	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	248	762	Background	No Exceedance
MW-370	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-370	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	2,940	3,260	Background	No Exceedance
MW-382	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	17	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-382	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	20	25	CI around median	0.0011	0.0104	Background	No Exceedance
MW-382	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	20	0	CI around mean	0.0172	2	Standard	No Exceedance
MW-382	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	15	93	CI around median	0.001	0.004	Standard	No Exceedance
MW-382	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	21	0	CI around median	1.72	2.16	Background	No Exceedance
MW-382	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-382	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around mean	34.9	1,370	Background	No Exceedance
MW-382	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	19	10	CB around linear reg	0.00577	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-382	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	18	72	CB around T-S line	0.001	0.006	Standard	No Exceedance
MW-382	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around geomean	2.78	4	Standard	No Exceedance
MW-382	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	18	67	CB around T-S line	0.001	0.0075	Standard	No Exceedance
MW-382	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	20	0	CI around mean	0.058	0.14	Background	No Exceedance
MW-382	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-382	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	20	20	CB around T-S line	0.00222	0.1	Standard	No Exceedance
MW-382	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	21	0	CI around mean	7.7/7.9	6.5/11.11	Background/Background	No Exceedance
MW-382	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	20	0	CI around geomean	0.289	5	Standard	No Exceedance
MW-382	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	17	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-382	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	354	762	Background	No Exceedance
MW-382	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-382	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	1,060	3,260	Background	No Exceedance
MW-392	UA	E001	Antimony, total	mg/L	10/27/22 - 05/16/23	8	75	CI around median	0.001	0.006	Standard	No Exceedance
MW-392	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/16/23	8	50	CI around geomean	0.000901	0.0104	Background	No Exceedance
MW-392	UA	E001	Barium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0345	2	Standard	No Exceedance
MW-392	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-392	UA	E001	Boron, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	1.58	2.16	Background	No Exceedance
MW-392	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-392	UA	E001	Chloride, total	mg/L	10/27/22 - 05/16/23	8	0	CI around median	334	1,370	Background	No Exceedance
MW-392	UA	E001	Chromium, total	mg/L	10/27/22 - 05/16/23	8	62	CI around median	0.0015	0.1	Standard	No Exceedance
MW-392	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.006	Standard	No Exceedance
MW-392	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	3.63	4	Standard	No Exceedance
MW-392	UA	E001	Lead, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.0075	Standard	No Exceedance
MW-392	UA	E001	Lithium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0497	0.14	Background	No Exceedance
MW-392	UA	E001	Mercury, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-392	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/16/23	8	62	CI around median	0.0015	0.1	Standard	No Exceedance
MW-392	UA	E001	pH (field)	SU	10/27/22 - 05/16/23	8	0	CI around mean	7.3/7.9	6.5/11.11	Background/Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-392	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/16/23	8	0	CI around mean	0.237	5	Standard	No Exceedance
MW-392	UA	E001	Selenium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-392	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/16/23	8	0	CI around geomean	45.9	762	Background	No Exceedance
MW-392	UA	E001	Thallium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-392	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	1,410	3,260	Background	No Exceedance
MW-393	UA	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	75	CI around median	0.001	0.006	Standard	No Exceedance
MW-393	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.0104	Background	No Exceedance
MW-393	UA	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around geomean	0.0224	2	Standard	No Exceedance
MW-393	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-393	UA	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1.47	2.16	Background	No Exceedance
MW-393	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-393	UA	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	617	1,370	Background	No Exceedance
MW-393	UA	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.0015	0.1	Standard	No Exceedance
MW-393	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	88	CI around median	0.001	0.006	Standard	No Exceedance
MW-393	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	7.49	4	Standard	Determined
MW-393	UA	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0075	0.0075	Standard	No Exceedance
MW-393	UA	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0519	0.14	Background	No Exceedance
MW-393	UA	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-393	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	38	CI around mean	-0.000199	0.1	Standard	No Exceedance
MW-393	UA	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	7.7/8.4	6.5/11.11	Background/Background	No Exceedance
MW-393	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0868	5	Standard	No Exceedance
MW-393	UA	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-393	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	104	762	Background	No Exceedance
MW-393	UA	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-393	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around median	826	3,260	Background	No Exceedance
MW-394	UA	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	50	CI around mean	0.00085	0.006	Standard	No Exceedance
MW-394	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	25	CI around median	0.001	0.0104	Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
MW-394	UA	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0258	2	Standard	No Exceedance
MW-394	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.004	Standard	No Exceedance
MW-394	UA	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1.53	2.16	Background	No Exceedance
MW-394	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.005	Standard	No Exceedance
MW-394	UA	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	490	1,370	Background	No Exceedance
MW-394	UA	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	50	CI around mean	-6.91e-06	0.1	Standard	No Exceedance
MW-394	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.006	Standard	No Exceedance
MW-394	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	3.25	4	Standard	No Exceedance
MW-394	UA	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.0075	Standard	No Exceedance
MW-394	UA	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0438	0.14	Background	No Exceedance
MW-394	UA	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-394	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.00443	0.1	Standard	No Exceedance
MW-394	UA	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	7.6/8.1	6.5/11.11	Background/Background	No Exceedance
MW-394	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.301	5	Standard	No Exceedance
MW-394	UA	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	88	Most recent sample	0.001	0.05	Standard	No Exceedance
MW-394	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	77.3	762	Background	No Exceedance
MW-394	UA	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-394	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1,770	3,260	Background	No Exceedance
OW-256	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.006	Standard	No Exceedance
OW-256	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.01	0.0104	Background	No Exceedance
OW-256	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.102	2	Standard	No Exceedance
OW-256	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.004	Standard	No Exceedance
OW-256	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.187	2.16	Background	No Exceedance
OW-256	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.005	Standard	No Exceedance
OW-256	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	54	1,370	Background	No Exceedance
OW-256	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.005	0.1	Standard	No Exceedance
OW-256	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.0015	0.006	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
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 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
OW-256	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.25	4	Standard	No Exceedance
OW-256	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0075	0.0075	Standard	No Exceedance
OW-256	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.005	0.14	Background	No Exceedance
OW-256	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
OW-256	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.1	Standard	No Exceedance
OW-256	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.7/6.7	6.5/11.11	Background/Background	No Exceedance
OW-256	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.717	5	Standard	No Exceedance
OW-256	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.05	Standard	No Exceedance
OW-256	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	64	762	Background	No Exceedance
OW-256	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002	Standard	No Exceedance
OW-256	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	514	3,260	Background	No Exceedance
OW-257	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.005	0.006	Standard	No Exceedance
OW-257	PMP	E001R	Antimony, total	mg/L	03/14/23 - 07/10/23	3	67	Most recent sample	0.001	0.006	Standard	No Exceedance
OW-257	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.103	0.0104	Background	Potential
OW-257	PMP	E001R	Arsenic, total	mg/L	03/14/23 - 07/10/23	3	33	Most recent sample	0.01	0.0104	Background	Not Confirmed
OW-257	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.975	2	Standard	No Exceedance
OW-257	PMP	E001R	Barium, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	0.126	2	Standard	No Exceedance
OW-257	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.0097	0.004	Standard	Potential
OW-257	PMP	E001R	Beryllium, total	mg/L	03/14/23 - 07/10/23	3	67	Most recent sample	0.0005	0.004	Standard	Not Confirmed
OW-257	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.49	2.16	Background	No Exceedance
OW-257	PMP	E001R	Boron, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	0.463	2.16	Background	No Exceedance
OW-257	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.0045	0.005	Standard	No Exceedance
OW-257	PMP	E001R	Cadmium, total	mg/L	03/14/23 - 07/10/23	3	67	Most recent sample	0.002	0.005	Standard	No Exceedance
OW-257	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	7	1,370	Background	No Exceedance
OW-257	PMP	E001R	Chloride, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	8	1,370	Background	No Exceedance
OW-257	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.214	0.1	Standard	Potential
OW-257	PMP	E001R	Chromium, total	mg/L	03/14/23 - 07/10/23	3	33	Most recent sample	0.005	0.1	Standard	Not Confirmed

TABLE 2.
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845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
OW-257	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.203	0.006	Standard	Potential
OW-257	PMP	E001R	Cobalt, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	0.0032	0.006	Standard	Not Confirmed
OW-257	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.37	4	Standard	No Exceedance
OW-257	PMP	E001R	Fluoride, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	0.44	4	Standard	No Exceedance
OW-257	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.214	0.0075	Standard	Potential
OW-257	PMP	E001R	Lead, total	mg/L	03/14/23 - 07/10/23	3	33	Most recent sample	0.0075	0.0075	Standard	Not Confirmed
OW-257	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.207	0.14	Background	Potential
OW-257	PMP	E001R	Lithium, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	0.0333	0.14	Background	Not Confirmed
OW-257	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
OW-257	PMP	E001R	Mercury, total	mg/L	03/14/23 - 07/10/23	3	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
OW-257	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.01	0.1	Standard	No Exceedance
OW-257	PMP	E001R	Molybdenum, total	mg/L	03/14/23 - 07/10/23	3	67	Most recent sample	0.01	0.1	Standard	No Exceedance
OW-257	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.8/6.8	6.5/11.11	Background/Background	No Exceedance
OW-257	PMP	E001R	pH (field)	SU	03/14/23 - 07/10/23	3	0	Most recent sample	6.8/6.8	6.5/11.11	Background/Background	No Exceedance
OW-257	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	25.3	5	Standard	Potential
OW-257	PMP	E001R	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 07/10/23	3	0	Most recent sample	1.33	5	Standard	Not Confirmed
OW-257	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.05	Standard	No Exceedance
OW-257	PMP	E001R	Selenium, total	mg/L	03/14/23 - 07/10/23	3	100	Most recent sample	0.001	0.05	Standard	No Exceedance
OW-257	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	118	762	Background	No Exceedance
OW-257	PMP	E001R	Sulfate, total	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	115	762	Background	No Exceedance
OW-257	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.002	Standard	Potential
OW-257	PMP	E001R	Thallium, total	mg/L	03/14/23 - 07/10/23	3	100	Most recent sample	0.002	0.002	Standard	Not Confirmed
OW-257	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	1,270	3,260	Background	No Exceedance
OW-257	PMP	E001R	Total Dissolved Solids	mg/L	03/14/23 - 07/10/23	3	0	Most recent sample	710	3,260	Background	No Exceedance
PZ-170	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.001	0.006	Standard	No Exceedance
PZ-170	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.0104	Background	No Exceedance
PZ-170	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0975	2	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
PZ-170	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.004	Standard	No Exceedance
PZ-170	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.267	2.16	Background	No Exceedance
PZ-170	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.005	Standard	No Exceedance
PZ-170	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	35	1,370	Background	No Exceedance
PZ-170	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.005	0.1	Standard	No Exceedance
PZ-170	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0046	0.006	Standard	No Exceedance
PZ-170	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.18	4	Standard	No Exceedance
PZ-170	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0075	0.0075	Standard	No Exceedance
PZ-170	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0291	0.14	Background	No Exceedance
PZ-170	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
PZ-170	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.1	Standard	No Exceedance
PZ-170	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.5/6.5	6.5/11.11	Background/Background	No Exceedance
PZ-170	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.181	5	Standard	No Exceedance
PZ-170	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.05	Standard	No Exceedance
PZ-170	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	170	762	Background	No Exceedance
PZ-170	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002	Standard	No Exceedance
PZ-170	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	730	3,260	Background	No Exceedance
PZ-182	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.006	Standard	No Exceedance
PZ-182	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.01	0.0104	Background	No Exceedance
PZ-182	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0692	2	Standard	No Exceedance
PZ-182	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.004	Standard	No Exceedance
PZ-182	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.484	2.16	Background	No Exceedance
PZ-182	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.005	Standard	No Exceedance
PZ-182	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	88	1,370	Background	No Exceedance
PZ-182	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.005	0.1	Standard	No Exceedance
PZ-182	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.001	0.006	Standard	No Exceedance
PZ-182	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.19	4	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Exceedance Type
PZ-182	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.0075	0.0075	Standard	No Exceedance
PZ-182	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0069	0.14	Background	No Exceedance
PZ-182	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
PZ-182	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.1	Standard	No Exceedance
PZ-182	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.6/6.6	6.5/11.11	Background/Background	No Exceedance
PZ-182	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.925	5	Standard	No Exceedance
PZ-182	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.05	Standard	No Exceedance
PZ-182	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	254	762	Background	No Exceedance
PZ-182	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002	Standard	No Exceedance
PZ-182	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	1,120	3,260	Background	No Exceedance

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

Notes:

Exceedance Type:

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

Not Confirmed: An exceedance was determined in the parent event, a resample was collected, and the resample did not confirm the exceedance.

Potential: An individual LCL or UCL exceeded the GWPS; resample has been collected and not confirmed the exceedance OR resample is pending.

Determined: An exceedance was determined without comparison to a resample.

HSU = hydrostratigraphic unit:

PMP = Potential Migration Pathway

UA = Uppermost Aquifer

UU = Upper Unit

LCL = Lower Confidence Limit

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

R = resample

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

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

GWPS = Groundwater Protection Standard

GWPS Source:

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

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

UCL = Upper Confidence Limit

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-192	UU	E002	Antimony, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.001	0.006	Standard	No Exceedance
MW-192	UU	E002	Arsenic, total	mg/L	10/27/22 - 08/04/23	9	22	CI around geomean	0.0016	0.0104	Background	No Exceedance
MW-192	UU	E002	Barium, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.0878	2.0	Standard	No Exceedance
MW-192	UU	E002	Beryllium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-192	UU	E002	Boron, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.0263	2.16	Background	No Exceedance
MW-192	UU	E002	Cadmium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-192	UU	E002	Chloride, total	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	15.8	1,370	Background	No Exceedance
MW-192	UU	E002	Chromium, total	mg/L	10/27/22 - 08/04/23	9	89	CI around median	0.0015	0.1	Standard	No Exceedance
MW-192	UU	E002	Cobalt, total	mg/L	10/27/22 - 08/04/23	9	33	CI around mean	0.000988	0.006	Standard	No Exceedance
MW-192	UU	E002	Fluoride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.407	4.0	Standard	No Exceedance
MW-192	UU	E002	Lead, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.001	0.0075	Standard	No Exceedance
MW-192	UU	E002	Lithium, total	mg/L	10/27/22 - 08/04/23	9	11	CB around linear reg	-0.0254	0.140	Background	No Exceedance
MW-192	UU	E002	Mercury, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-192	UU	E002	Molybdenum, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.00191	0.1	Standard	No Exceedance
MW-192	UU	E002	pH (field)	SU	10/27/22 - 08/04/23	9	0	CI around mean	6.7/7.0	6.5/11.1	Standard/Background	No Exceedance
MW-192	UU	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/04/23	9	0	CI around mean	0.26	5	Standard	No Exceedance
MW-192	UU	E002	Selenium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-192	UU	E002	Sulfate, total	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	1.99	762	Background	No Exceedance
MW-192	UU	E002	Thallium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-192	UU	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	140	3,260	Background	No Exceedance
MW-193	UU	E002	Antimony, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-193	UU	E002	Arsenic, total	mg/L	10/27/22 - 08/04/23	9	11	CI around mean	0.00125	0.0104	Background	No Exceedance
MW-193	UU	E002	Barium, total	mg/L	10/27/22 - 08/04/23	9	0	CI around geomean	0.0719	2.0	Standard	No Exceedance
MW-193	UU	E002	Beryllium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-193	UU	E002	Boron, total	mg/L	10/27/22 - 08/04/23	9	11	CI around mean	0.0318	2.16	Background	No Exceedance
MW-193	UU	E002	Cadmium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-193	UU	E002	Chloride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	34.8	1,370	Background	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-193	UU	E002	Chromium, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.0015	0.1	Standard	No Exceedance
MW-193	UU	E002	Cobalt, total	mg/L	10/27/22 - 08/04/23	9	89	Most recent sample	0.001	0.006	Standard	No Exceedance
MW-193	UU	E002	Fluoride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.241	4.0	Standard	No Exceedance
MW-193	UU	E002	Lead, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.0075	Standard	No Exceedance
MW-193	UU	E002	Lithium, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.00458	0.140	Background	No Exceedance
MW-193	UU	E002	Mercury, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-193	UU	E002	Molybdenum, total	mg/L	10/27/22 - 08/04/23	9	67	CI around median	0.0015	0.1	Standard	No Exceedance
MW-193	UU	E002	pH (field)	SU	10/27/22 - 08/04/23	9	0	CI around mean	6.6/7.2	6.5/11.1	Standard/Background	No Exceedance
MW-193	UU	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/04/23	9	0	CI around mean	0.413	5	Standard	No Exceedance
MW-193	UU	E002	Selenium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-193	UU	E002	Sulfate, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	151	762	Background	No Exceedance
MW-193	UU	E002	Thallium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-193	UU	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	531	3,260	Background	No Exceedance
MW-356	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	24	92	CI around median	0.001	0.006	Standard	No Exceedance
MW-356	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	27	82	CI around median	0.001	0.0104	Background	No Exceedance
MW-356	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around median	0.0297	2.0	Standard	No Exceedance
MW-356	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-356	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	28	0	CI around median	1.94	2.16	Background	No Exceedance
MW-356	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-356	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	28.1	1,370	Background	No Exceedance
MW-356	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	26	100	All ND - Last	0.0015	0.1	Standard	No Exceedance
MW-356	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	25	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-356	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	1.95	4.0	Standard	No Exceedance
MW-356	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	25	96	CI around median	0.001	0.0075	Standard	No Exceedance
MW-356	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.0524	0.140	Background	No Exceedance
MW-356	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-356	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	27	59	CI around median	0.0015	0.1	Standard	No Exceedance

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-356	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	28	0	CI around median	7.7/7.8	6.5/11.1	Standard/Background	No Exceedance
MW-356	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	27	0	CI around median	0.1	5	Standard	No Exceedance
MW-356	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	24	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-356	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	28	0	CI around mean	44.4	762	Background	No Exceedance
MW-356	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-356	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	27	0	CI around mean	658	3,260	Background	No Exceedance
MW-369	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	18	78	CB around T-S line	-0.00132	0.006	Standard	No Exceedance
MW-369	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	21	14	CI around geomean	0.00138	0.0104	Background	No Exceedance
MW-369	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	21	0	CB around T-S line	0.0794	2.0	Standard	No Exceedance
MW-369	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-369	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	-0.189	2.16	Background	No Exceedance
MW-369	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-369	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around geomean	82	1,370	Background	No Exceedance
MW-369	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	20	90	CB around T-S line	0.00135	0.1	Standard	No Exceedance
MW-369	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	19	84	CI around median	0.001	0.006	Standard	No Exceedance
MW-369	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	22	0	CB around T-S line	-1.2	4.0	Standard	No Exceedance
MW-369	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	19	95	CI around median	0.001	0.0075	Standard	No Exceedance
MW-369	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	21	5	CI around mean	0.0206	0.140	Background	No Exceedance
MW-369	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-369	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	21	5	CB around T-S line	-0.00682	0.1	Standard	No Exceedance
MW-369	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	22	0	CI around mean	7.3/8.1	6.5/11.1	Standard/Background	No Exceedance
MW-369	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	21	0	CI around mean	0.399	5	Standard	No Exceedance
MW-369	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	18	61	CB around T-S line	-0.0221	0.05	Standard	No Exceedance
MW-369	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	22	0	CB around T-S line	-107	762	Background	No Exceedance
MW-369	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-369	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	22	0	CI around median	720	3,260	Background	No Exceedance
MW-370	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	24	75	CB around T-S line	-0.000263	0.006	Standard	No Exceedance

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-370	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	27	56	CB around T-S line	0.000178	0.0104	Background	No Exceedance
MW-370	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	27	0	CB around T-S line	0.0261	2.0	Standard	No Exceedance
MW-370	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-370	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	28	0	CI around median	1.77	2.16	Background	No Exceedance
MW-370	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-370	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	1,370	1,370	Background	No Exceedance
MW-370	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	26	96	CB around T-S line	0.00143	0.1	Standard	No Exceedance
MW-370	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	25	96	CI around median	0.001	0.006	Standard	No Exceedance
MW-370	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	2.98	4.0	Standard	No Exceedance
MW-370	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	25	100	All ND - Last	0.001	0.0075	Standard	No Exceedance
MW-370	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.129	0.140	Background	No Exceedance
MW-370	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-370	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	27	4	CB around linear reg	0.00585	0.1	Standard	No Exceedance
MW-370	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	28	0	CB around linear reg	7.3/7.6	6.5/11.1	Standard/Background	No Exceedance
MW-370	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.527	5	Standard	No Exceedance
MW-370	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	24	96	Most recent sample	0.001	0.05	Standard	No Exceedance
MW-370	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	28	0	CI around mean	248	762	Background	No Exceedance
MW-370	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-370	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	2,930	3,260	Background	No Exceedance
MW-382	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	18	100	All ND - Last	0.001	0.006	Standard	No Exceedance
MW-382	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	21	24	CI around median	0.0012	0.0104	Background	No Exceedance
MW-382	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	21	0	CI around mean	0.0176	2.0	Standard	No Exceedance
MW-382	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	16	94	CI around median	0.001	0.004	Standard	No Exceedance
MW-382	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	22	0	CI around median	1.71	2.16	Background	No Exceedance
MW-382	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-382	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around mean	34.3	1,370	Background	No Exceedance
MW-382	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	20	10	CB around linear reg	0.00687	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-382	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	19	68	CB around T-S line	0.001	0.006	Standard	No Exceedance
MW-382	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around geomean	2.78	4.0	Standard	No Exceedance
MW-382	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	19	63	CB around T-S line	0.001	0.0075	Standard	No Exceedance
MW-382	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	21	0	CI around mean	0.0578	0.140	Background	No Exceedance
MW-382	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-382	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	21	19	CB around T-S line	0.00221	0.1	Standard	No Exceedance
MW-382	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	22	0	CI around mean	7.7/7.9	6.5/11.1	Standard/Background	No Exceedance
MW-382	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	21	0	CI around geomean	0.308	5	Standard	No Exceedance
MW-382	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	18	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-382	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	344	762	Background	No Exceedance
MW-382	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-382	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	1,030	3,260	Background	No Exceedance
MW-392	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	78	CI around median	0.001	0.006	Standard	No Exceedance
MW-392	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.001	0.0104	Background	No Exceedance
MW-392	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0355	2.0	Standard	No Exceedance
MW-392	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-392	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1.61	2.16	Background	No Exceedance
MW-392	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-392	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around median	648	1,370	Background	No Exceedance
MW-392	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.1	Standard	No Exceedance
MW-392	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.006	Standard	No Exceedance
MW-392	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	3.65	4.0	Standard	No Exceedance
MW-392	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.0075	Standard	No Exceedance
MW-392	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0532	0.140	Background	No Exceedance
MW-392	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-392	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.1	Standard	No Exceedance
MW-392	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.4/7.9	6.5/11.1	Standard/Background	No Exceedance

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-392	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.322	5	Standard	No Exceedance
MW-392	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-392	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	47.2	762	Background	No Exceedance
MW-392	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-392	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1,460	3,260	Background	No Exceedance
MW-393	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	78	CI around median	0.001	0.006	Standard	No Exceedance
MW-393	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.0104	Background	No Exceedance
MW-393	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	0.023	2.0	Standard	No Exceedance
MW-393	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-393	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	1.54	2.16	Background	No Exceedance
MW-393	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-393	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	480	1,370	Background	No Exceedance
MW-393	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.1	Standard	No Exceedance
MW-393	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.006	Standard	No Exceedance
MW-393	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	6.17	4.0	Standard	Exceedance
MW-393	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.0075	Standard	No Exceedance
MW-393	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0529	0.140	Background	No Exceedance
MW-393	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-393	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	44	CI around mean	-2.82e-05	0.1	Standard	No Exceedance
MW-393	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.8/8.4	6.5/11.1	Standard/Background	No Exceedance
MW-393	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.165	5	Standard	No Exceedance
MW-393	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.05	Standard	No Exceedance
MW-393	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	61.3	762	Background	No Exceedance
MW-393	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-393	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around median	1,870	3,260	Background	No Exceedance
MW-394	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.001	0.006	Standard	No Exceedance
MW-394	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	33	CI around median	0.001	0.0104	Background	No Exceedance

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

845 QUARTERLY REPORT
 BALDWIN POWER PLANT
 BOTTOM ASH POND
 BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
MW-394	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0271	2.0	Standard	No Exceedance
MW-394	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.004	Standard	No Exceedance
MW-394	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1.49	2.16	Background	No Exceedance
MW-394	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.005	Standard	No Exceedance
MW-394	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	438	1,370	Background	No Exceedance
MW-394	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.0015	0.1	Standard	No Exceedance
MW-394	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.006	Standard	No Exceedance
MW-394	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	2.99	4.0	Standard	No Exceedance
MW-394	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.0075	Standard	No Exceedance
MW-394	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0441	0.140	Background	No Exceedance
MW-394	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
MW-394	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	11	CI around mean	0.00514	0.1	Standard	No Exceedance
MW-394	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.6/8.0	6.5/11.1	Standard/Background	No Exceedance
MW-394	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.358	5	Standard	No Exceedance
MW-394	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	89	Most recent sample	0.001	0.05	Standard	No Exceedance
MW-394	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	45.3	762	Background	No Exceedance
MW-394	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002	Standard	No Exceedance
MW-394	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1,670	3,260	Background	No Exceedance
OW-256	PMP	E002	Antimony, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.006	Standard	No Exceedance
OW-256	PMP	E002	Arsenic, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0013	0.0104	Background	No Exceedance
OW-256	PMP	E002	Barium, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.0915	2.0	Standard	No Exceedance
OW-256	PMP	E002	Beryllium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.004	Standard	No Exceedance
OW-256	PMP	E002	Boron, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.187	2.16	Background	No Exceedance
OW-256	PMP	E002	Cadmium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.005	Standard	No Exceedance
OW-256	PMP	E002	Chloride, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	55	1,370	Background	No Exceedance
OW-256	PMP	E002	Chromium, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.002	0.1	Standard	No Exceedance
OW-256	PMP	E002	Cobalt, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0011	0.006	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
OW-256	PMP	E002	Fluoride, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.25	4.0	Standard	No Exceedance
OW-256	PMP	E002	Lead, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.0023	0.0075	Standard	No Exceedance
OW-256	PMP	E002	Lithium, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0082	0.140	Background	No Exceedance
OW-256	PMP	E002	Mercury, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
OW-256	PMP	E002	Molybdenum, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.0016	0.1	Standard	No Exceedance
OW-256	PMP	E002	pH (field)	SU	03/14/23 - 08/03/23	3	0	Most recent sample	6.8/6.8	6.5/11.1	Standard/Background	No Exceedance
OW-256	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.66	5	Standard	No Exceedance
OW-256	PMP	E002	Selenium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.05	Standard	No Exceedance
OW-256	PMP	E002	Sulfate, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	69	762	Background	No Exceedance
OW-256	PMP	E002	Thallium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.002	0.002	Standard	No Exceedance
OW-256	PMP	E002	Total Dissolved Solids	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	478	3,260	Background	No Exceedance
PZ-170	PMP	E002	pH (field)	SU	03/14/23 - 08/04/23	3	0	Most recent sample	6.6/6.6	6.5/11.1	Standard/Background	No Exceedance
PZ-170	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/04/23	3	0	Most recent sample	1.16	5	Standard	No Exceedance
PZ-182	PMP	E002	Antimony, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.006	Standard	No Exceedance
PZ-182	PMP	E002	Arsenic, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.0104	Background	No Exceedance
PZ-182	PMP	E002	Barium, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.0712	2.0	Standard	No Exceedance
PZ-182	PMP	E002	Beryllium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.004	Standard	No Exceedance
PZ-182	PMP	E002	Boron, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.476	2.16	Background	No Exceedance
PZ-182	PMP	E002	Cadmium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.005	Standard	No Exceedance
PZ-182	PMP	E002	Chloride, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	40	1,370	Background	No Exceedance
PZ-182	PMP	E002	Chromium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0015	0.1	Standard	No Exceedance
PZ-182	PMP	E002	Cobalt, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.006	Standard	No Exceedance
PZ-182	PMP	E002	Fluoride, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.16	4.0	Standard	No Exceedance
PZ-182	PMP	E002	Lead, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.0075	Standard	No Exceedance
PZ-182	PMP	E002	Lithium, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.0155	0.140	Background	No Exceedance
PZ-182	PMP	E002	Mercury, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
PZ-182	PMP	E002	Molybdenum, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0015	0.1	Standard	No Exceedance

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
PZ-182	PMP	E002	pH (field)	SU	03/14/23 - 08/15/23	3	0	Most recent sample	6.4/6.4	6.5/11.1	Standard/Background	Exceedance
PZ-182	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/15/23	3	0	Most recent sample	1.4	5	Standard	No Exceedance
PZ-182	PMP	E002	Selenium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.05	Standard	No Exceedance
PZ-182	PMP	E002	Sulfate, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	172	762	Background	No Exceedance
PZ-182	PMP	E002	Thallium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.002	0.002	Standard	No Exceedance
PZ-182	PMP	E002	Total Dissolved Solids	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	772	3,260	Background	No Exceedance

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

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Notes:

Compliance Result:

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

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

PMP = Potential Migration Pathway

UA = Uppermost Aquifer

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

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

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

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

GWPS = Groundwater Protection Standard

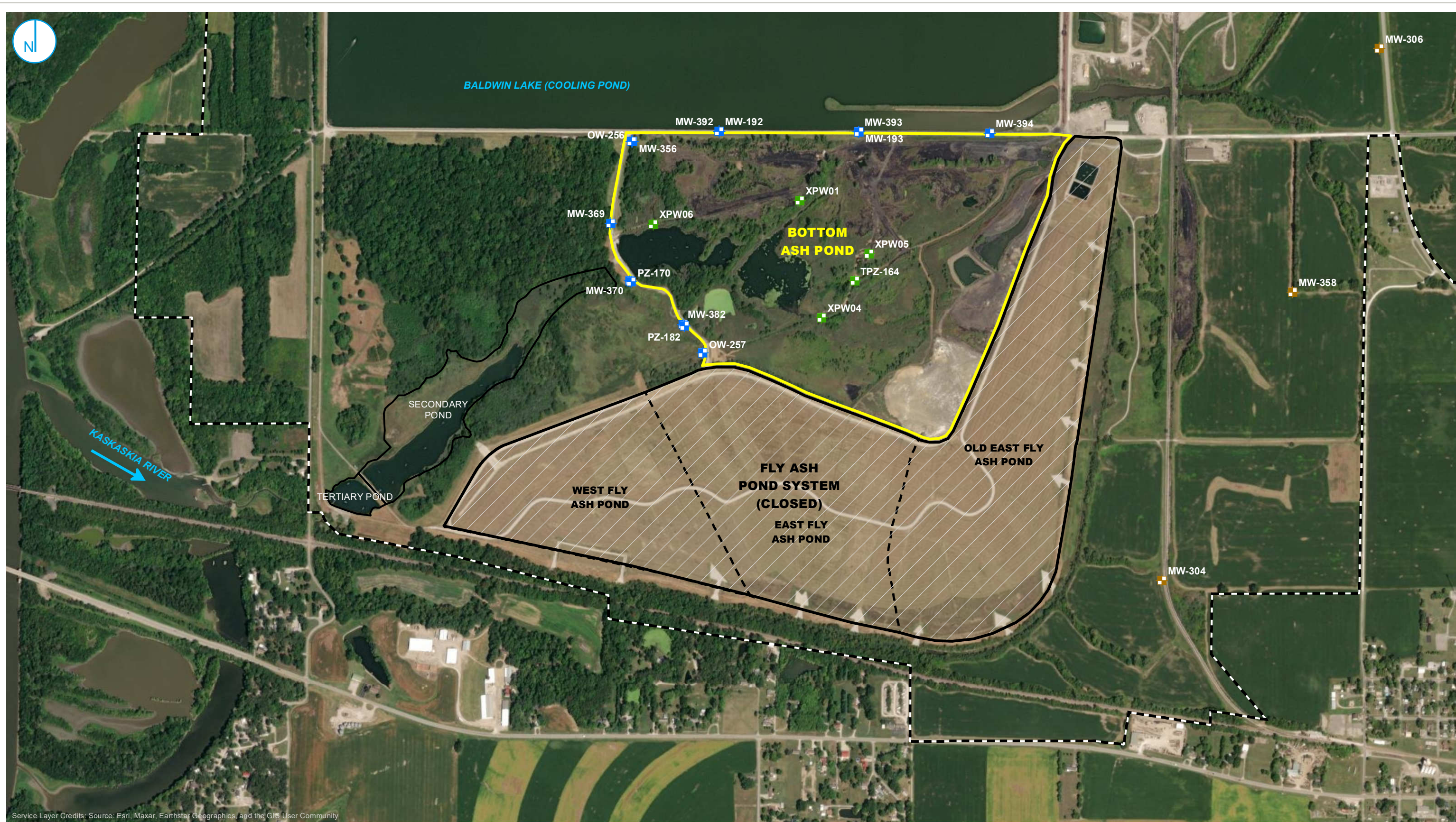
GWPS Source:

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

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

FIGURES

PROJECT: 16900XXXXX | DATED: 6/20/2023 | DESIGNER: GALARNMIC
 Y:\Mapping\Projects\222285\MXD\845_Operating_Permit\Baldwin\BAP\2023_Update\GMP\Figure 2-1_BAL BAP Proposed Monitoring Well Network.mxd



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

- BACKGROUND WELL
- COMPLIANCE WELL
- PORE WATER WELL
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM (CLOSED)
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY



35 I.A.C. § 845 GROUNDWATER MONITORING WELL LOCATION MAP

BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.





- TOTAL CHLORIDE EXCEEDANCE
- TOTAL FLUORIDE EXCEEDANCE
- MONITORING WELL LOCATION WITHOUT EXCEEDANCE
- 35 I.A.C. § 845 REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM (CLOSED)
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY



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

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

BOTTOM ASH POND
BALDWIN POWER PLANT
BALDWIN, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



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



● pH EXCEEDANCE

● MONITORING WELL LOCATION WITHOUT EXCEEDANCE

35 I.A.C. § 845 REGULATED UNIT (SUBJECT UNIT)

FLY ASH POND SYSTEM (CLOSED)

SITE FEATURE

CAPPED AREA

PROPERTY BOUNDARY

0 400 800 Feet

GWPS EXCEEDANCE MAP UPPER UNIT - QUARTERS 2-3, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

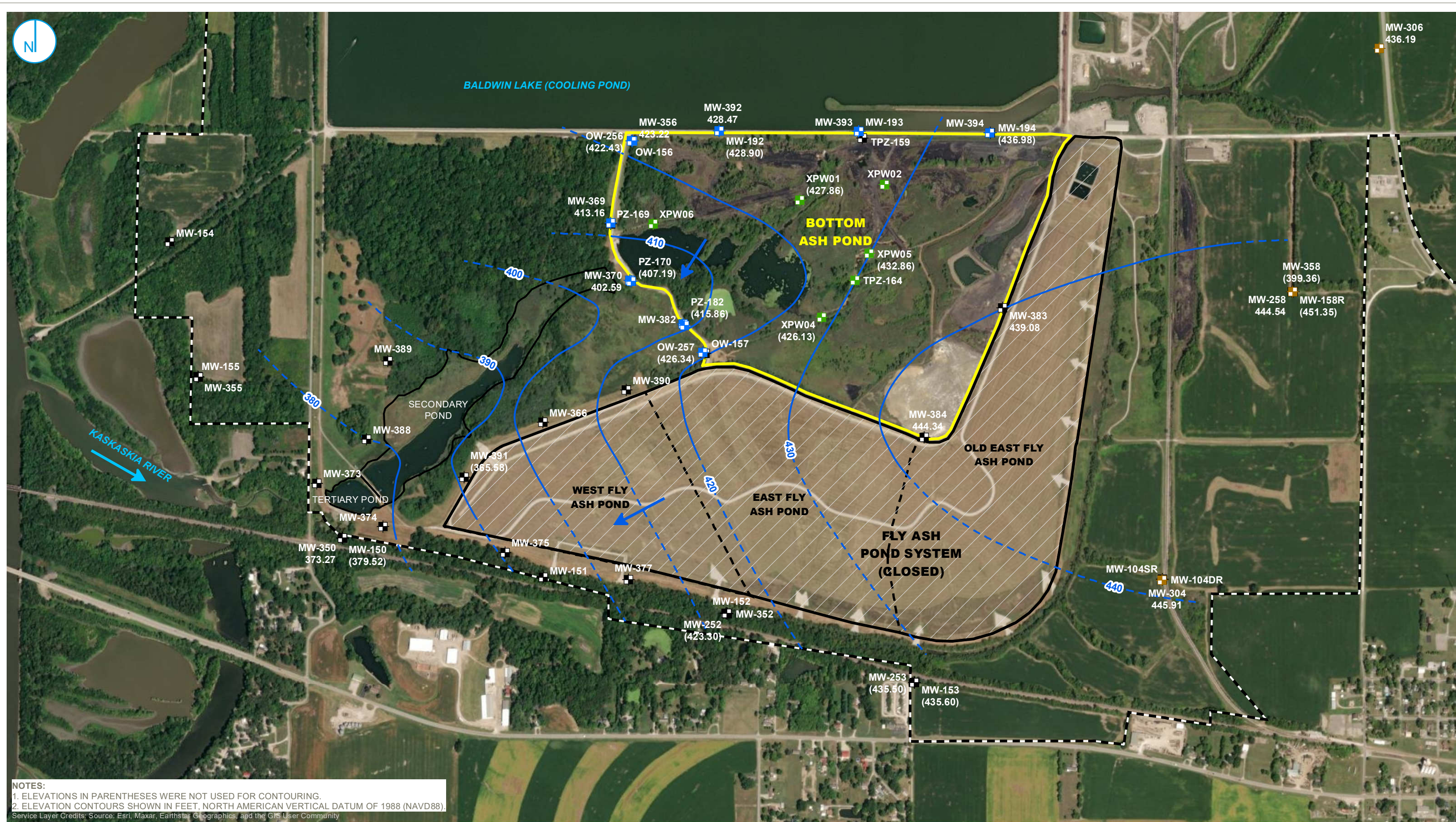
BOTTOM ASH POND
BALDWIN POWER PLANT
BALDWIN, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



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



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
 APRIL 16, 2023**

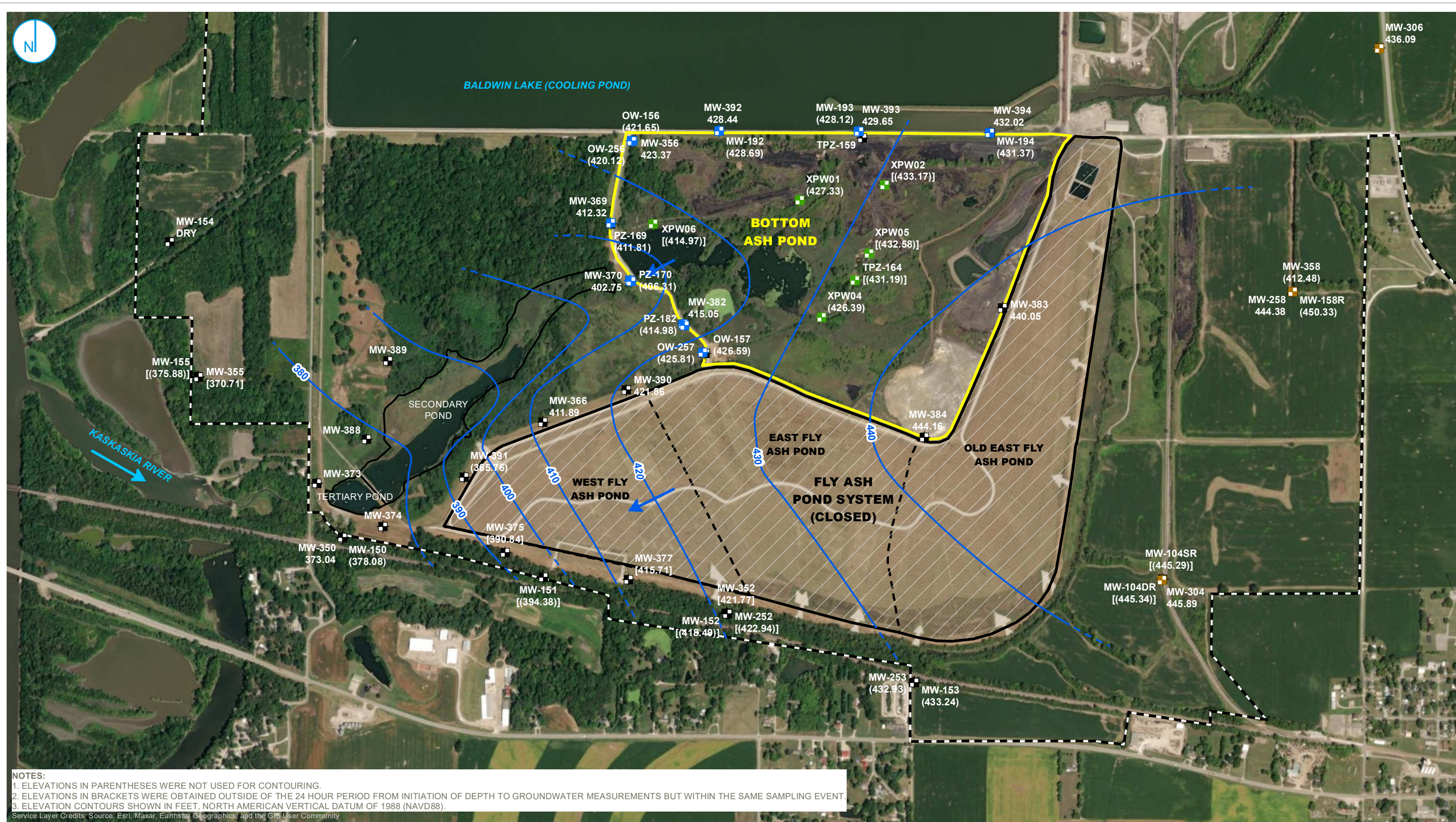
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 4

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXX | DATED: 10/25/2023 | DESIGNER: GAL-ARNMC
 Y:\Mapping\Projects\22\2285\MXD\GWC_Contours\Round_2023\Baldwin\BAP_601\BAL_601_BAP_Pot Surface 20230516.mxd



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

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
 MAY 15-17, 2023**

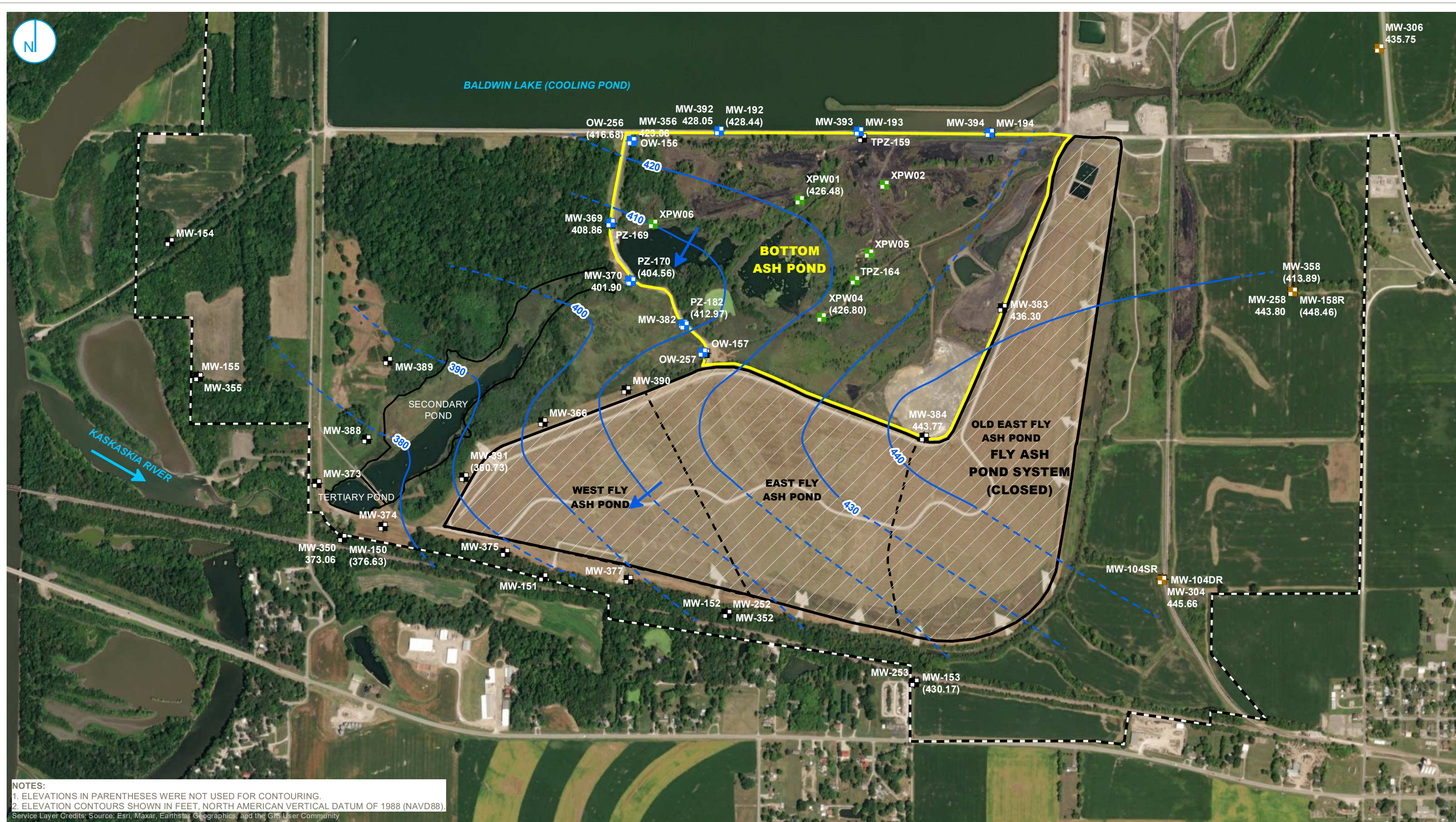
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 5

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 12/21/2023 | DESIGNER: GAL-AR/MIC



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED
- PROPERTY BOUNDARY

0 400 800 Feet

**POTENTIOMETRIC SURFACE MAP
 JUNE 16, 2023**

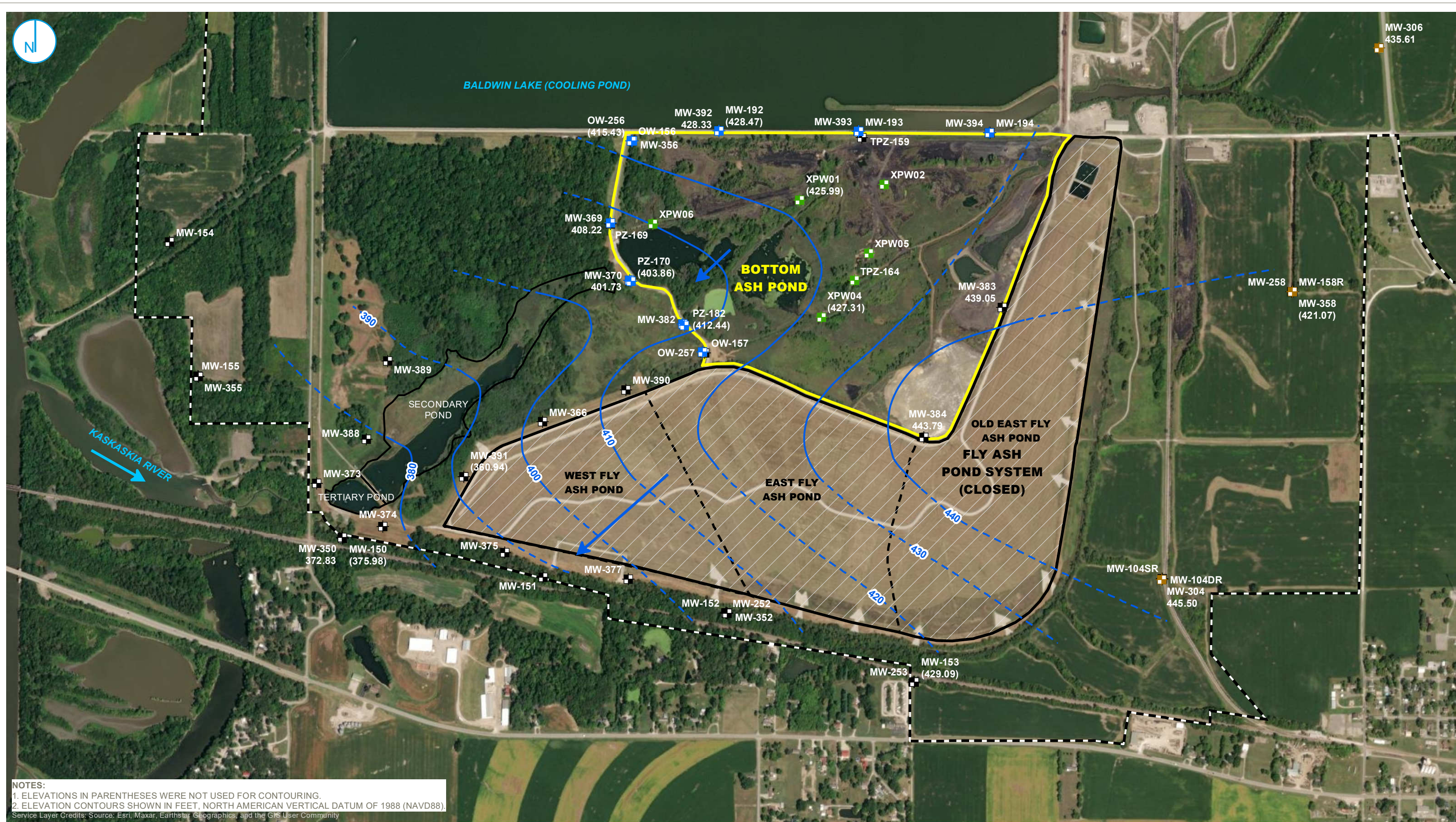
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 6

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 1/8/2024 | DESIGNER: GALARNMC



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
JULY 16, 2023**

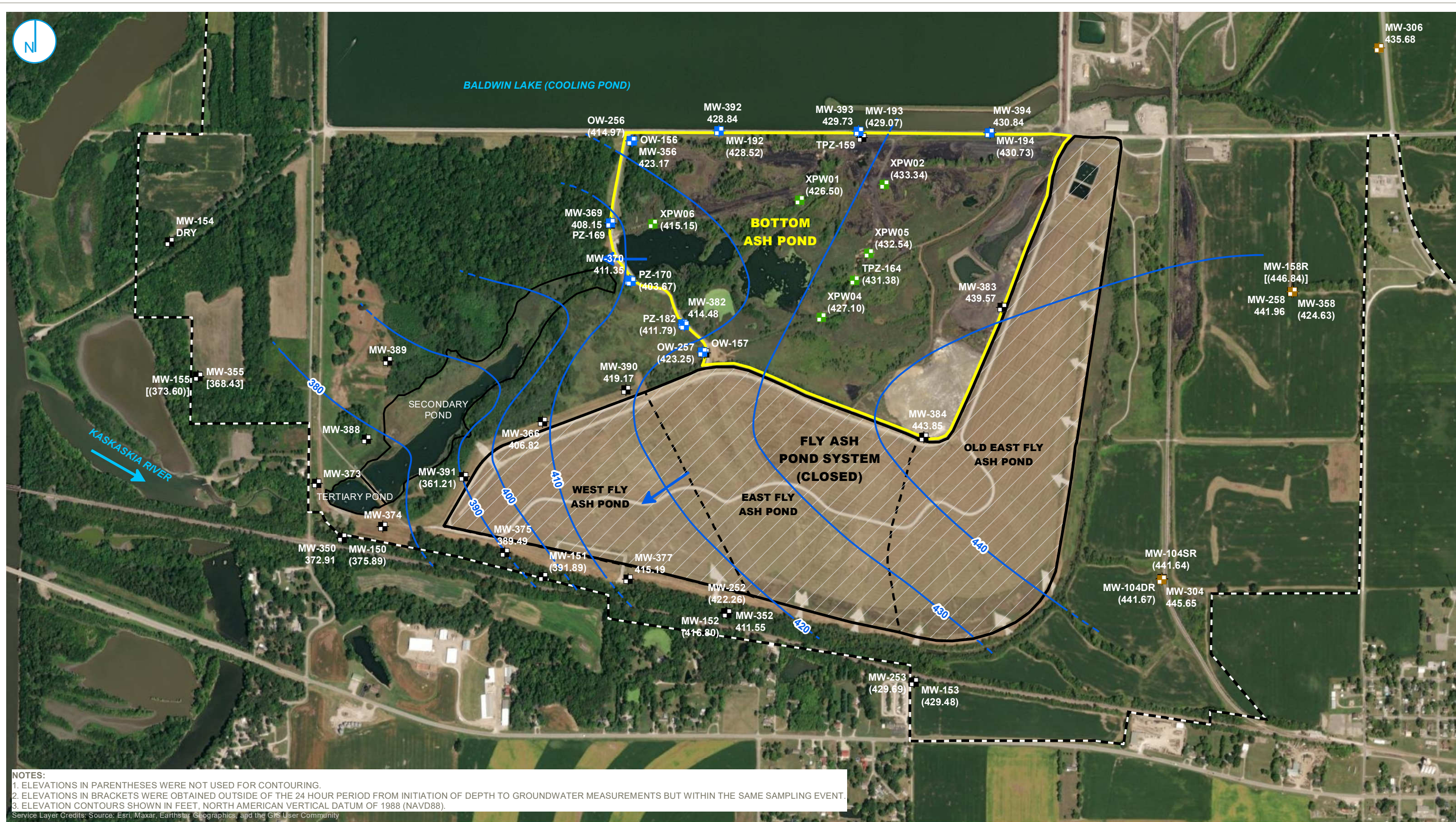
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 7

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXXX | DATED: 12/4/2023 | DESIGNER: GALARNMC
 Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2023\BaldwinBAP_601\BAL_601_BAP_Pot Surface 20230802.mxd



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

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED
- PROPERTY BOUNDARY



**POTENTIOMETRIC SURFACE MAP
 AUGUST 2-3, 2023**

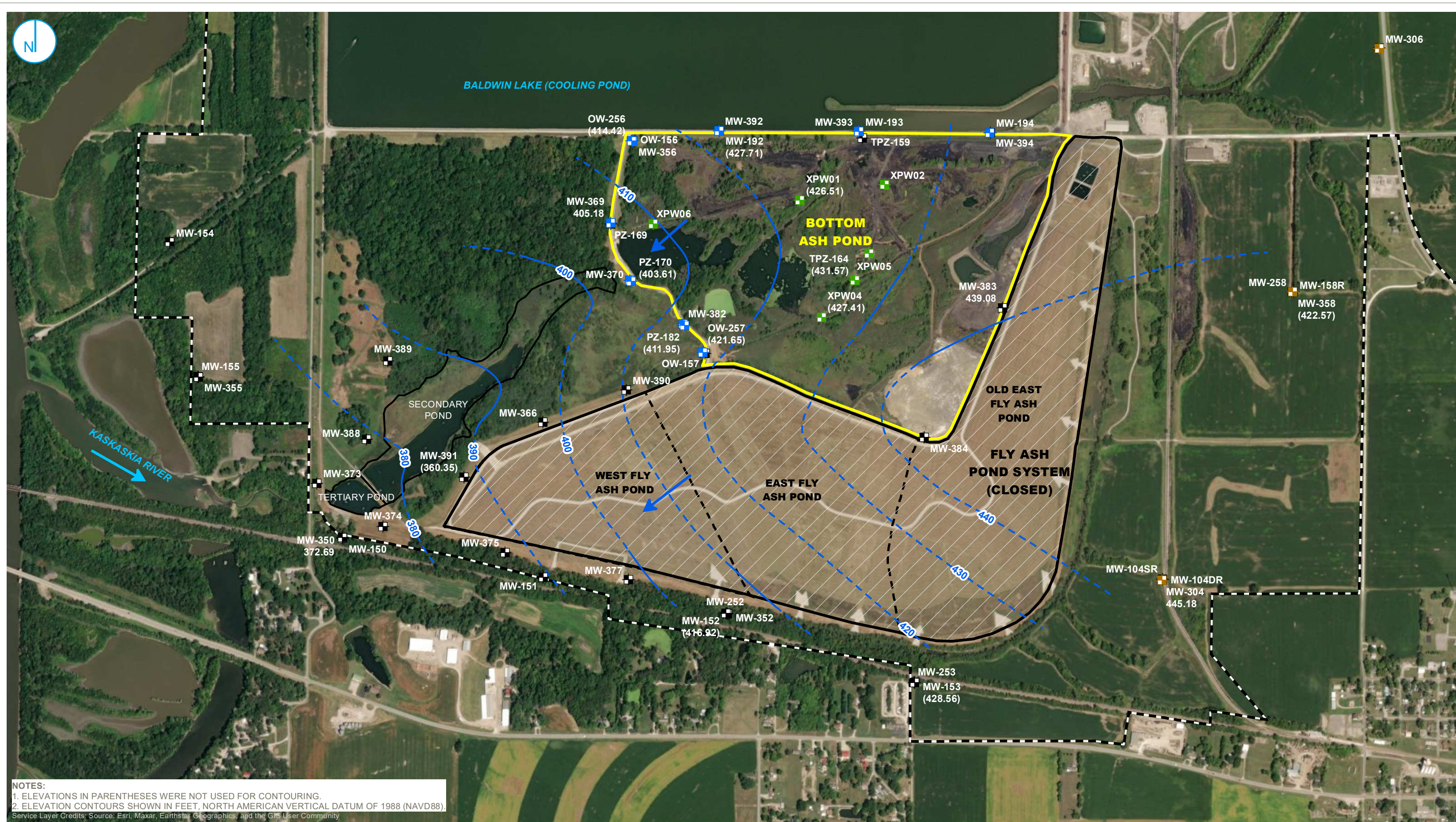
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 8

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 1/24/2024 | DESIGNER: GALARNIMC
 Y:\Mapping\Projects\22\2285\MXD\GWC_Contours\Round_2023\Baldwin\BAP_601\BAL_601_BAP_Pot Surface 20230930.mxd



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM (CLOSED)
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
 SEPTEMBER 30, 2023**

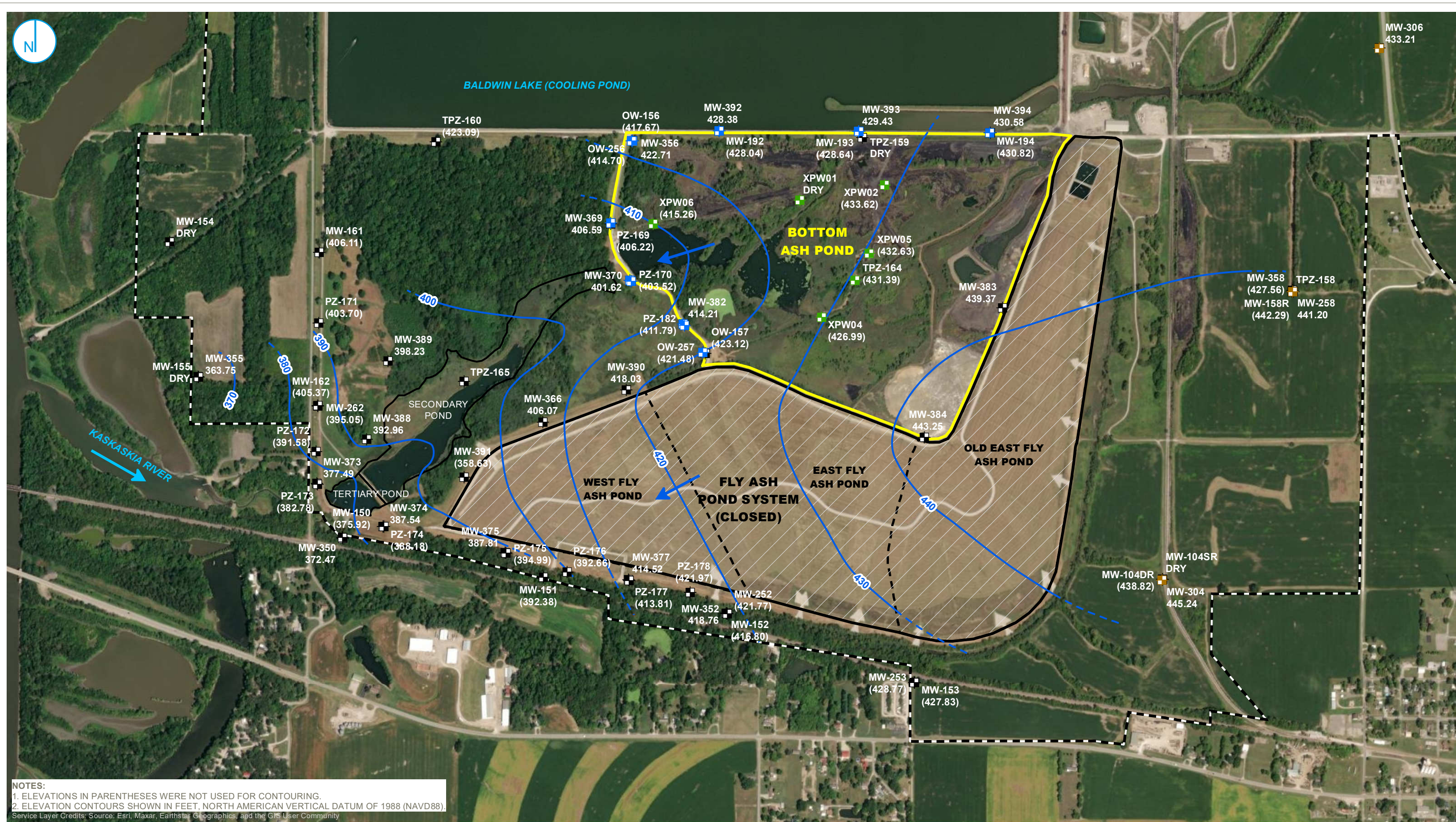
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 9

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXX | DATED: 12/14/2023 | DESIGNER: GALARNIC



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
 OCTOBER 30, 2023**

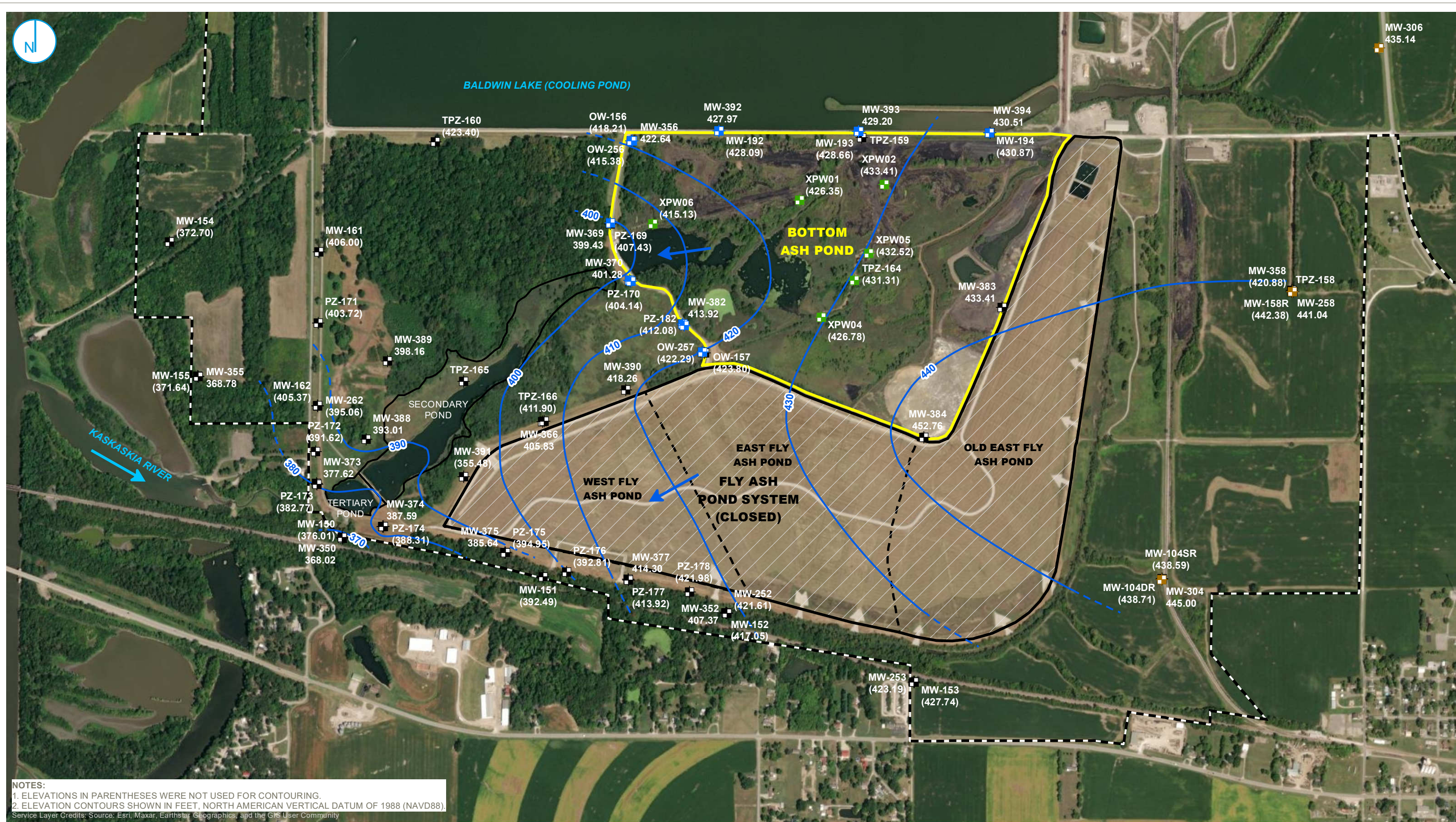
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 10

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 1/8/2024 | DESIGNER: GALARNIMC
 Y:\Mapping\Projects\22\2285\MXD\GWL_Contours\Round_2023\Baldwin\BAP_601\BAL_601_BAP_Pot Surface 20231106.mxd



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY



**POTENTIOMETRIC SURFACE MAP
 NOVEMBER 6-7, 2023**

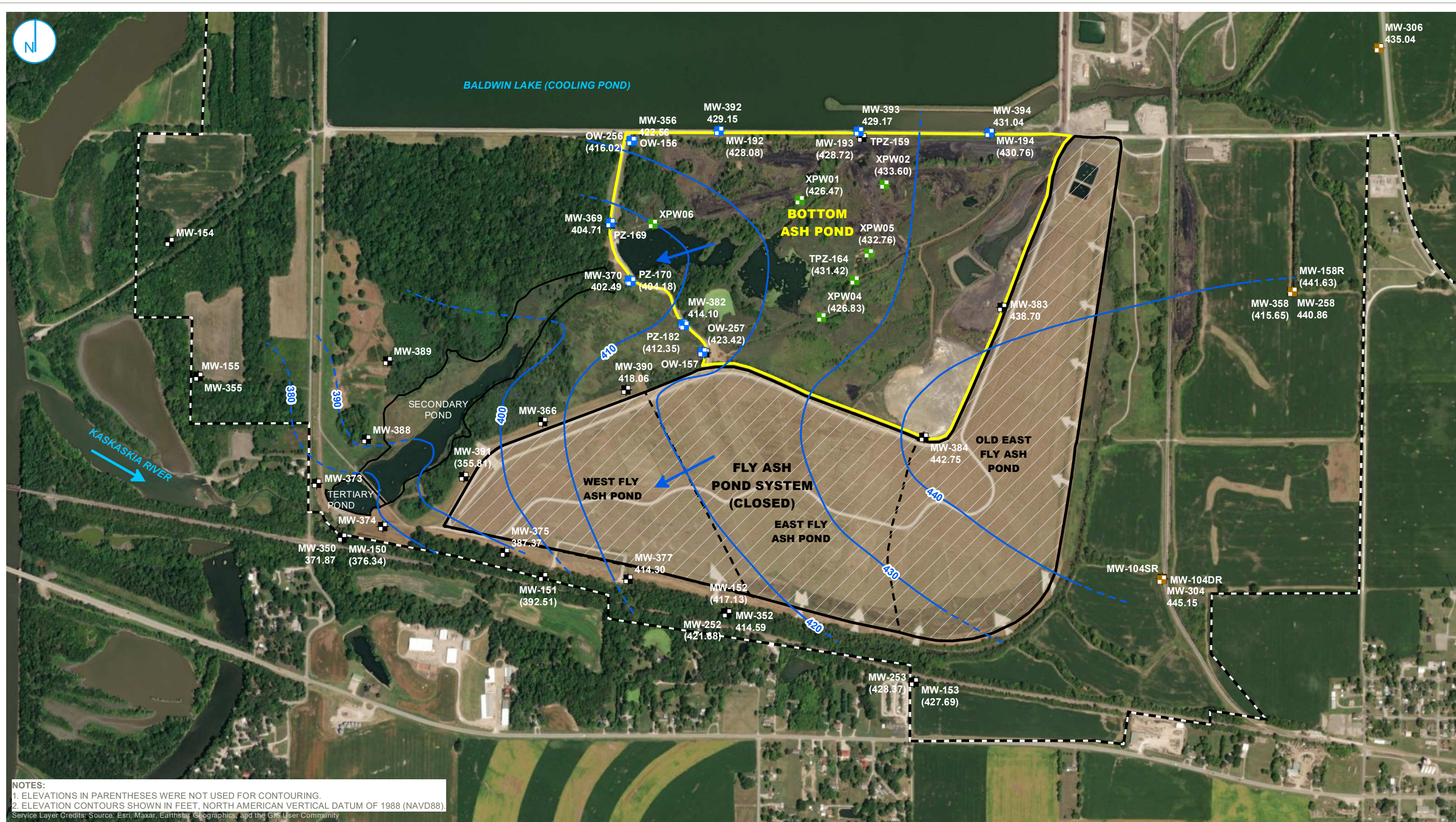
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 11

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



PROJECT: 169000XXXX | DATED: 1/4/2024 | DESIGNER: GALARNMC
 Y:\Mapping\Projects\222285\MXD\IGW_Contours\Round_2023\Baldwin\FAPS_605\BAL_601_BAP Pot Surface 20231213.mxd



NOTES:
 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY



**POTENTIOMETRIC SURFACE MAP
 DECEMBER 13, 2023**

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

FIGURE 12

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENTS

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

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

BALDWIN POWER PLANT

BOTTOM ASH POND

BALDWIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
MW-192	Compliance	UU	01/10/2023	8.03	428.91
MW-192	Compliance	UU	02/20/2023	8.00	428.94
MW-192	Compliance	UU	03/13/2023	8.12	428.82
MW-192	Compliance	UU	04/16/2023	8.04	428.90
MW-192	Compliance	UU	05/16/2023	8.25	428.69
MW-192	Compliance	UU	06/16/2023	8.50	428.44
MW-192	Compliance	UU	07/16/2023	8.47	428.47
MW-192	Compliance	UU	08/02/2023	8.42	428.52
MW-192	Compliance	UU	09/30/2023	9.23	427.71
MW-192	Compliance	UU	10/30/2023	8.90	428.04
MW-192	Compliance	UU	11/06/2023	8.85	428.09
MW-192	Compliance	UU	12/13/2023	8.86	428.08
MW-193	Compliance	UU	01/10/2023	8.76	429.29
MW-193	Compliance	UU	02/20/2023	6.82	431.24
MW-193	Compliance	UU	03/13/2023	8.87	429.19
MW-193	Compliance	UU	05/15/2023	9.94	428.12
MW-193	Compliance	UU	08/02/2023	8.99	429.07
MW-193	Compliance	UU	10/30/2023	9.42	428.64
MW-193	Compliance	UU	11/06/2023	9.40	428.66
MW-193	Compliance	UU	12/13/2023	9.34	428.72
MW-304	Background	UA	01/10/2023	9.92	445.57
MW-304	Background	UA	02/20/2023	9.65	445.84
MW-304	Background	UA	04/16/2023	9.57	445.91
MW-304	Background	UA	05/16/2023	9.60	445.89
MW-304	Background	UA	06/16/2023	9.82	445.66
MW-304	Background	UA	07/16/2023	9.99	445.50
MW-304	Background	UA	08/03/2023	9.84	445.65
MW-304	Background	UA	09/30/2023	10.31	445.18
MW-304	Background	UA	10/30/2023	10.25	445.24
MW-304	Background	UA	11/07/2023	10.49	445.00
MW-304	Background	UA	12/13/2023	10.34	445.15
MW-306	Background	UA	01/10/2023	17.86	435.31
MW-306	Background	UA	02/20/2023	17.20	435.97
MW-306	Background	UA	04/16/2023	16.98	436.19
MW-306	Background	UA	05/16/2023	17.08	436.09
MW-306	Background	UA	06/16/2023	17.42	435.75
MW-306	Background	UA	07/16/2023	17.56	435.61
MW-306	Background	UA	08/03/2023	17.49	435.68
MW-306	Background	UA	10/30/2023	19.96	433.21
MW-306	Background	UA	11/07/2023	18.03	435.14
MW-306	Background	UA	12/13/2023	18.13	435.04
MW-356	Compliance	UA	01/10/2023	4.35	423.25
MW-356	Compliance	UA	02/20/2023	4.35	423.25
MW-356	Compliance	UA	03/13/2023	4.36	423.24
MW-356	Compliance	UA	04/16/2023	4.38	423.22
MW-356	Compliance	UA	05/16/2023	4.23	423.37

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
MW-356	Compliance	UA	06/16/2023	4.54	423.06
MW-356	Compliance	UA	08/02/2023	4.43	423.17
MW-356	Compliance	UA	10/30/2023	4.89	422.71
MW-356	Compliance	UA	11/06/2023	4.96	422.64
MW-356	Compliance	UA	12/13/2023	5.04	422.56
MW-358	Background	UA	01/10/2023	69.35	386.37
MW-358	Background	UA	02/20/2023	13.12	442.61
MW-358	Background	UA	03/13/2023	12.90	442.83
MW-358	Background	UA	04/16/2023	56.36	399.36
MW-358	Background	UA	05/16/2023	43.24	412.48
MW-358	Background	UA	06/16/2023	41.83	413.89
MW-358	Background	UA	07/16/2023	34.65	421.07
MW-358	Background	UA	08/03/2023	31.10	424.63
MW-358	Background	UA	09/30/2023	33.15	422.57
MW-358	Background	UA	10/30/2023	28.17	427.56
MW-358	Background	UA	11/07/2023	34.85	420.88
MW-358	Background	UA	12/13/2023	40.08	415.65
MW-369	Compliance	UA	01/10/2023	11.55	411.16
MW-369	Compliance	UA	04/16/2023	9.54	413.16
MW-369	Compliance	UA	05/16/2023	10.39	412.32
MW-369	Compliance	UA	06/16/2023	13.85	408.86
MW-369	Compliance	UA	07/16/2023	14.49	408.22
MW-369	Compliance	UA	08/02/2023	14.56	408.15
MW-369	Compliance	UA	08/16/2023	22.04	400.67
MW-369	Compliance	UA	09/30/2023	17.53	405.18
MW-369	Compliance	UA	10/30/2023	16.12	406.59
MW-369	Compliance	UA	11/06/2023	23.28	399.43
MW-369	Compliance	UA	12/13/2023	18.00	404.71
MW-370	Compliance	UA	01/10/2023	18.25	402.60
MW-370	Compliance	UA	02/20/2023	18.10	402.75
MW-370	Compliance	UA	04/16/2023	18.26	402.59
MW-370	Compliance	UA	05/16/2023	18.10	402.75
MW-370	Compliance	UA	06/16/2023	18.95	401.90
MW-370	Compliance	UA	07/16/2023	19.12	401.73
MW-370	Compliance	UA	08/02/2023	9.50	411.35
MW-370	Compliance	UA	10/30/2023	19.23	401.62
MW-370	Compliance	UA	11/06/2023	19.57	401.28
MW-370	Compliance	UA	12/13/2023	18.36	402.49
MW-382	Compliance	UA	01/10/2023	16.50	414.69
MW-382	Compliance	UA	05/16/2023	16.14	415.05
MW-382	Compliance	UA	08/02/2023	16.71	414.48
MW-382	Compliance	UA	10/30/2023	16.98	414.21
MW-382	Compliance	UA	11/06/2023	17.27	413.92
MW-382	Compliance	UA	12/13/2023	17.09	414.10
MW-392	Compliance	UA	01/10/2023	8.41	428.61
MW-392	Compliance	UA	02/20/2023	8.05	428.97

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
MW-392	Compliance	UA	03/13/2023	8.12	428.90
MW-392	Compliance	UA	04/16/2023	8.55	428.47
MW-392	Compliance	UA	05/16/2023	8.58	428.44
MW-392	Compliance	UA	06/16/2023	8.97	428.05
MW-392	Compliance	UA	07/16/2023	8.69	428.33
MW-392	Compliance	UA	08/02/2023	8.18	428.84
MW-392	Compliance	UA	10/30/2023	8.64	428.38
MW-392	Compliance	UA	11/06/2023	9.05	427.97
MW-392	Compliance	UA	12/13/2023	7.87	429.15
MW-393	Compliance	UA	01/10/2023	8.35	429.51
MW-393	Compliance	UA	02/20/2023	8.51	429.35
MW-393	Compliance	UA	03/13/2023	8.39	429.47
MW-393	Compliance	UA	05/15/2023	8.21	429.65
MW-393	Compliance	UA	08/02/2023	8.13	429.73
MW-393	Compliance	UA	10/30/2023	8.43	429.43
MW-393	Compliance	UA	11/06/2023	8.66	429.20
MW-393	Compliance	UA	12/13/2023	8.69	429.17
MW-394	Compliance	UA	01/10/2023	5.30	432.99
MW-394	Compliance	UA	02/20/2023	5.38	432.91
MW-394	Compliance	UA	03/13/2023	5.52	432.77
MW-394	Compliance	UA	05/15/2023	6.27	432.02
MW-394	Compliance	UA	08/02/2023	7.45	430.84
MW-394	Compliance	UA	10/30/2023	7.71	430.58
MW-394	Compliance	UA	11/06/2023	7.78	430.51
MW-394	Compliance	UA	12/13/2023	7.25	431.04
OW-256	Compliance	PMP	01/10/2023	6.57	421.13
OW-256	Compliance	PMP	04/16/2023	5.26	422.43
OW-256	Compliance	PMP	05/16/2023	7.57	420.12
OW-256	Compliance	PMP	06/16/2023	11.02	416.68
OW-256	Compliance	PMP	07/16/2023	12.27	415.43
OW-256	Compliance	PMP	08/02/2023	12.73	414.97
OW-256	Compliance	PMP	09/30/2023	13.28	414.42
OW-256	Compliance	PMP	10/30/2023	13.00	414.70
OW-256	Compliance	PMP	11/06/2023	12.32	415.38
OW-256	Compliance	PMP	12/13/2023	11.68	416.02
OW-257	Compliance	PMP	01/10/2023	5.36	425.66
OW-257	Compliance	PMP	04/16/2023	4.68	426.34
OW-257	Compliance	PMP	05/16/2023	5.20	425.81
OW-257	Compliance	PMP	07/10/2023	7.46	423.56
OW-257	Compliance	PMP	08/02/2023	7.77	423.25
OW-257	Compliance	PMP	09/30/2023	9.37	421.65
OW-257	Compliance	PMP	10/30/2023	9.54	421.48
OW-257	Compliance	PMP	11/06/2023	8.73	422.29
OW-257	Compliance	PMP	12/13/2023	7.60	423.42
PZ-170	Compliance	PMP	01/10/2023	15.41	406.02
PZ-170	Compliance	PMP	04/16/2023	14.24	407.19

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

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

BALDWIN POWER PLANT

BOTTOM ASH POND

BALDWIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
PZ-170	Compliance	PMP	05/16/2023	15.12	406.31
PZ-170	Compliance	PMP	06/16/2023	16.87	404.56
PZ-170	Compliance	PMP	07/16/2023	17.57	403.86
PZ-170	Compliance	PMP	08/02/2023	17.76	403.67
PZ-170	Compliance	PMP	09/30/2023	17.82	403.61
PZ-170	Compliance	PMP	10/30/2023	17.91	403.52
PZ-170	Compliance	PMP	11/06/2023	17.29	404.14
PZ-170	Compliance	PMP	12/13/2023	17.25	404.18
PZ-182	Compliance	PMP	01/10/2023	17.30	414.31
PZ-182	Compliance	PMP	04/16/2023	15.75	415.86
PZ-182	Compliance	PMP	05/16/2023	16.63	414.98
PZ-182	Compliance	PMP	06/16/2023	18.64	412.97
PZ-182	Compliance	PMP	07/16/2023	19.17	412.44
PZ-182	Compliance	PMP	08/02/2023	19.82	411.79
PZ-182	Compliance	PMP	09/30/2023	19.66	411.95
PZ-182	Compliance	PMP	10/30/2023	19.82	411.79
PZ-182	Compliance	PMP	11/06/2023	19.53	412.08
PZ-182	Compliance	PMP	12/13/2023	19.26	412.35
TPZ-164	Water Level	CCR	01/10/2023	10.06	425.04
TPZ-164	Water Level	CCR	04/16/2023	3.66	431.44
TPZ-164	Water Level	CCR	05/16/2023	3.80	431.30
TPZ-164	Water Level	CCR	05/23/2023	[3.91]	[431.19]
TPZ-164	Water Level	CCR	06/16/2023	3.70	431.40
TPZ-164	Water Level	CCR	07/16/2023	3.63	431.47
TPZ-164	Water Level	CCR	08/02/2023	3.72	431.38
TPZ-164	Water Level	CCR	09/30/2023	3.53	431.57
TPZ-164	Water Level	CCR	10/30/2023	3.71	431.39
TPZ-164	Water Level	CCR	11/07/2023	3.79	431.31
TPZ-164	Water Level	CCR	12/13/2023	3.68	431.42
XPW01	Water Level	CCR	01/10/2023	10.06	427.59
XPW01	Water Level	CCR	04/16/2023	9.79	427.86
XPW01	Water Level	CCR	05/16/2023	10.32	427.33
XPW01	Water Level	CCR	05/23/2023	[10.30]	[427.36]
XPW01	Water Level	CCR	06/16/2023	11.17	426.48
XPW01	Water Level	CCR	07/16/2023	11.66	425.99
XPW01	Water Level	CCR	08/02/2023	11.16	426.50
XPW01	Water Level	CCR	09/30/2023	11.14	426.51
XPW01	Water Level	CCR	10/30/2023	Dry	Dry
XPW01	Water Level	CCR	11/07/2023	11.31	426.35
XPW01	Water Level	CCR	12/13/2023	11.19	426.47
XPW05	Water Level	CCR	04/16/2023	4.40	432.86
XPW05	Water Level	CCR	05/23/2023	[4.69]	[432.58]
XPW05	Water Level	CCR	08/02/2023	4.73	432.54
XPW05	Water Level	CCR	10/30/2023	4.64	432.63
XPW05	Water Level	CCR	11/07/2023	4.75	432.52
XPW05	Water Level	CCR	12/13/2023	4.51	432.76

**ATTACHMENT A
GROUNDWATER ELEVATION DATA**

2023 35 I.A.C. § 845 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
XPW06	Water Level	CCR	01/10/2023	2.41	415.30
XPW06	Water Level	CCR	05/23/2023	[2.75]	[414.97]
XPW06	Water Level	CCR	08/02/2023	2.57	415.15
XPW06	Water Level	CCR	10/30/2023	2.46	415.26
XPW06	Water Level	CCR	11/07/2023	2.59	415.13

Notes:

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

BMP = below measuring point

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

NAVD88 = North American Vertical Datum of 1988

Monitored Unit Abbreviations:

CCR = coal combustion residuals

PMP = potential migration pathway

UA = uppermost aquifer

UU = upper unit

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



engineers | scientists | innovators

ALTERNATIVE SOURCE DEMONSTRATION

**Baldwin Power Plant Bottom Ash Pond
(Unit ID #601)
IEPA ID: W1578510001-06
35 IAC 845.650**

Prepared for

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

Prepared by

Geosyntec Consultants, Inc.
150 E Wilson Bridge Road
Worthington, Ohio 43085

Project Number: GLP8068

October 27, 2023

Alternative Source Demonstration

Baldwin Power Plant Bottom Ash Pond

(Unit ID #601)

IEPA ID: W1578510001-06

35 IAC 845.650

Prepared for

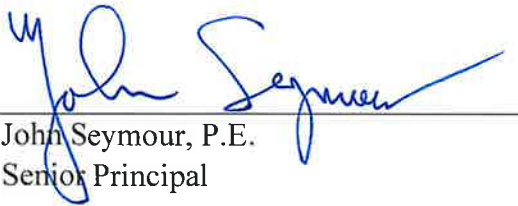
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Senior Principal



Project Number: GLP8068

October 27, 2023

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ACRONYMS AND ABBREVIATIONS

%	percent
‰	per mill
ANOSIM	analysis of similarities
ASD	alternative source demonstration
BAP	Bottom Ash Pond
bgs	below ground surface
BPP	Baldwin Power Plant
CCR	coal combustion residuals
cm/s	centimeters per second
DMG	Dynegy Midwest Generation, LLC
FAPS	Fly Ash Pond System
GWPS	groundwater protection standard
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
LOE	line of evidence
mg/L	milligrams per liter
NAVD88	North American Vertical Datum of 1988
NMDS	nonmetric multidimensional scaling
NPDES	National Pollutant Discharge Elimination System
NRT	Natural Resource Technology, Inc.
PC	principal component
PCA	principal component analysis
USGS	United States Geological Survey

1. INTRODUCTION

Geosyntec Consultants, Inc. has prepared this alternative source demonstration (ASD) on behalf of Dynegy Midwest Generation, LLC (DMG), regarding the Bottom Ash Pond coal combustion residuals (CCR) unit at the Baldwin Power Plant (BPP) near Baldwin, Illinois. The ASD is completed pursuant to the Illinois Administrative Code (IAC) Title 35, Part 845 (“Standards for the Disposal of CCR in Surface Impoundments”) and was completed by October 27, 2023, within 60 days of determination of the exceedances (August 28, 2023), as required by 35 I.A.C.§ 845.650(e). This report applies specifically to the CCR Unit referred to as the Bottom Ash Pond (BAP), identification (ID) number (No.) 601, IEPA ID No. W1578510001-06, and National Inventory of Dams (NID) ID No. IL50721.

An exceedance of chloride was identified above the site-specific groundwater protection standard (GWPS) of 1,370 milligrams per liter (mg/L) at downgradient monitoring well MW-370 following the Second Quarter 2023 sampling event. An exceedance of fluoride was identified above the site-specific GWPS of 4.0 mg/L at downgradient monitoring well MW393 following the Second Quarter 2023 sampling event.

Under 35 IAC 845.650(e), the owner or operator of a CCR surface impoundment may submit a demonstration that a source other than the CCR surface impoundment caused the contamination, or that the exceedance of the groundwater protection standard resulted from error in sampling, analysis, or statistical evaluation, natural variation in groundwater quality, or a change in the potentiometric surface and groundwater flow direction.

Pursuant to 35 IAC 845.650(e), the lines of evidence (LOEs) documented in this ASD demonstrate that a source other than the BPP BAP CCR unit was the cause of the GWPS exceedance for chloride at downgradient monitoring well MW-370 and the GWPS exceedance for fluoride at downgradient monitoring well MW-393. Natural variability associated with the lithology of the aquifer was identified as the alternative source for the elevated chloride and fluoride concentrations at MW-370 and MW-393, respectively.

2. BACKGROUND

2.1 Site Location and Description

The BPP is located in Randolph County and St. Clair County in southwest Illinois approximately 0.5 miles west-northwest of the village of Baldwin. The BPP property is bordered by Baldwin Road to the east; the village of Baldwin to the southeast; Illinois Central Gulf railroad tracks, State Road 154, and scattered residences to the south; the Kaskaskia River to the west; and farmland to the north. CCR impoundments present at the BPP include the BAP and the closed Fly Ash Pond System (FAPS), which included the West Fly Ash Pond, East Fly Ash Pond, and Old East Fly Ash Pond. Non-CCR impoundments present at the BPP include the Secondary Pond, Tertiary Pond, and Baldwin Lake (BPP Cooling Pond). The location of the CCR and non-CCR impoundments are shown in **Attachment 1**. The BAP is immediately north of the FAPS, which is a closed in-place CCR unit approved for closure by the IEPA on August 16, 2016.

2.2 Description of the CCR Unit

The BPP began operation in 1970 and initially burned bituminous coal from Illinois, switching to subbituminous coal in 1999. The BAP is an unlined surface impoundment with a surface area of approximately 177 acres used to store and dispose of sluiced bottom ash from the BPP, some of which is mined for beneficial reuse. The BAP is also used to temporarily store spray dry adsorption waste and to clarify plant process water, including other non-CCR station process wastewaters, which is then discharged in accordance with the station's National Pollutant Discharge Elimination System (NPDES) permit (AECOM 2016; IEPA 2016). The original construction date of the BAP is unknown (AECOM 2016).

2.3 Geology and Hydrogeology

This section provides a summary of the site geology and hydrogeology; additional detail is provided in the Supplemental Hydrogeologic Site Characterization and Groundwater Monitoring Plan (Natural Resource Technology, Inc. [NRT] 2016) and the Hydrogeologic Site Characterization Report (Ramboll 2021).

Three hydrostratigraphic units are present at the BPP, which include the CCR, an unconsolidated Upper Unit, and a Bedrock Unit.

- CCR: Consists primarily of bottom ash, fly ash, and boiler slag and also includes fill materials comprising predominantly of clays and silts excavated on-site for use in berm and road construction around the impoundment. Up to 28.2 feet of bottom ash has been observed towards the center of the BAP (Ramboll 2023b).
- Upper Unit: Predominantly clay with silt and minor sand, silt layers, and occasional sand lenses, and includes lithologies identified as the Cahokia Formation, Peoria Loess, Equality Formation, and Vandalia Till. Thin sand seams present at the contact between the Upper Unit and Bedrock Unit have been identified as potential migration pathways

(PMPs) due to higher hydraulic conductivities in comparison to those in the surrounding clays (e.g., 10^{-4} centimeters per second [cm/s] in sands compared with 10^{-5} cm/s in clays) (Ramboll 2023a). Continuous sand seams have not been observed in the Upper Unit or immediately adjacent to the BAP. Due to the predominance of clay and only thin and intermittent sand lenses, this unit is not considered a continuous aquifer unit within the site boundary (NRT, 2016; Ramboll, 2021).

- **Bedrock Unit:** Pennsylvanian and Mississippian-aged interbedded shale and limestone continuously underlies the BPP and is considered the uppermost aquifer at the site. The top of bedrock ranges from 12.5 feet below ground surface (bgs) near the Kaskaskia River to 70 feet bgs within the East Fly Ash Pond (part of the FAPS). The Bedrock Unit is the uppermost aquifer.

A geologic cross-section originally included in the Hydrogeologic Characterization Report and locator map are provided as **Attachment 2**.

Groundwater at the site has previously been classified as Class II groundwater in accordance with 35 IAC 620 based on the geometric mean hydraulic conductivity values measured in the monitoring wells screened in both the Upper Unit (3.2×10^{-5} cm/s) and the Bedrock Unit (5.0×10^{-6}) (NRT 2014).

The groundwater monitoring network for the BAP consists of 16 monitoring wells: thirteen downgradient monitoring wells (MW-192, MW-193, MW-356, MW-369, MW-370, MW-382, MW-392, MW-393, MW-394, OW-256, OW-257, PZ-170, and PZ-182) and three background monitoring wells (MW-304, MW-306, and MW-358) (**Attachment 1**). Monitoring wells are screened in both the uppermost aquifer (Bedrock Unit) from approximately 350 to 404 feet and the unconsolidated unit from 388 to 414 feet (North American Vertical Datum of 1988 [NAVD88]).

The potentiometric groundwater contours and generalized groundwater flow directions at the site are shown in **Attachment 3**. Groundwater flow in bedrock is toward the northwest in the eastern and central areas of the BAP, and southwest in the east area of the FAPS. Bedrock groundwater flows toward the Secondary and Tertiary Ponds, which were created in a former surface water drainage channel. Groundwater flow directions are generally consistent.

3. ALTERNATIVE SOURCE DEMONSTRATION LINES OF EVIDENCE

This ASD for the chloride GWPS exceedance at MW-370 and the fluoride GWPS exceedance at MW-393 is based on four lines of evidence (LOEs). These LOEs are described and supported below.

3.1 LOE #1: BAP Porewater Concentrations of Chloride and Fluoride are Lower than Groundwater Concentrations.

Porewater (*i.e.*, water within the CCR) samples have been collected from piezometer TPZ-164 since September 2018 and at five new porewater wells (XPW-01, -02, -04, -05, and -06) since October 2022. The chloride and fluoride concentrations reported for these porewater sampling locations are consistently below the concentrations observed for chloride at MW-370 and for fluoride at MW-393, as shown in **Figure 1** and **Figure 2**, respectively. The highest observed chloride concentration in the porewater is consistently more than 10 times lower than the maximum concentration observed at MW-370. Likewise, the highest observed fluoride concentration in the porewater is consistently more than 10 times lower than the maximum fluoride concentration observed at MW-393. The chloride concentrations detected in the porewater samples are less than the lower confidence limits of chloride concentrations observed at downgradient well MW-370 (1,370 mg/L calculated using a confidence band around a linear regression) and fluoride concentrations observed at downgradient well MW-393 (7.49 mg/L calculated using a confidence band around a linear regression) (Ramboll 2023a).

If the BAP were the source of chloride or fluoride in groundwater, BAP porewater concentrations are expected to be greater than the GWPS exceedance concentrations. Given the conservative (non-reactive) nature of both chloride and fluoride, their concentrations are expected to remain stable or decrease along the flow path from the source due to dispersion and dilution. Because the concentrations in the BAP are lower than the concentrations of chloride above the GWPS at monitoring well MW-370 and the concentrations of fluoride above the GWPS at monitoring well MW-393, these exceedances are not attributed to impacts from the BAP unit.

3.2 LOE #2: The Wells of Concern Have a Similar Ionic Composition to Upgradient Monitoring Well MW-358.

The groundwater at both MW-370 and MW-393 has a similar ionic composition to the groundwater from recently installed background monitoring well MW-358, suggesting that these locations are not affected by the BAP. Ramboll (2023b) previously evaluated Stiff diagrams and found that both MW-358 and MW-370 contain groundwater dominated by chloride and monovalent cations. Furthermore, a Piper diagram — an alternative to Stiff diagrams for illustrating the relative concentration of major cations and anions in groundwater samples — shows that groundwater at MW-393 appears to be predominantly composed of chloride and monovalent cations, consistent with the composition of MW-358 and MW-370 (**Figure 3**). This groundwater composition is different from the composition of samples of BAP porewater, which

tends to have greater relative contributions of alkalinity, sulfate, and divalent cations such as calcium and magnesium (**Figure 3**).

Piper and Stiff diagrams (Ramboll 2023b) typically show the relative proportions and individual concentrations (respectively) of major cations and anions. Advanced statistical approaches such as principal component analysis (PCA) or non-metric multi-dimensional scaling (NMDS) use a broader suite of analytes to evaluate the similarity or dissimilarity of different samples or groups and identify analytes that are main drivers for dissimilarities.

PCA is often used to simplify large datasets with multiple variables by creating new uncorrelated variables known as principal components (PCs). The PCs are linear combinations of the original variables; the first few PCs typically capture most of the variation within the dataset. Factor loadings are calculated based on the correlation between PCs and the original variables. As such, variables with notably higher positive or negative factor loadings are main drivers of similarity or dissimilarity and clustering of samples. Factor scores are calculated based on the correlation between the combined chemical composition of each sample and the PCs. Samples with similar chemical compositions show similar factor scores and tend to cluster together on a PCA plot.

In this study the dataset used for PCA included 65 samples collected between 2017 and 2023 from background MW-358, downgradient wells MW-370 and MW-393, and porewater wells. PCA requires that input variables have similar scales of measurement and variances. As such, data were standardized by mean-centering and scaling to unit variance prior to performing PCA. The fraction of total variation explained by each PC is shown in **Figure 4a**, with the first two PCs accounting for approximately 70 percent [%] of the total variation in the datasets. Additionally, the quality of representation of each variable is presented in **Figure 4b**, demonstrating that for most variables, the majority of the variation is captured by the first two PCs.

PCA results are often visualized using biplots, where samples are projected on to the first two PCs (i.e., factor scores), and factor loadings are represented as vectors. The closer the data points are on the graph, the greater the similarity in their chemical composition. The result from this study is shown on **Figure 5**, where the background samples are highlighted in orange, the downgradient samples in shades of blue, and the porewater samples in gray. The factor loadings, represented as vectors on the biplot, suggest that constituents such as calcium, magnesium, potassium, and barium are responsible for shifting the chemical signature of samples from within the BAP towards the porewater cluster. In contrast, constituents such as lithium, fluoride, and chloride are drivers for shifting chemical compositions in the direction of the downgradient and background sample clusters. These results are generally consistent with the findings of the Piper Diagram (**Figure 3**).

The 95% bivariate confidence ellipses for each of the three groups of water (porewater from within the BAP, downgradient bedrock groundwater, and background bedrock groundwater) are also depicted on the biplot graph (**Figure 5**). As illustrated on the biplot, the porewater samples cluster relatively separately from the downgradient and background wells, with no overlap in their

confidence ellipses. Furthermore, the PCA suggests that the composition of downgradient samples from MW-370 and MW-393 are similar to the composition of background samples from MW-358.

Clustering was further explored using Ward's hierarchical clustering method, a distance measure employed in agglomerative algorithms and commonly applied in hydrogeochemical studies. The analysis was performed on a scaled and centered dataset. As illustrated in the dendrogram (**Figure 6**), this analysis supported the distinction between porewater samples from the combined group of downgradient and background wells.

The different groups of samples were further compared and contrasted using Analysis of Similarities (ANOSIM). ANOSIM is a nonparametric, rank-based test used to evaluate if differences in water quality data between groups are statistically significant. **Table 1** presents the ANOSIM results for three subsets of data.

The first subset compares porewater samples with background samples, and the second subset compares porewater samples with downgradient samples. The third subset compares the background and downgradient samples. The p-values for the first two comparisons are less than 0.05, indicating a significant difference between the porewater samples and both the downgradient and background water samples¹. However, the high p-value (0.14) for the third dataset comparing background and downgradient wells indicates no statistically significant difference between the background and downgradient clusters.

NMDS analysis of the available dataset from 2023 was conducted to evaluate more recent site conditions and to further compare the combined chemical composition of porewater, background, and key downgradient samples. As some wells were installed in 2022, the 2023 samples are likely to be more representative of equilibrium conditions in the aquifer. While both PCA and NMDS aim to reduce dimensionality and visualize patterns among samples, their methods are distinct. PCA relies on linear transformations and captures maximum variance through orthogonal components, whereas NMDS utilizes rank orders to achieve a non-linear representation of the original distances between samples. Therefore, NMDS is more flexible in relation to input requirement and given the limited number of sampling results available for 2023, NMDS was chosen over PCA when looking at only the most recent samples. Additionally, the results of NMDS analysis can be used for independent validation of previous findings from PCA. The results are displayed in a biplot in **Figure 7**.

Qualitatively, the NMDS findings align closely with those from the PCA (**Figure 5**) and indicate that: (i) the porewater sample cluster is separate from the downgradient and background samples; and (ii) the chemical compositions of the background and downgradient wells appear more similar to each other than to the composition of porewater. These results support the conclusion that

¹ P-values are a measure indicating the differences between two groups relative to random variations. Generally, p-values <0.05 are assumed to represent statistically significant differences between groups.

downgradient locations MW-370 and MW-393 are not affected by the BAP and their geochemistry is instead influenced by the native lithology.

3.3 LOE #3: Stable Boron Isotopes Provide Further Evidence That the Wells of Concern Have a Geochemical Signature Distinct from the BAP's.

Boron isotopes (^{11}B and ^{10}B) can be useful tracers in groundwater systems in sedimentary environments (United States Geological Survey [USGS] 2004). Depleted (lower) boron isotope ratios (reported as $\delta^{11}\text{B}$, which is calculated as the ratio of $^{11}\text{B}/^{10}\text{B}$ relative to an international standard) are an indicator of CCR impacts to aqueous samples due to the depleted $\delta^{11}\text{B}$ found in source coal (Ruhl et al. 2014) and coal ash. Alternatively, sediments formed during deposition from marine environments, such as the shales identified within the uppermost aquifer at the site, can be enriched in $\delta^{11}\text{B}$ during deposition (Spivack et al. 1987).

Aqueous samples were collected from select locations to represent multiple lithologies and locations relevant to the BAP, as summarized in **Table 2**. These locations included TPZ-164 to represent porewater conditions and compliance well MW-370 to represent wells screened within the downgradient shale. The samples were submitted to SmartGas Sciences, LLC (Columbus, Ohio) for analysis of total boron and stable boron isotopes. A review of the boron stable isotopic signatures for the BAP porewater and groundwater at MW-370, which is representative of conditions within the downgradient shale, are markedly different, providing further evidence that the groundwater chemistry at the wells of concern is not affected by the BAP.

Of the samples with more than 1 mg/L of total boron detected, porewater from TPZ-164 was the most depleted in $\delta^{11}\text{B}$, with a reported $\delta^{11}\text{B}$ of 2.8 per mill (‰). This is consistent with the reported $\delta^{11}\text{B}$ range for Illinois basin coal-derived CCR of -8.8‰ to +6.3‰ (Ruhl et al 2014) (**Figure 8**). Upgradient well MW-358 and compliance well MW-370 both had enriched $\delta^{11}\text{B}$ values, with reported results of +31.1‰ and +32.4‰, respectively (**Table 2**). The enrichment of $\delta^{11}\text{B}$ is inconsistent with influences from CCR. Instead, these results are consistent with elevated $\delta^{11}\text{B}$ in shale formations due to their deposition from marine environments (Spivack et al. 1987; Warner et al. 2013). Typical ranges for $\delta^{11}\text{B}$ in groundwater unimpacted by CCR are +4.0‰ to +33.0‰ (Warner et al. 2013) and +8.7‰ to 34.0‰ (Buszka et al. 2007). MW-258, which is also an upgradient well screened within the interbedded limestone and shale formation although at a higher elevation (403-413 feet NAVD88) in comparison with approximately 356-366 feet NAVD88 at downgradient well MW-370) was less enriched in $\delta^{11}\text{B}$. This variability in $\delta^{11}\text{B}$ enrichment with depth within the shale may be attributed to differences in mineralogy or depositional environment over time.

These results provide further evidence that wells screened within the shale lithology, including at downgradient locations such as MW-370, are not influenced by the BAP and instead are more strongly influenced by the bedrock lithology where they are screened.

3.4 LOE #4: Chloride and Fluoride Occur Naturally in the Shale Bedrock of the Uppermost Aquifer.

Solid phase analysis identified chloride and fluoride within the bedrock of the uppermost aquifer at the Site – i.e., these are naturally occurring inorganics within the mineral matrix of the bedrock. The presence of these constituents within the solid phase of the uppermost aquifer (bedrock) likely contributes to elevated and naturally occurring chloride and fluoride in the groundwater. Studies have found that chloride and fluoride concentrations in groundwater are comparable to or higher than those observed at MW-370 and MW-393, respectively, and are often found within the Pennsylvanian and Mississippian-aged interbedded shale and limestone of the uppermost aquifer.

Solid phase analysis of bedrock from background boring location MW-358 identified both chloride and fluoride in the solid phase materials (**Attachment 4**). The boring logs for these locations are provided in **Attachment 5**. Solid phase samples were also submitted for analysis of mineralogy via x-ray diffraction (XRD). Fluorapatite [$\text{Ca}_5(\text{PO}_4)_3\text{F}$], a fluoride-bearing mineral, was identified in samples collected from the shale formation at downgradient well MW-392 (**Table 3; Attachment 6**). The highest abundance of fluorapatite (2.7%) was identified in a sample collected at 80 to 82 feet below ground surface at downgradient well MW-392, which is the same depth interval as the well screen of MW-393. The presence of chloride and fluoride within the aquifer solids of the shale in the uppermost aquifer, including the presence of a fluoride-bearing mineral, provide an alternative source for these constituents in groundwater other than the BAP.

A USGS summary found that water within the upper parts of the Pennsylvanian-aged aquifers is generally similar throughout the Illinois and Indiana basins (Cable et al, 1971). This groundwater is influenced by the interaction with the variable interbedded rock types - present in the uppermost aquifer at the BAP and can vary from a sodium bicarbonate to a sodium chloride type within a few feet of change in depth (Lloyd and Lyke 1995). Concentrations of chloride as high as 1,400 mg/L, which is consistent with the concentrations at MW-370, were reported in Pennsylvanian-aged aquifers (Cable et al, 1971).

Furthermore, seeps with high salinity (i.e., brines) are known to occur in southern Illinois. Samples of seeps and shallow wells affected by brine in Illinois had highly variable chloride concentrations ranging from ~100 mg/L up to more than 15,000 mg/L (Panno, et al. 2005). Similarly, Lloyd and Lyke (1995) noted that “the fluoride content of the water [in Pennsylvanian-aged aquifers] is great enough to mottle the teeth of persons who drink it on a continual basis,” with concentrations reported as high as 15 mg/L. These results suggest that contact with Pennsylvanian-aged bedrock can result in natural variability in the reported chloride and fluoride concentrations in groundwater at ranges consistent with those observed at the site.

4. CONCLUSIONS

It has been demonstrated that the chloride GWPS exceedance at MW-370 and the fluoride GWPS exceedance at MW-393 are not caused by a release from the BAP CCR unit, but instead are attributed to a source other than the BAP. The following summarizes the four LOEs used to support this demonstration:

1. Chloride and fluoride concentrations in the BAP porewater are historically more than 10 times lower than the chloride concentrations observed at MW-370 and the fluoride concentrations observed at MW-393.
2. Compliance monitoring locations MW-370 and MW-393 have similar geochemical signatures as upgradient monitoring well MW-358. Moreover, a statistical evaluation has shown that their groundwater compositions are distinct from the porewater geochemical signature.
3. The stable boron isotopic ratio in groundwater at MW-370 is similar to the same ratio in groundwater at upgradient monitoring well MW-358 and dissimilar from the BAP porewater, providing further evidence that groundwater geochemistry at MW-370 is not influenced by the BAP.
4. Solid phase analysis of rock cores from the uppermost aquifer (i.e., bedrock) identified chloride and fluoride within the naturally occurring minerals of the bedrock, thereby providing an alternative source of these constituents in groundwater. Based on a review of literature, elevated concentrations of chloride and fluoride are known to occur in groundwater within the shale-limestone bedrock (i.e., uppermost aquifer at the BAP) and is likely due to the influence of the solid phase composition.

The alternative source of both chloride and fluoride is the influence of the shale bedrock lithology on the groundwater composition. This demonstration meets the expectations in both 35 IAC 845.650(e) and the technical manual for the Municipal Solid Waste Landfill federal regulatory program (Code of Federal Regulations, Title 40, Section 258) that a statistically significant increase may result from natural variation in groundwater quality.

The information serves as the written ASD prepared in accordance with 35 IAC 845.650(e) demonstrating that the GWPS exceedances for chloride at MW-370 and for fluoride at MW-393 are not due to the BAP CCR unit. Therefore, implementation of corrective measures is not required for chloride or fluoride at the BAP CCR unit.

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TABLES

**Table 1 - ANOSIM Hypothesis Test Results
Baldwin Power Plant**

Data	R	p-Value	Conclusion
Comparing porewater and background well	1	< 0.001	Water quality of porewater and background wells is different.
Comparing porewater and downgradient wells	1	< 0.001	Water quality of porewater and downgradient wells is different.
Comparing background and downgradient wells	0.09	0.14	Water quality of background and downgradient wells is similar.

Notes:

ANOSIM- Analysis of Similarities

R: ANOSIM test statistics; an R value close to "1.0" suggests a high dissimilarity between groups, while an R value close to "0" indicates an even distribution of high and low ranks both within and between groups.

p-Value: A measure indicating the differences between two groups relative to random variations. Generally, p-values < 0.05 are assumed to represent statistically significant differences between groups.

**Table 2 - Boron Isotope Analytical Results
Baldwin Power Plant**

Geosyntec Consultants, Inc.

Sample ID	Sample Location	Sample Description	$\delta^{11}\text{B}$ (‰)	Total Boron ($\mu\text{g/L}$)
20230206 TPZ-164	TPZ-164	Porewater	2.8	1116
20230206 Cooling Pond	Cooling Pond	Surface Water	5.7	240
20230206 MW-370	MW-370	Downgradient Shale	32.4	2061
20230206 PZ-170	PZ-170	Downgradient PMP	43.2	326
20230206 MW-158R	MW-158R	Background PMP	18.0	86
20230207 MW-358	MW-358	Background Deep Shale	31.1	1778
20230207 MW-258	MW-258	Background Shale	14.2	1248

Notes:

1. The standard error for all boron isotope samples was 1.2 ‰

‰: parts per thousand (per mill)

$\mu\text{g/L}$: micrograms per liter

PMP: potential migration pathway

**Table 3 - Summary of Rietveld Quantitative Analysis
X-Ray Diffraction Results
Baldwin Power Plant**

Well ID			MW-358	MW-358	MW-392	MW-392
Depth (ft bgs)			(47-49)	(86-88)	(66-68)	(80-82)
Location			Upgradient	Upgradient	Downgradient	Downgradient
Boring Log Description			Shallow Shale	Deeper Shale Body	Shale	Shale transitioning to limestone
Mineral/Compound	Formula	Mineral Type	(wt %)	(wt %)	(wt %)	(wt %)
Quartz	SiO ₂	Silicate	29.2	30.7	22.7	29.8
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂	Mica	18.8	19.7	15.9	13.1
Albite	NaAlSi ₃ O ₈	Feldspar	0.4	2.5	0.6	0.6
Microcline	KAlSi ₃ O ₈	Feldspar	8.6	5.9	5.1	1.0
Diaspore	aAlO.OH	Oxyhydroxide	-	-	2.8	-
Magnetite	Fe ₃ O ₄	Oxide	0.5	0.3	0.1	1.4
Anatase	TiO ₂	Oxide	0.8	1.8	1.0	0.8
Calcite	CaCO ₃	Carbonate	0.5	1.0	14.9	28.1
Fluorapatite	Ca ₅ (PO ₄) ₃ F	Phosphate	-	-	0.2	2.7
Ankerite	CaFe(CO ₃) ₂	Carbonate	-	-	0.8	-
Clay Minerals						
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄	Kaolin	4.8	15.0	3.6	5.5
Montmorillonite	(Na,Ca) _{0.3} (Al,Mg) ₂ Si ₄ O ₁₀ (OH) ₂ •10H ₂ O	Smectite	6.8	4.8	5.8	3.5
Nontronite	Fe ₂ (Al,Si) ₄ O ₁₀ (OH) ₂ Na _{0.3} (H ₂ O) ₄	Smectite	4.6	4.3	3.3	4.2
Illite/Montmorillonite	KAl ₄ (Si,Al) ₈ O ₁₀ (OH) ₄ •4H ₂ O	Mixed Layer I/S	8.8	2.7	7.1	3.6
Illite	K(Al,Mg,Fe) ₂ (Si,Al) ₄ O ₁₀ (OH) ₂	Illite	15.0	9.2	10.4	4.1
Chlorite	(Fe,Mg,Mn) ₅ Al(Si ₃ Al)O ₁₀ (OH) ₈	Chlorite	1.3	2	6.1	1.6
Clay Minerals Total			41	38	36	23
Clays + Muscovite Total			60	58	52	36

Notes

Only samples collected within the shale bedrock are shown. Additional sample data is provided in Attachment 5.

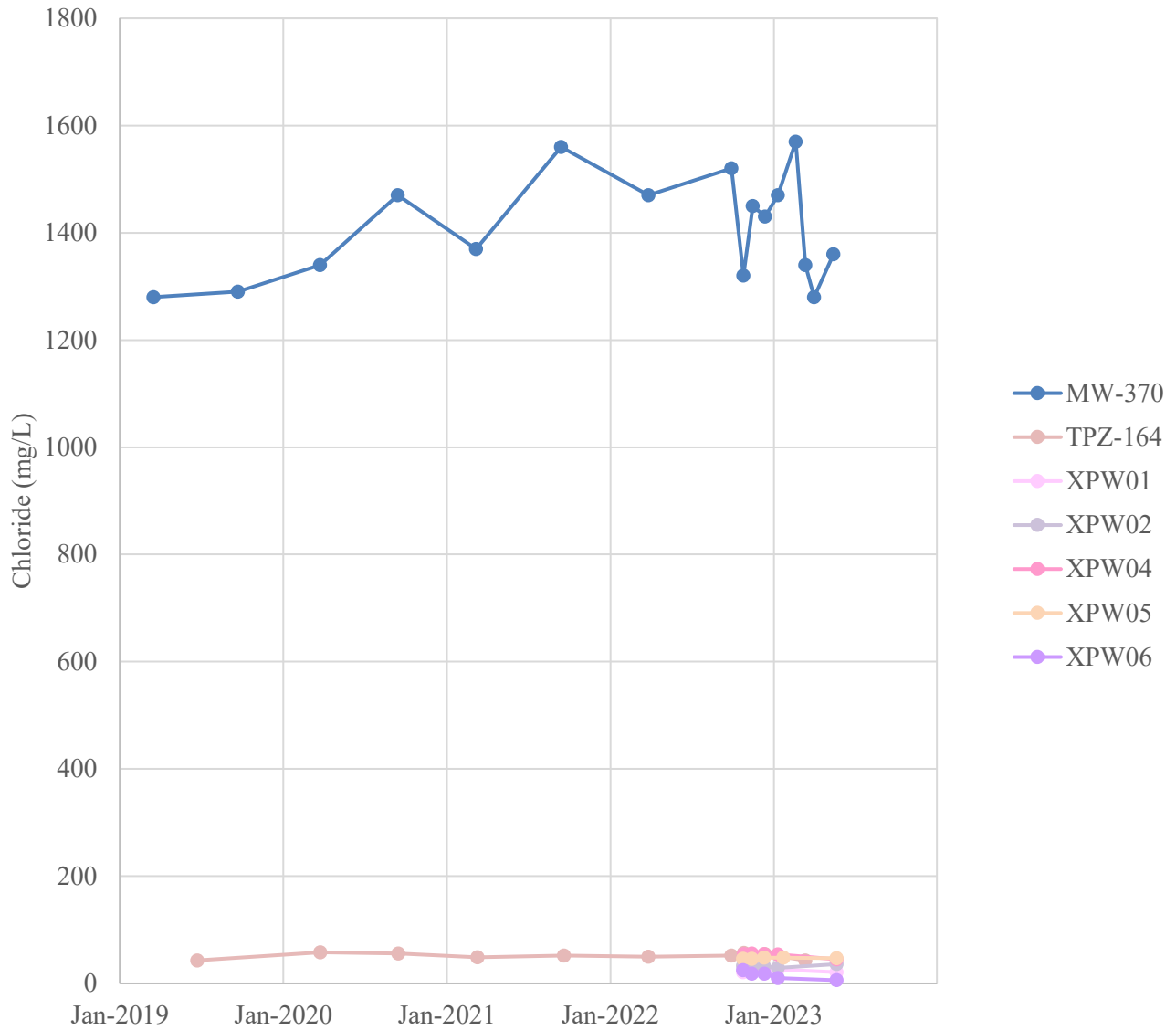
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Sample depths are shown in feet below ground surface (ft bgs).

wt %: percentage by weight

FIGURES



Notes:

1. Chloride data at MW-370 are available back to 12/29/15. Historically, results have been consistent, and the dataset is truncated for ease of view here.
 mg/L: milligrams per liter

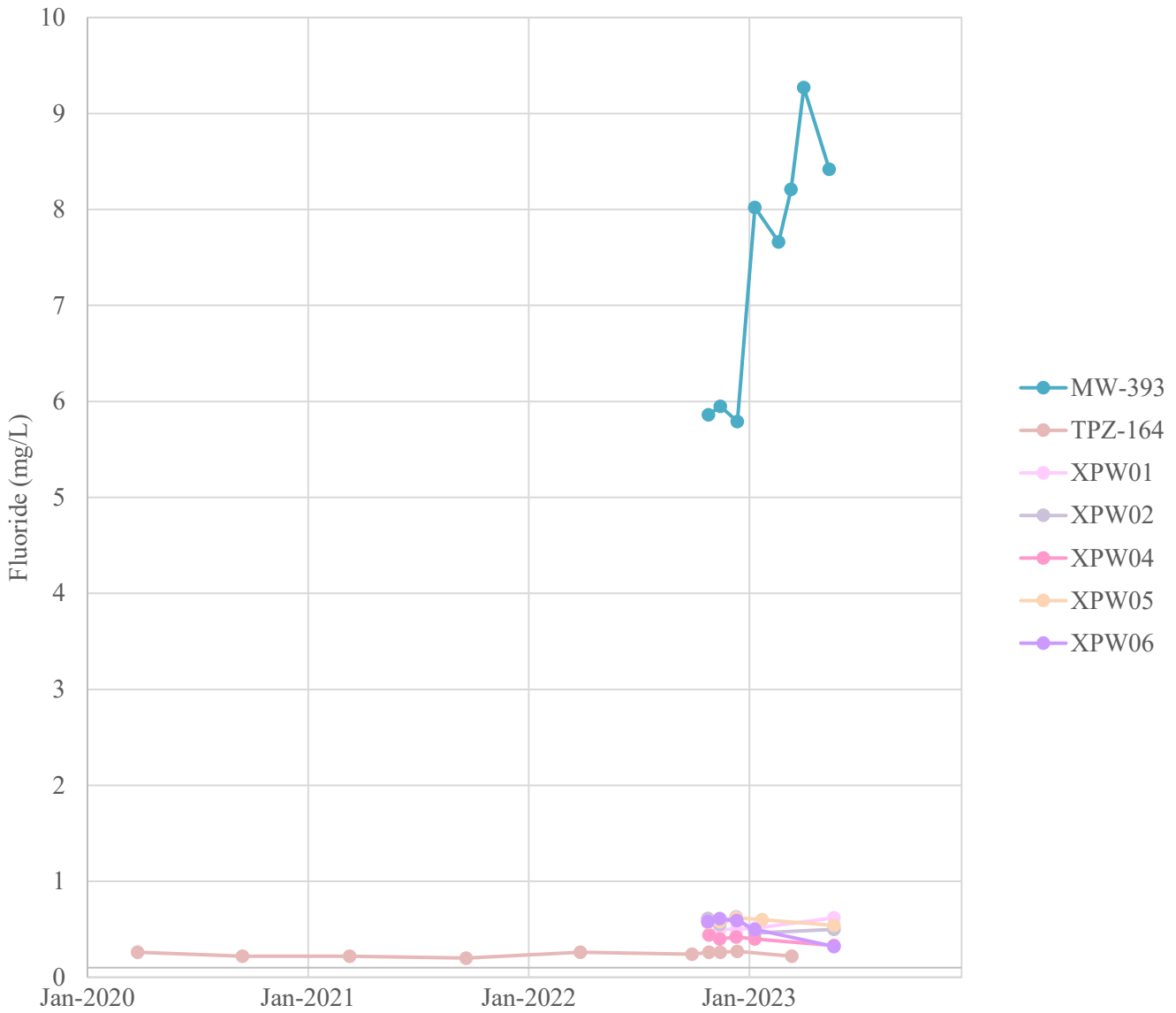
Chloride Time Series Graph
 Baldwin Power Plant



Figure
1

Columbus, Ohio

October 2023



Notes:
mg/L: milligrams per liter

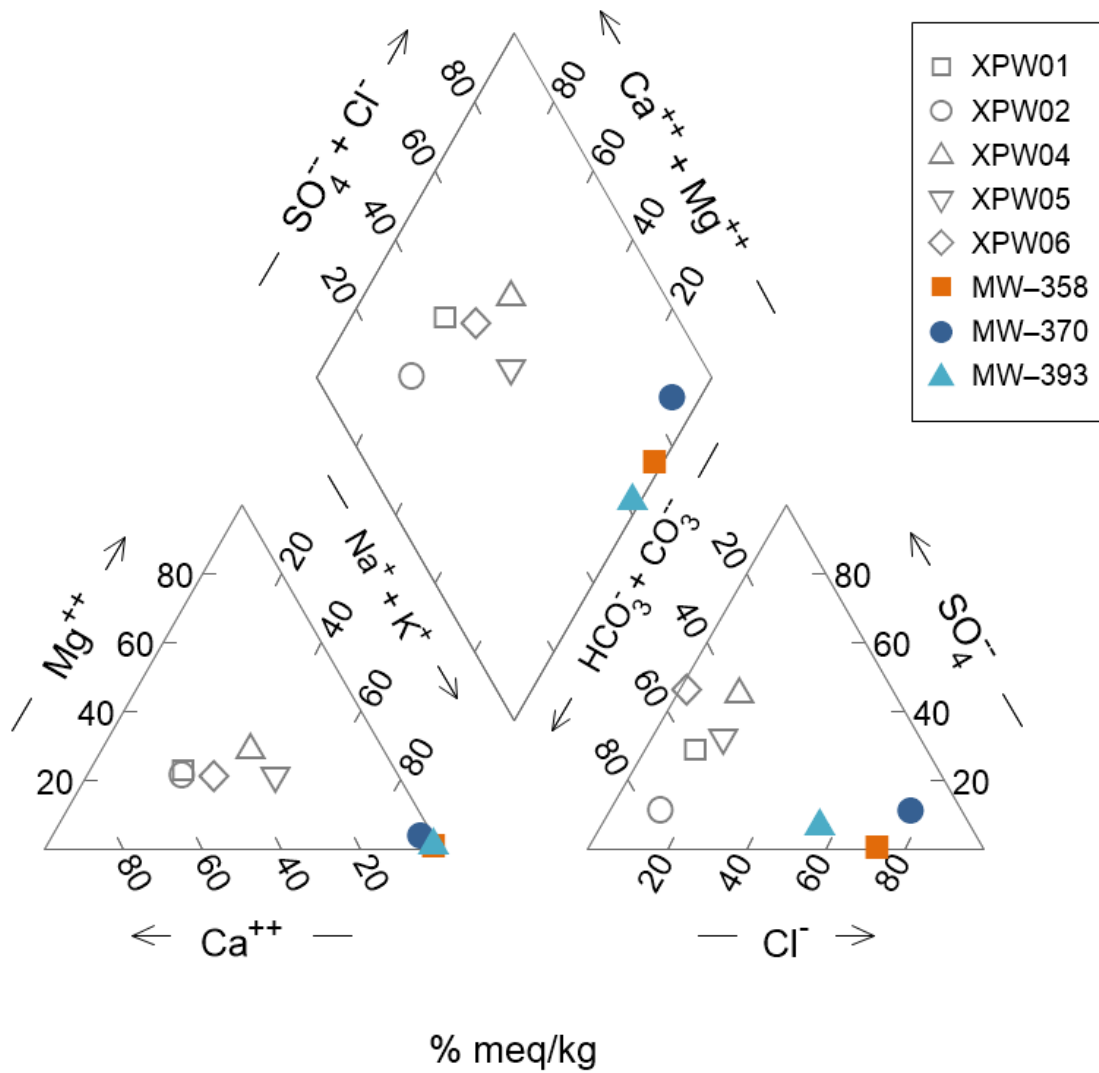
Fluoride Time Series Graph
Baldwin Power Plant



Figure
2

Columbus, Ohio

October 2023



Notes:

1. Data from May 2023 are shown.
% meq/kg: percent milliequivalents per kilogram

Piper Diagram

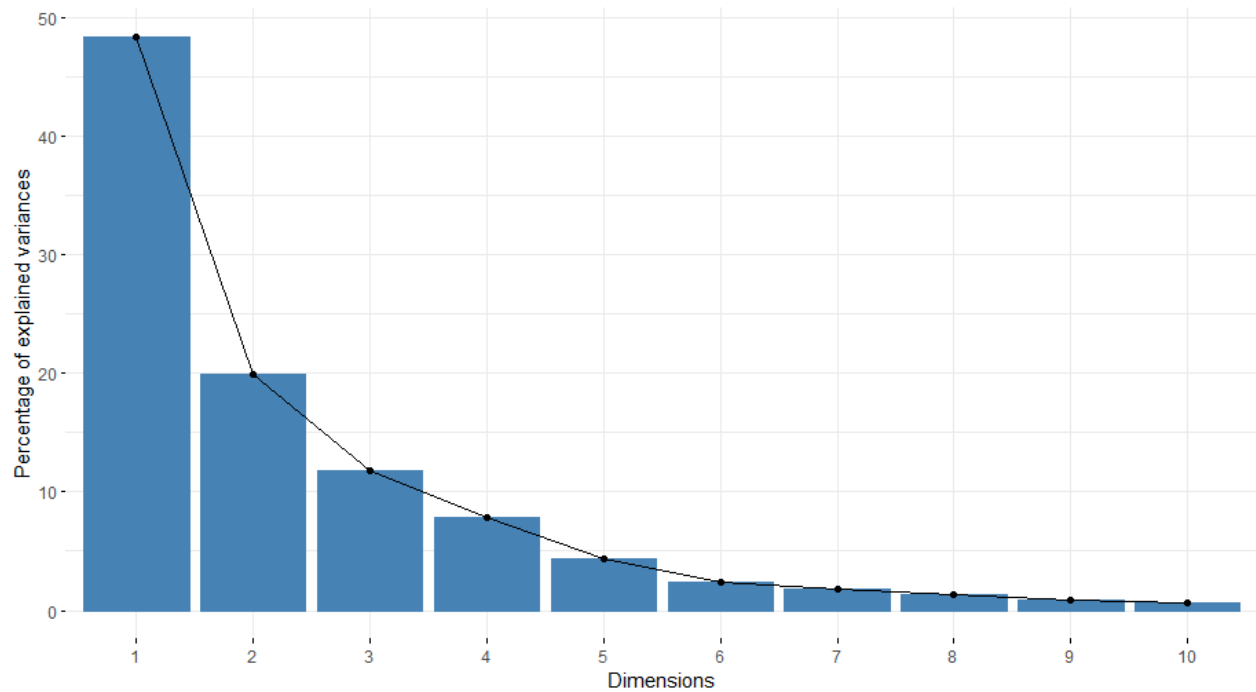
Baldwin Power Plant – Bottom Ash Pond



Figure
3

Columbus, Ohio

October 2023



Notes:

Samples collected from background well MW-358, downgradient wells MW-370 and MW-393, and porewater wells TPZ-164, XPW-1, XPW-2, XPW-3, XPW-5, and XPW-6 were included in the evaluation.

PCA Analysis - Quality of Representation of PCs
Baldwin Power Plant – Bottom Ash Pond

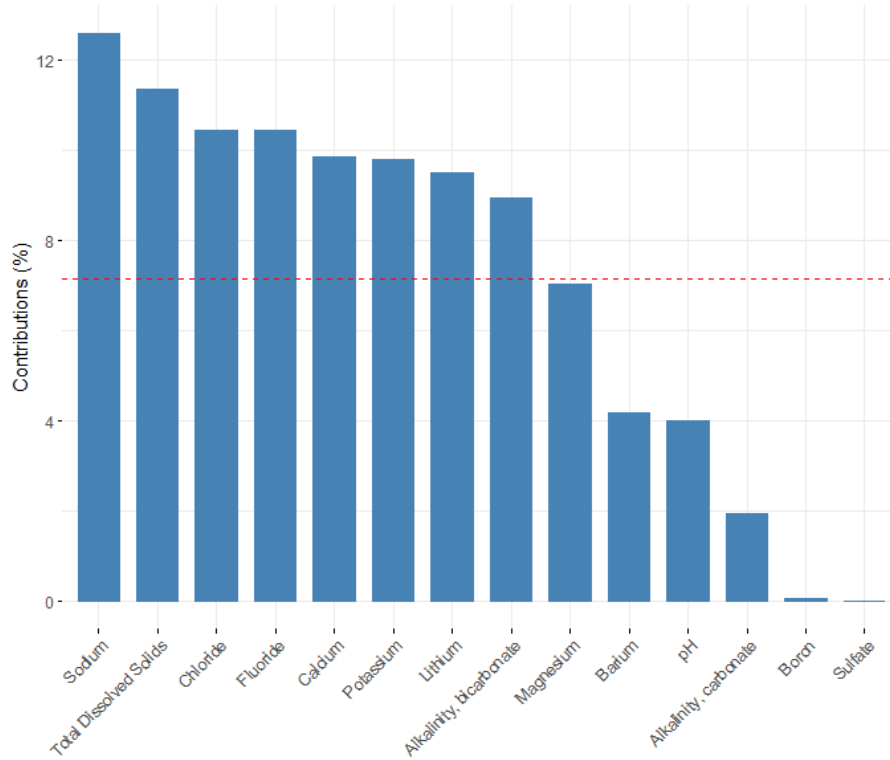


Figure
4a

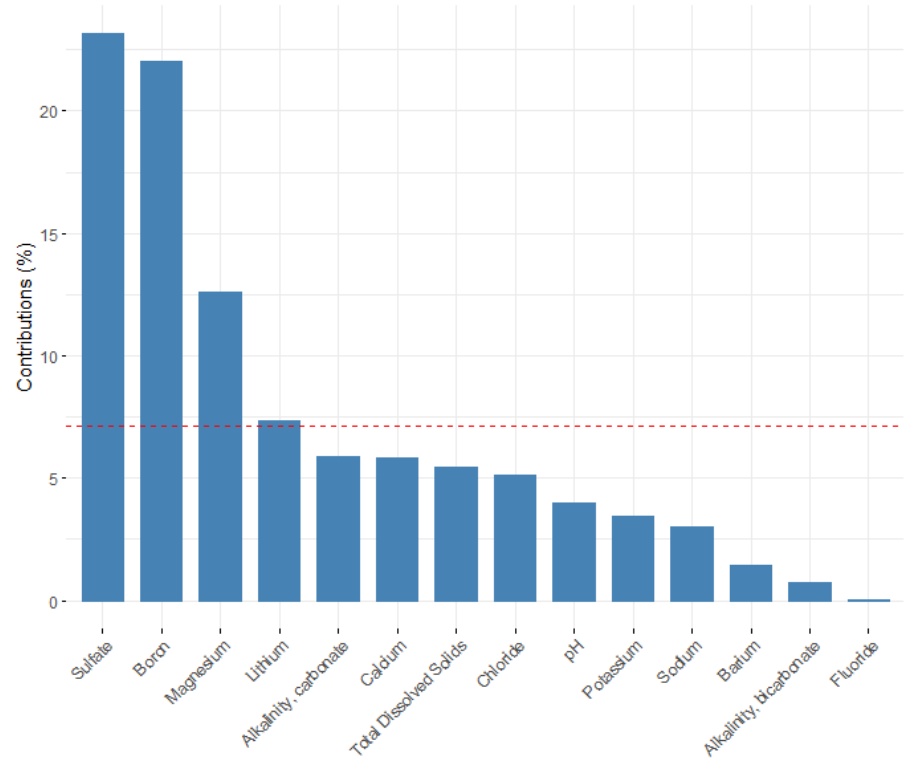
Columbus, Ohio

October 2023

Contribution of Variables to PC-1



Contribution of Variables to PC-2



Notes:

1. The dashed red line represents the anticipated value for uniform contribution. The constituents with a contribution exceeding the reference line are considered significant in its contribution to each PC (principal component).

Contribution of Variables to First Two PCs

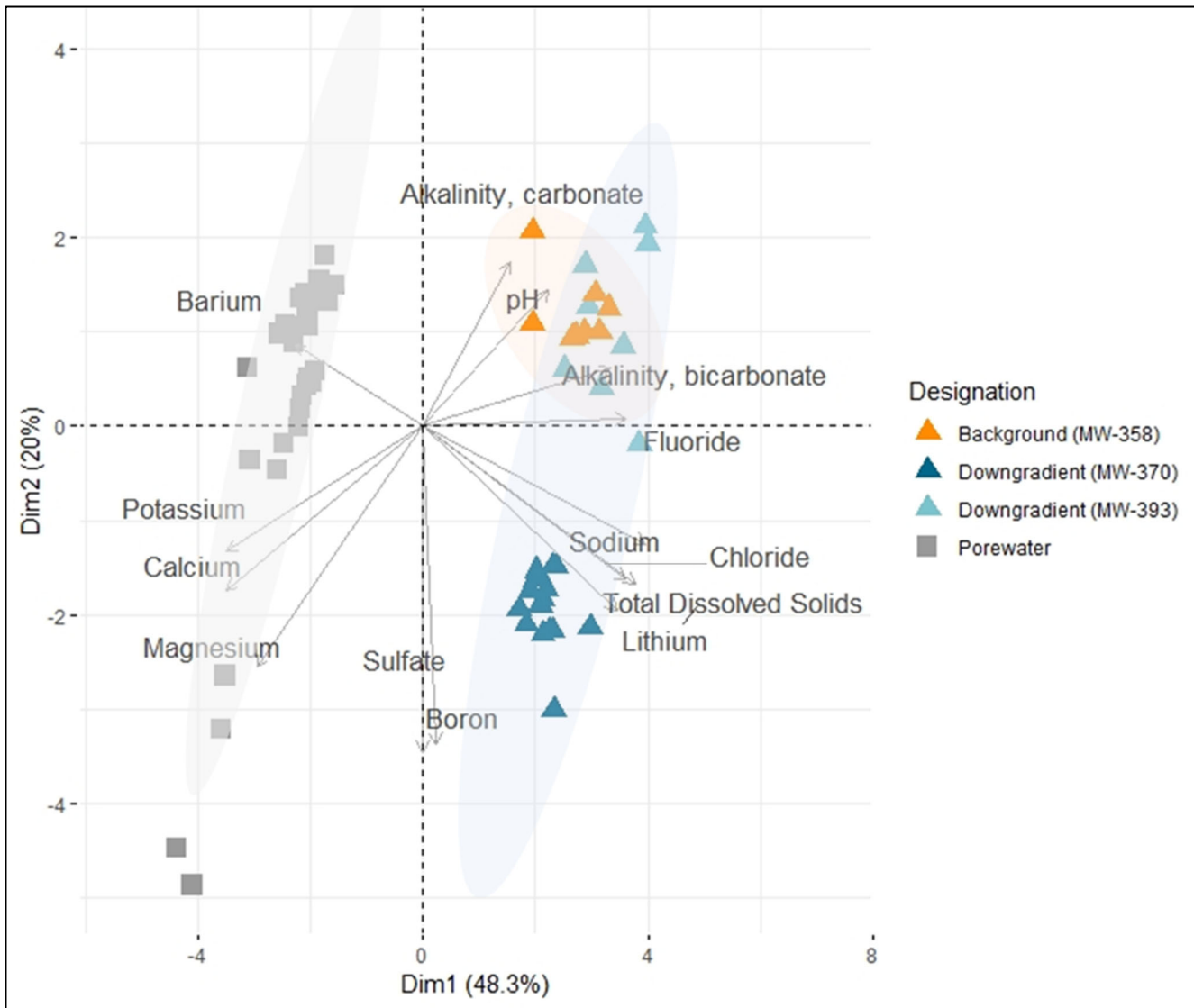
Baldwin Power Plant



Figure
4b

Columbus, Ohio

October 2023



Notes:

1. The ellipse containing data points within the 95% confidence interval for each group is outlined and shaded in gray, orange, and blue for porewater, background and downgradient groups.
2. The arrows signify the correlations between the constituents and the principal components.

PCA Biplot

Baldwin Power Plant – Bottom Ash Pond



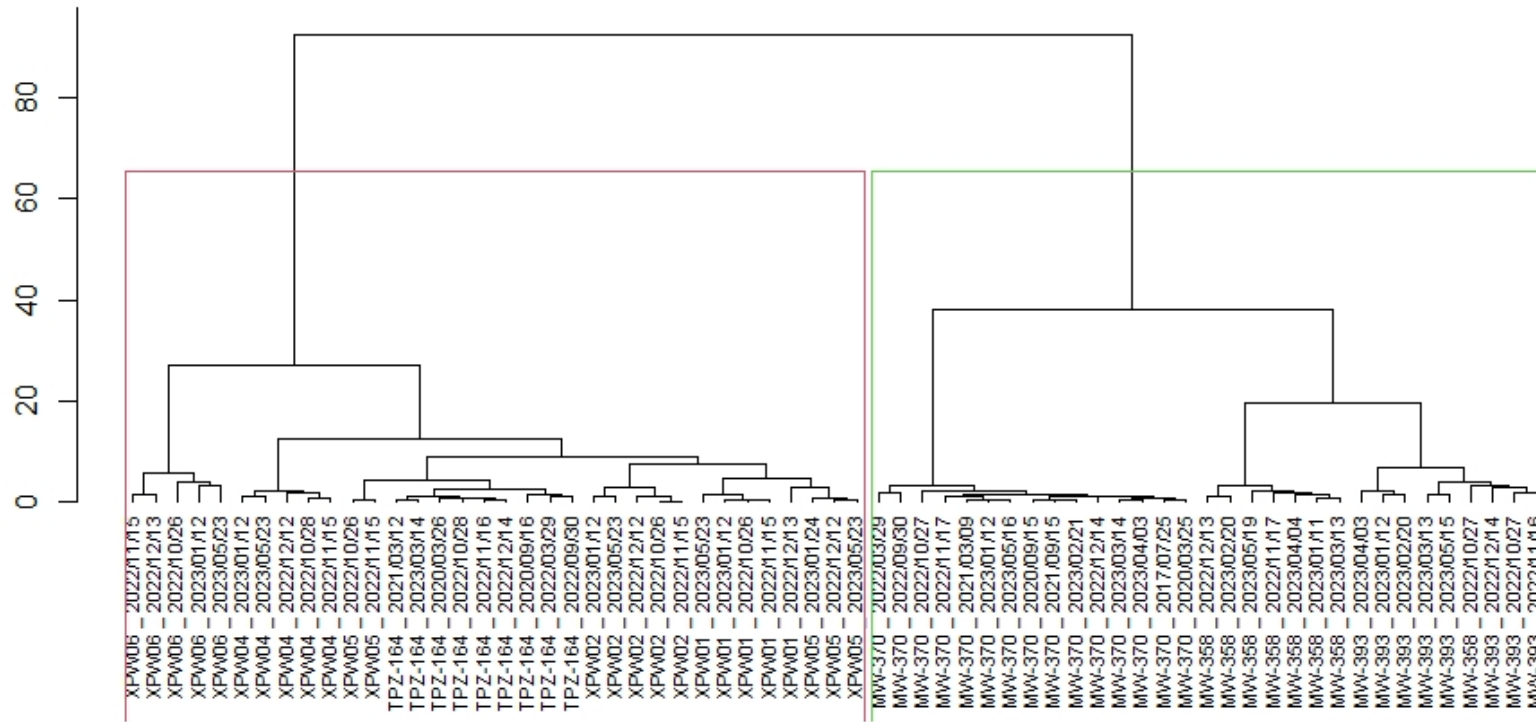
Figure

5

Columbus, Ohio

October 2023

Cluster Dendrogram



dist
hclust (*, "ward.D")

Dendrogram Graph from Cluster Analysis
Baldwin Power Plant

Notes:

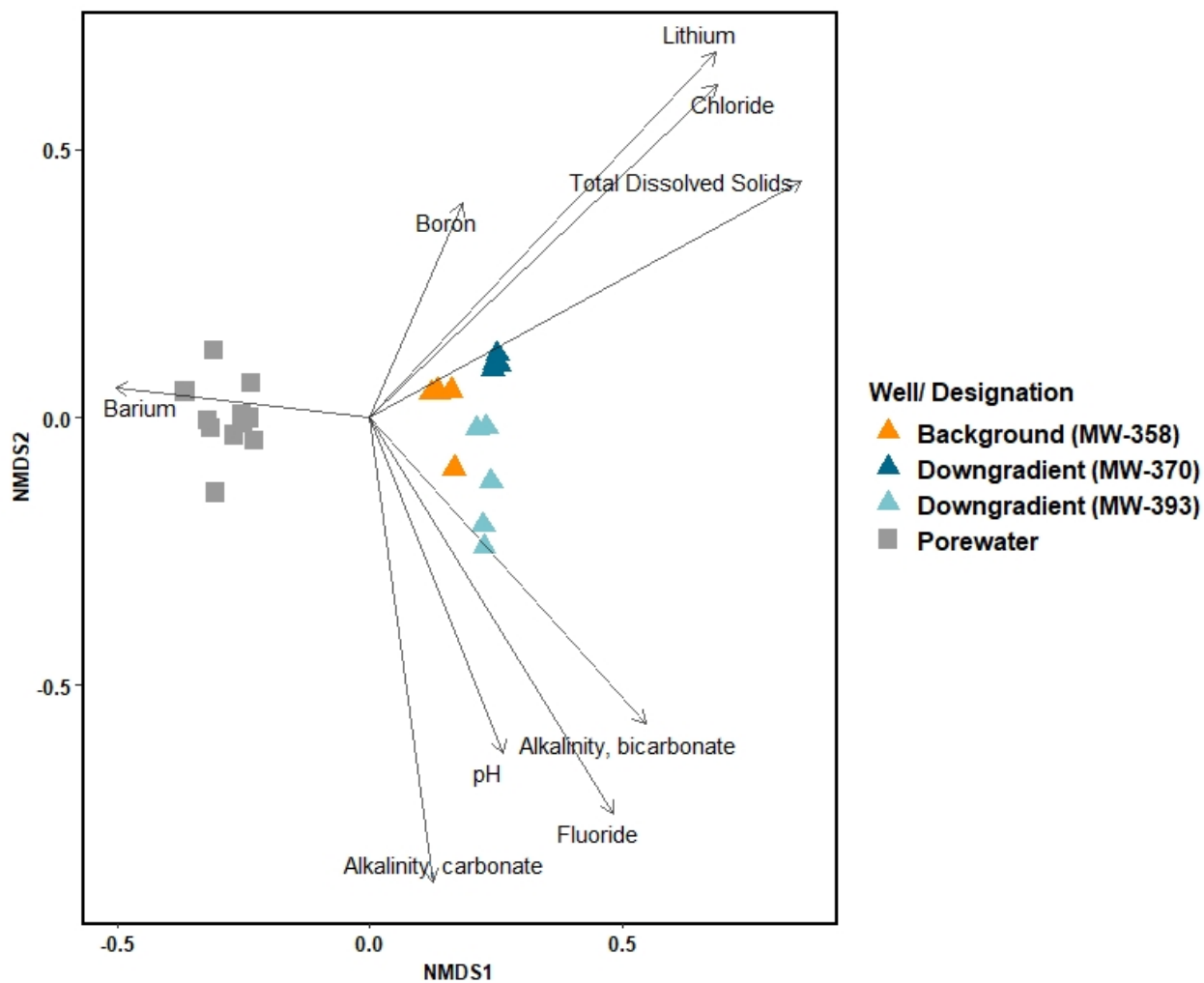
1. The cluster analysis used Euclidean distances as the similarity measure and Ward's method as the clustering algorithm.



Figure
6

Columbus, Ohio

October 2023



Vistra - Groundwater Compliance - Documents\General\Baldwin\2023-09 CI and F ASD Report

Notes:

1. The arrows represent the correlations between the constituents and the NMDS axes.
2. NMDS: Non-metric Multidimensional Scaling

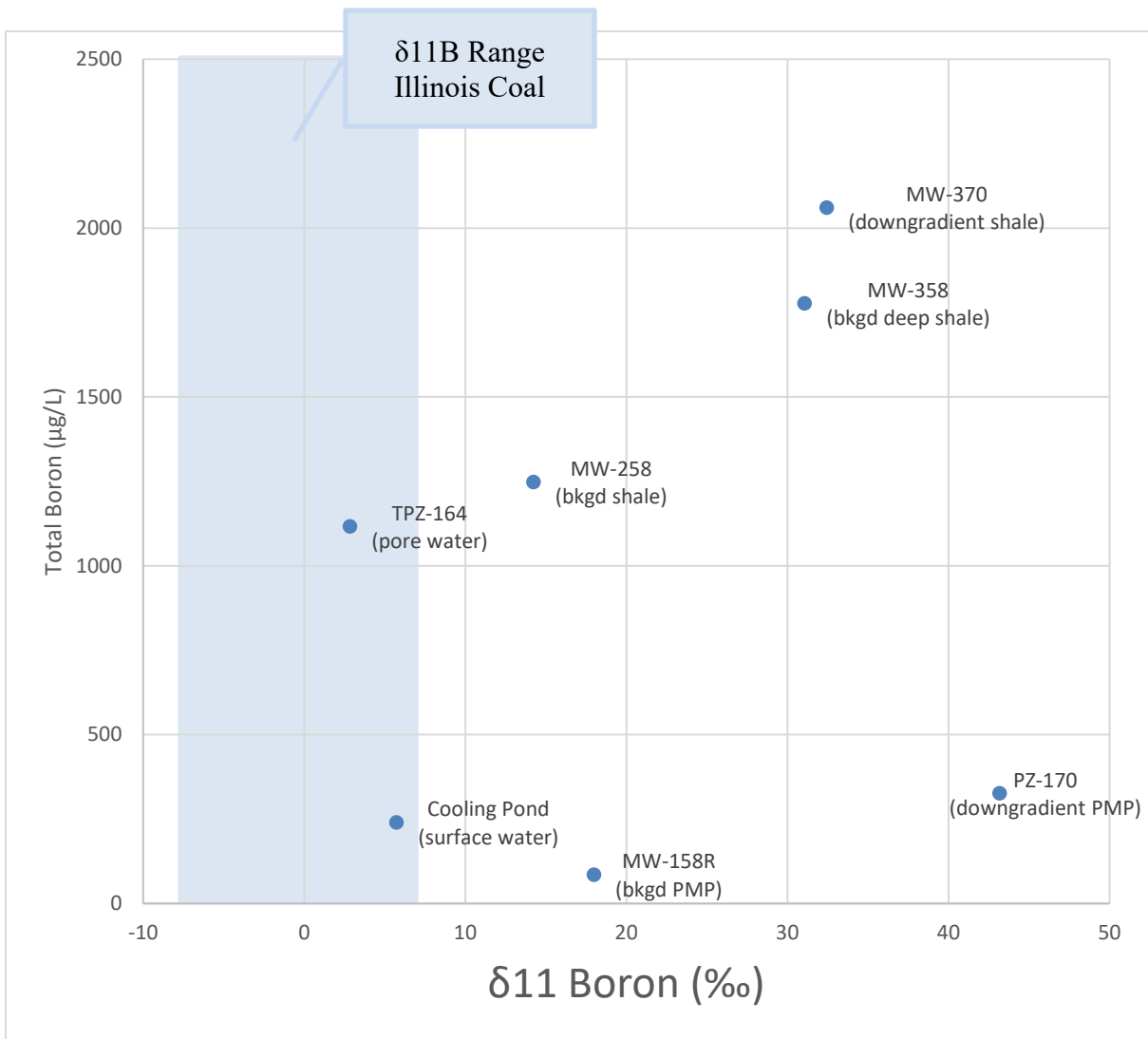
NMDS Biplot
Baldwin Power Plant – Bottom Ash Pond



Figure
7

Columbus, Ohio

October 2023



Notes:

1. δ11B range from Ruhl et al 2014.

µg/L: micrograms per liter

‰: parts per thousand

PMP: potential migration pathway

Boron Isotope Distribution

Baldwin Power Plant – Bottom Ash Pond



Figure

8

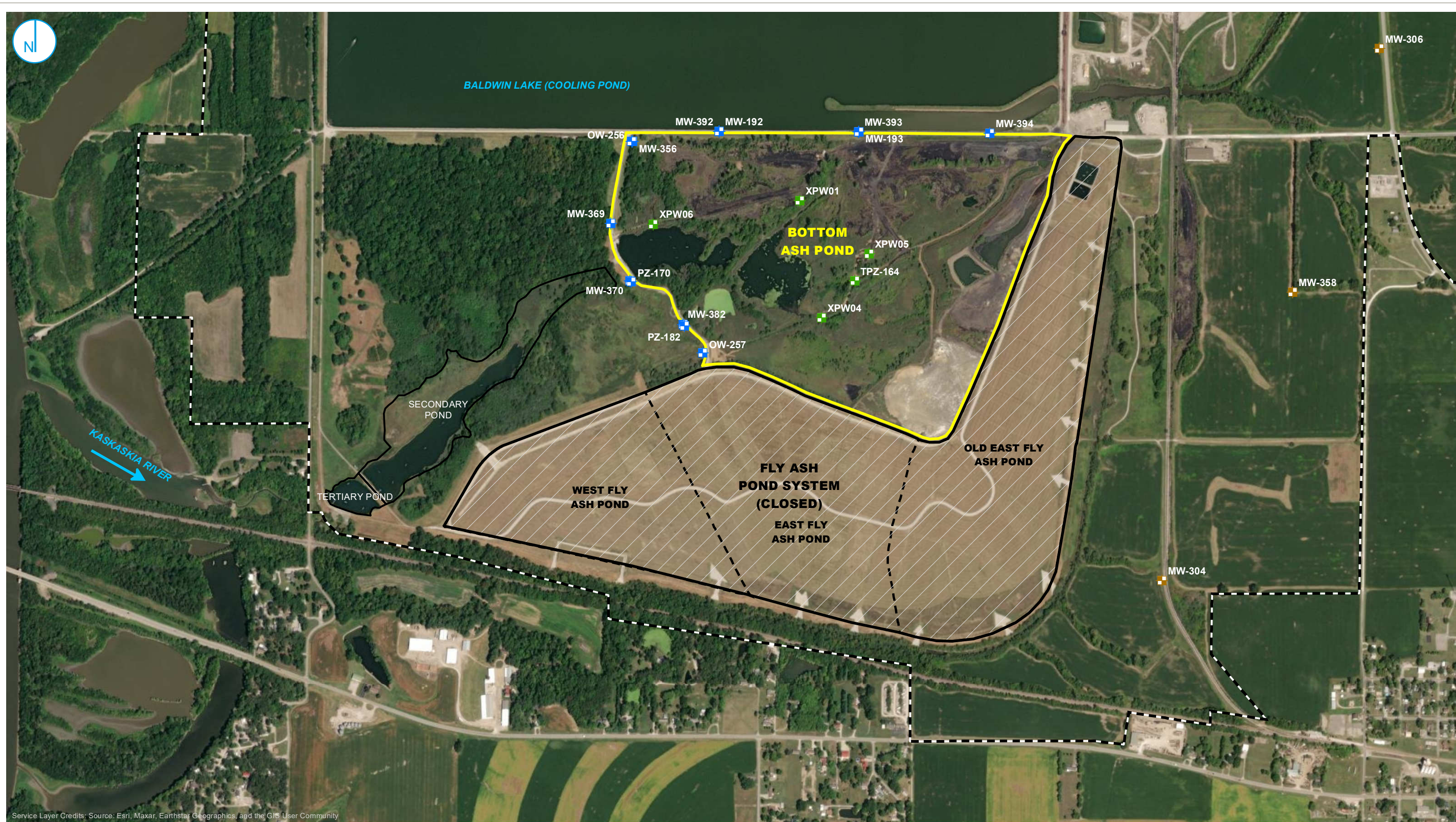
Columbus, Ohio

October 2023

ATTACHMENT 1

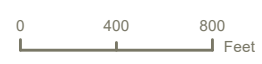
Part 845 Groundwater Monitoring Network

PROJECT: 16900XXXXX | DATED: 6/20/2023 | DESIGNER: GALARNMIC
 Y:\Mapping\Projects\2212285\MXD\845_Operating_Permit\Baldwin\BAP\2023_Update\GMP\Figure 2-1_BAL BAP Proposed Monitoring Well Network.mxd



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

- BACKGROUND WELL
- COMPLIANCE WELL
- PORE WATER WELL
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM (CLOSED)
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY



35 I.A.C. § 845 GROUNDWATER MONITORING WELL NETWORK

FIGURE 1

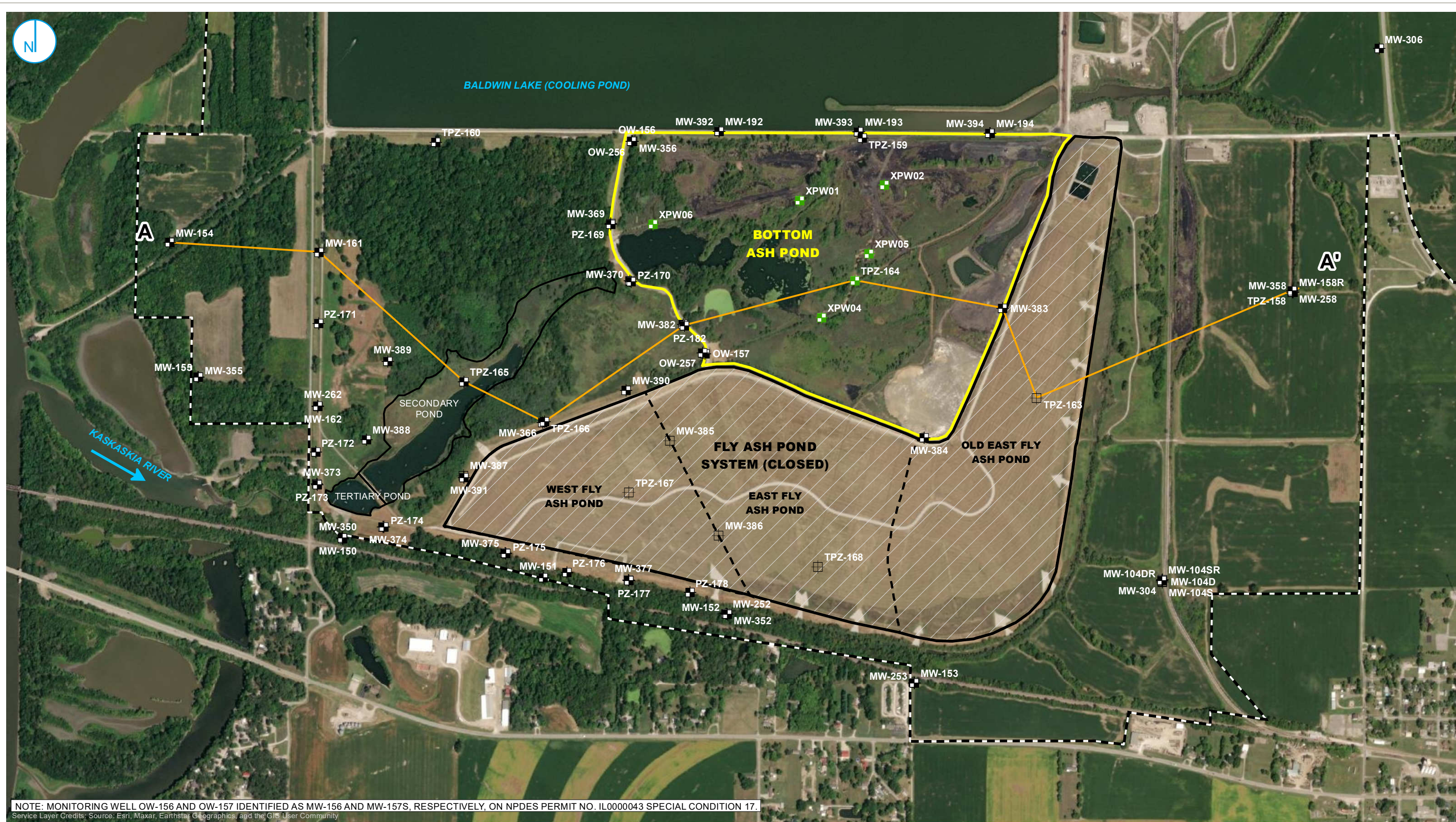
BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENT 2

Geologic Cross Section



NOTE: MONITORING WELL OW-156 AND OW-157 IDENTIFIED AS MW-156 AND MW-157S, RESPECTIVELY, ON NPDES PERMIT NO. IL000043 SPECIAL CONDITION 17.
Service Layer Credits: Source: Esri, Maxar, Earthstar, Geographics, and the GIS User Community

■ MONITORING WELL AND PIEZOMETER LOCATION	■ REGULATED UNIT (SUBJECT UNIT) FLY ASH
■ PORE WATER WELL	■ POND SYSTEM (CLOSED)
■ CLOSED MONITORING WELL	■ SITE FEATURE
● CCR SOURCEWATER SAMPLE	■ LIMITS OF FINAL COVER
CROSS SECTION TRANSECT	■ PROPERTY BOUNDARY
— A to A'	
0 400 800 Feet	

CROSS SECTION LOCATION MAP

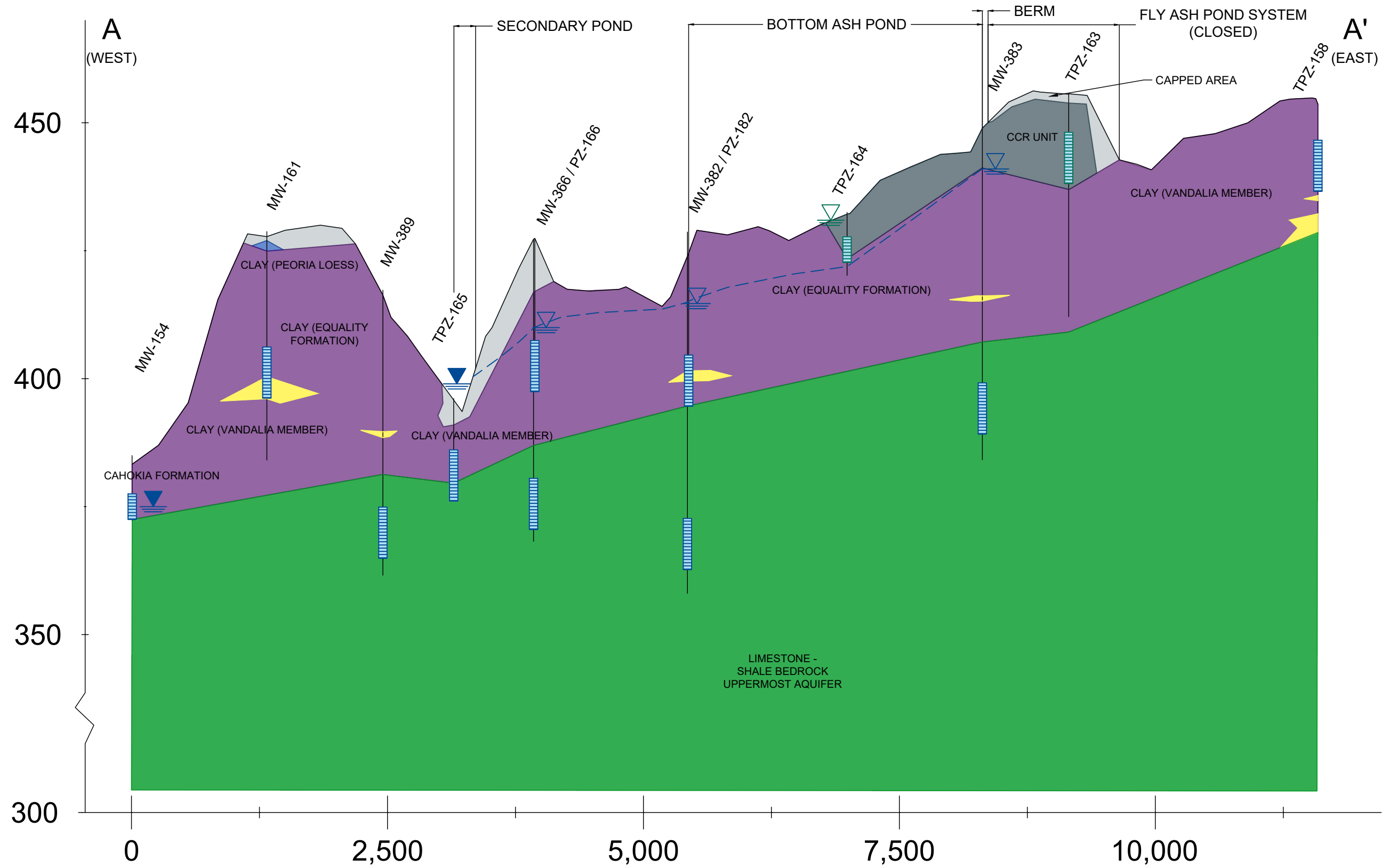
ALTERNATE SOURCE DEMONSTRATION
BOTTOM ASH POND
BALDWIN POWER PLANT
BALDWIN, ILLINOIS

FIGURE 3

PROJECT: 1940100806 DATED: 10/18/2022 1:44:40 PM PROJECT: 1940100806 DATED: 10/18/2022 1:44:40 PM

NOTES

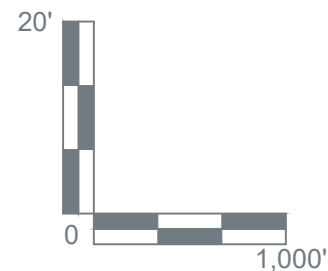
1. This profile was developed by interpolation between widely spaced boreholes. Only at the borehole location should it be considered as an approximately accurate representation and then only to the degree implied by the notes on the borehole logs.
2. Scale is approximate.
3. Vertical scale is exaggerated 50X.
4. Groundwater elevations measured on September 15, 2020.



LEGEND

- COAL COMBUSTION RESIDUALS (CCR)
- FILL
- CLAY (CL/CH)
- SILT (ML)
- SAND (SP/SM/SW)
- BEDROCK / WEATHERED BEDROCK (INTERBEDDED SHALE, LIMESTONE, SANDSTONE, V. LITTLE SS)

- WELL SCREEN INTERVAL
- UPPERMOST AQUIFER POTENTIOMETRIC SURFACE
- UPPERMOST AQUIFER GROUNDWATER ELEVATION
- POREWATER ELEVATION
- OTHER GROUNDWATER / SURFACE WATER ELEVATION(S)



CROSS SECTIONS A-A'

HYDROGEOLOGIC SITE CHARACTERIZATION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

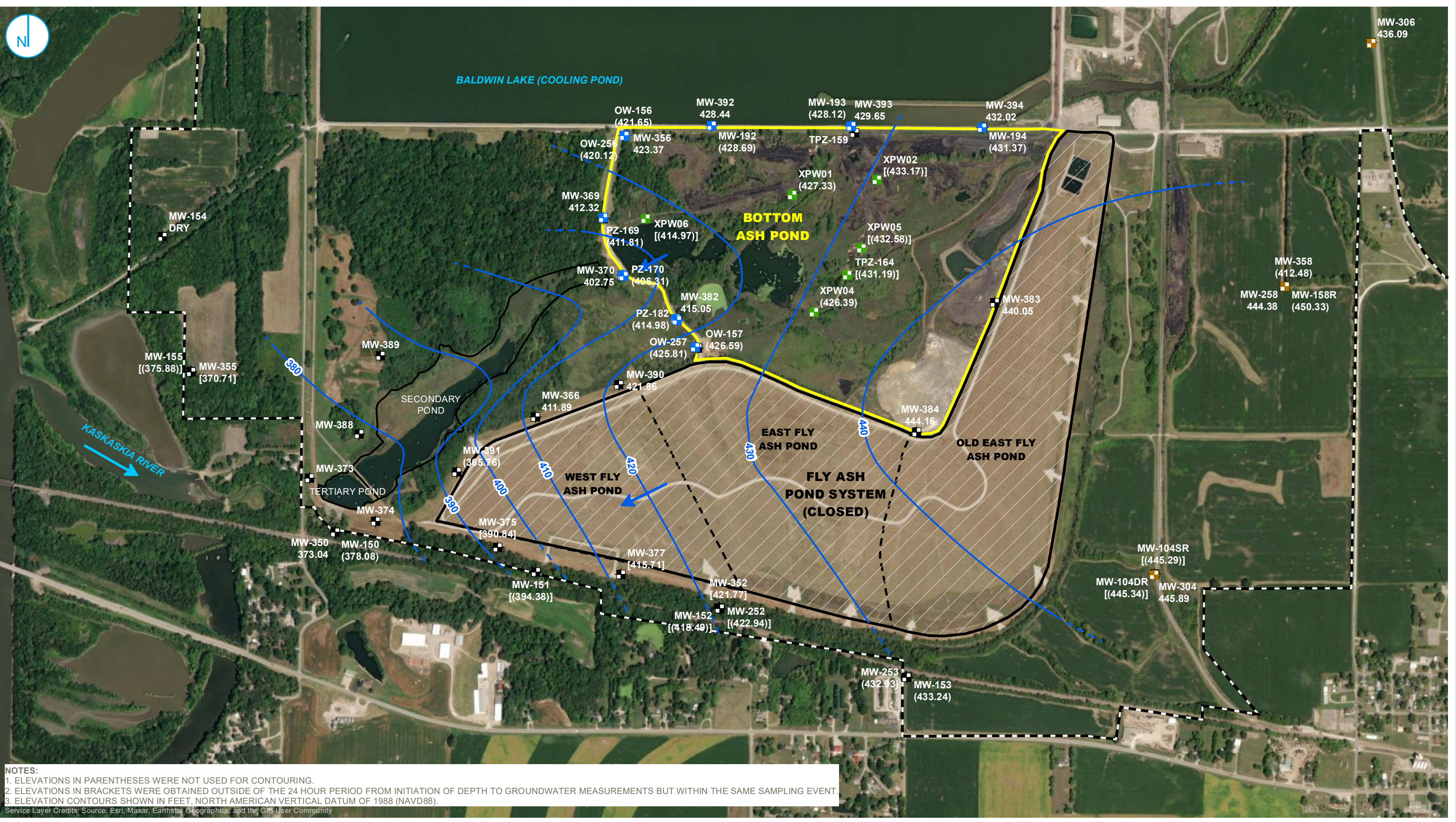
FIGURE 2-7

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENT 3
Uppermost Aquifer Potentiometric Surface Map
– May 15-17, 2023

PROJECT: 169000XXX | DATED: 10/25/2023 | DESIGNER: GAL-AR/M/C
 Y:\Mapping\Projects\22\2285\MXD\G\W_Contours\Round_2023\Baldwin\BAP_601\BAL_601_BAP_Pot Surface 20230516.mxd



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

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (10-FT CONTOUR INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- FLY ASH POND SYSTEM
- SITE FEATURE
- CAPPED AREA
- PROPERTY BOUNDARY

**POTENTIOMETRIC SURFACE MAP
 MAY 15-17, 2023**

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BOTTOM ASH POND
 BALDWIN POWER PLANT
 BALDWIN, ILLINOIS

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENT 4
Solid Phase Anions Laboratory Analytical Report

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

28-February-2023

Ramboll Americas Engineering Solutions, Inc.

Attn : Evvan Plank

P.O.# Box 4873
 Syracuse, New York
 13221-7873, USA

Phone: 315-463-7554
 Fax:

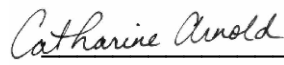

Date Rec. : 24 November 2022
LR Report: CA19226-NOV22
Reference: Baldwin Power Plant Drilling

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	6: MW-358 (47-49)	7: MW-358 (86-88)	8: MW-392 (80-82)	12: MW-392 (66-68)
Sample Date & Time					06-Oct-22 15:00	08-Oct-22 18:00	26-Sep-22 16:00	26-Sep-22 12:00
Cl [$\mu\text{g/g}$]	15-Dec-22	20:55	---	---	22	70	34	45
SO ₄ [$\mu\text{g/g}$]	15-Dec-22	20:55	29-Dec-22	13:45	50	620	280	100
F [%]	08-Dec-22	18:18	12-Dec-22	08:47	0.091	0.091	0.42	0.095
TKN [as N %]	30-Nov-22	09:28	02-Dec-22	11:00	0.06	0.05	< 0.01	0.05
Ra226 [Bq/g]	12-Dec-22	08:48	12-Dec-22	14:33	0.07	< 0.01	0.09	< 0.01



Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19226-NOV22

ATTACHMENT 5
MW-358 and MW-392 Boring Logs

Facility/Project Name Baldwin Power Plant		License/Permit/Monitoring Number		Boring Number MW358	
Boring Drilled By: Name of crew chief (first, last) and Firm Blake Weller Cascade Drilling			Date Drilling Started 10/5/2022	Date Drilling Completed 10/8/2022	Drilling Method Sonic
Common Well Name MW358			Final Static Water Level Feet (NAVD88)	Surface Elevation 453.59 Feet (NAVD88)	Borehole Diameter 6.0 inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 556,726.26 N, 2,387,756.63 E <input checked="" type="checkbox"/> E/W 1/4 of T 1/4 of Section N, R			Local Grid Location Lat 38° 11' 42.9882" <input type="checkbox"/> N <input type="checkbox"/> E Long -89° 50' 57.9018" <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID	County Randolph	State IL	Civil Town/City/ or Village Baldwin		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
									Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 CS	180 97		0 - 3.8'	SILT: ML , very dark grayish brown (10YR 3/2), organic material (0-10%), moist to wet.										CS= Core Sample
			1 - 2.1'	dry.	ML									Measured Rock Quality Designation (RQD) was modified due to drilling methods, modified RQD equals the sum of recovered core sections greater than 4 inches in length divided by total core recovery.
			2.1 - 3.8'	CLAYEY SILT: ML/CL , light gray (10YR 7/2), very dark grayish brown (10YR 3/2) and yellowish brown (10YR 5/8) mottling (20-30%), dry.	ML/CL									
			3.8 - 8.9'	SILTY CLAY WITH SAND: (CL/ML)S , grayish brown (10YR 5/2), strong brown (7.5YR 5/6) and very dark brown (10YR 2/2) mottling (20-30%), organic material (0-10%), low toughness, low to medium plasticity, stiff.	(CL/ML)S									
			8.9 - 13'											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature 	Firm Ramboll 234 W Florida Street, 5th Floor, Milwaukee, WI 53204	Tel: (414)837-3607 Fax: (414)837-3608
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Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
2 CS	60 60		13	13 - 17.8' SILTY CLAY : CL/ML, grayish brown (10YR 5/2), strong brown (7.5YR 5/6) and very dark brown (10YR 2/2) mottling (20-30%), low toughness, medium to high plasticity, stiff to very stiff.	(CL/ML)S									
			14	16.1' mottling discontinues.	CL/ML									
3 CS	48 36		18	17.8 - 21' SILTY CLAY WITH SAND : (CL/ML)S, brown (10YR 5/3), strong brown (7.5YR 5/6) and gray (10YR 6/1) mottling (20-30%), gravel (5-15%), no dilatancy, high toughness, low to medium plasticity, hard, moist.	(CL/ML)S									
			21	21 - 26.5' SHALE : BDX (SH), dark gray (GLEYS 1 4/N), weathered, thin bedding, moderately fractured.	BDX (SH)									
4 CORE	36 32		24	24' -25.2' wet.	BDX (SH)									
			27	26.5 - 27.5' LIMESTONE : BDX (LS), dark gray (5Y 4/1), shaley, fossiliferous, very strong.	BDX (LS)								RUN #4: Modified RQD = (21/32) = 66%	
5 CORE	36 29		28	27.5 - 31.3' SHALE : BDX (SH), grayish black (N2), weathered, highly decomposed to residual soil, wet to moist.	BDX (SH)									
			30	29.3' thinly bedded, moderately decomposed.	BDX (SH)								RUN #5: Modified RQD = (0/29) = 0%	
6 CORE	72 60		30	30' slightly decomposed to competent, moderately fractured.	BDX (SH)									
			32	31.3 - 32' COAL : COAL, black (N1).	COAL								RUN #6: Modified RQD = (45/60) = 75%	

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
7 CORE	72 71		32 - 33'	SHALE: BDX (SH), grayish black (N2), slightly decomposed to competent, moderately fractured, wet to moist.	BDX (SH)									
			33 - 36'	SHALEY LIMESTONE: BDX (LS/SH), medium gray (N5), weathered, shaley, highly decomposed, slightly fractured.	BDX (LS/SH)									
			36 - 40.8'	SHALEY LIMESTONE: to SHALE: BDX (LS/SH), interbedded shale.	BDX (LS/SH)									
8 CORE	96 85		40.8 - 42'	LIMESTONE: BDX (LS), medium light gray (N6), strong to moderately fractured, slightly decomposed, narrow apertures.	BDX (LS)									
			42 - 58.9'	SHALE: BDX (SH), medium gray (N5) to medium dark gray (N4), weathered, weak, thinly bedded, moderately to highly fractured.	BDX (SH)									
9 CORE	60 60		47.5'	dark grayish brown (10YR 4/2), pale olive (5Y 6/4) discoloration, more competent.										
			50.2'	weak to moderate.										
			50.8'	olive gray (5Y 5/2).										

RUN #7:
Modified
RQD =
(67/71) =
94%

RUN #8:
Modified
RQD =
(81/85) =
94%

RUN #9:
Modified
RQD =
(52/60) =
87%

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
10 CORE	60 58		53	42 - 58.9' SHALE : BDX (SH), medium gray (N5) to medium dark gray (N4), weathered, weak, thinly bedded, moderately to highly fractured. <i>(continued)</i> 52.2' dark grayish green (5GY 4/2).	BDX (SH)									RUN #10: Modified RQD = (42/58) = 72%
		54	54.1' medium dark gray (N4) to medium gray (N5), weak, highly decomposed, no visible bedding, dry.											
		55	55.7' dark grayish green (5GY 4/2).											
		56	57.2' light brownish gray (10YR 6/2), thinly bedded, laminated.											
		57	58.2' medium dark gray (N4), strong, intensely fractured, thinly bedded.											
11 CORE	36 31		59	58.9 - 64' LIMESTONE : BDX (LS), medium gray (N5), very strong, moderately fractured, visible laminations.	BDX (LS)								RUN #11: Modified RQD = (8/31) = 26%	
		60												
		61												
12 CORE	36 36		62		BDX (LS)								RUN #12: Modified RQD = (31/36) = 86%	
		63												
13 CORE	48 48		64	64 - 75.3' SHALE : BDX (SH), medium dark gray (N4) to medium gray (N5), strong, thinly bedded to laminated, moderately fractured.	BDX (SH)								RUN #13: Modified RQD = (43/48) = 90%	
		65	64.3' grayish green (5GY 5/2), weathered, weak, decomposed.											
		66												
		67												
14 CORE	60 58		68	69.3' medium dark gray (N4), weathered, moderate strength.	BDX (SH)								RUN# 14: Modified RQD = (57/58) = 99%	
		69												
		70												
		71												
		72												

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments		
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200			
15 CORE	60 56		73	64 - 75.3' SHALE: BDX (SH), medium dark gray (N4) to medium gray (N5), strong, thinly bedded to laminated, moderately fractured. <i>(continued)</i>	BDX (SH)											
			74													
			75													
			76													
16 CORE	60 51		76	75.3 - 77.1' LIMESTONE: BDX (LS), gray (5Y 6/1), fossiliferous, very strong.	BDX (LS)											
			77	77.1 - 78.2' SHALE: BDX (SH), medium dark gray (N4), weathered, weak to moderate strength, moderately decomposed.	BDX (SH)											
			78													
			79													
17 CORE	60 60		80	78.2 - 84.8' LIMESTONE: BDX (LS), medium dark gray (N4) to medium gray (N5), shaley, fossiliferous, very strong, moderately fractured, laminations (0-5%).	BDX (LS)											
			81													
			82													
			83													
			84	84.8 - 90' SHALE: BDX (SH), dark gray (N3), weathered, weak to moderate strength, moderately decomposed, moderately fractured, thin bedding.	BDX (SH)											
			85													
			86													
			87													
			88													
			89													
			90													

RUN #15:
Modified
RQD = Not
Recorded

RUN #16:
Modified
RQD =
(23/51) =
45%

RUN #17:
Modified
RQD =
(28/60) =
47%

Facility/Project Name Baldwin Power Plant		License/Permit/Monitoring Number		Boring Number MW392	
Boring Drilled By: Name of crew chief (first, last) and Firm Blake Weller Cascade Drilling		Date Drilling Started 9/9/2022		Date Drilling Completed 9/26/2022	
Common Well Name MW392		Final Static Water Level Feet (NAVD88)		Surface Elevation 434.07 Feet (NAVD88)	
				Borehole Diameter 6.0 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		Lat <u>38° 11' 57.132"</u>		Local Grid Location	
State Plane 558,140.20 N, 2,382,717.92 E <input checked="" type="checkbox"/> E/W		Long <u>-89° 52' 0.9632"</u>		<input type="checkbox"/> N <input type="checkbox"/> E	
1/4 of _____ 1/4 of Section _____, T _____ N, R _____		Feet <input type="checkbox"/> S		Feet <input type="checkbox"/> W	
Facility ID		County Randolph		State IL	
				Civil Town/City/ or Village Baldwin	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties						RQD/ Comments
									Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 CS	120 46		0 - 1.2'	FILL, WELL-GRADED GRAVEL WITH CLAY: GW-GC, pinkish gray (7.5YR 6/2), angular, moist.	(FILL) GW-GC										CS= Core Sample
			1.2 - 16'	FILL, LEAN CLAY: CL, light brown (7.5YR 6/4), sand (0-5%), no dilatancy, low to medium plasticity, moist.	(FILL) CL										Measured Rock Quality Designation (RQD) was modified due to drilling methods, modified RQD equals the sum of recovered core sections greater than 4 inches in length divided by total core recovery.
2 CS	120 62														

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm Ramboll 234 W Florida Street, 5th Floor, Milwaukee, WI 53204	Tel: (414)837-3607 Fax: (414)837-3608
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Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
7 CORE	60 4		52 - 57'	SHALE: BDX (SH), dark gray (5Y 4/1), highly weathered, hard, dry.	BDX (SH)									
			53'	very dark gray (7.5YR 3/1).										
			54'											
			55'											
			56'											
			57'											
			57 - 57.5'	LIMESTONE: BDX (LS), gray (5Y 6/1), slightly fractured.										BDX (LS)
8 CORE	96 78		57.5 - 70'	SHALE: BDX (SH), dark gray (5Y 4/1), weathered, soft, moderately fractured to highly fractured limestone beds (0-5%).	BDX (SH)								RUN #7: Modified RQD = 0% (No Solid Recovery > 4")	
			58'											
			59'											
			60'											
			61'											
			62'											
			62.3' - 67.2'	highly fractured, very soft, wet.										
9 CORE	120 62		70 - 74.4'	LIMESTONE: BDX (LS), gray (5Y 6/1), moderately to intensely fractured, moderately wide apertures.	BDX (LS)								RUN #9: Modified RQD = (28/78) = 36%	
			71'											
			72'											

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
10 CORE	48 48		73	70 - 74.4' LIMESTONE: BDX (LS), gray (5Y 6/1), moderately to intensely fractured, moderately wide apertures. <i>(continued)</i>	BDX (LS)									
			74											
			75	74.4 - 81.8' SHALE: BDX (SH), medium dark gray (N4) to dark gray (N3), slightly weathered, moderately fractured, thinly bedded.	BDX (SH)									
			76											
			77											
			78											
			79											
			80											
			81											
			82	81.8 - 84' LIMESTONE: BDX (LS), medium light gray (N6), shaley, fossiliferous, moderately fractured, thinly bedded.	BDX (LS)									
			83	83.2' medium gray (N5).										
			84	84' End of Boring.										

RUN #10:
Modified
RQD =
(28/48) =
58%

ATTACHMENT 6
X-ray Diffraction Laboratory Analytical Report



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services
Project Number/ LIMS No. Custom XRD/MI4508-DEC22
Sample Receipt: December 7, 2022
Sample Analysis: December 15, 2022
Reporting Date: April 24, 2023

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions (Bulk): Co radiation, 35 kV, 40 mA; Detector: LYNXEYE
Regular Scanning: Step: 0.02°, Step time: 0.75s, 2θ range: 6-80°

Test Conditions (Clay): Co radiation, 35 kV, 40 mA; Detector: LYNXEYE
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Clay Section Scanning: Step: 0.01°, Step time: 0.2s, 2θ range: 3-40°

Interpretations: PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit: 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Natural Resources Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada Inc. - Minerals: <https://www.scc.ca/en/search/palcan>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Natural Resources is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation.

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Clay Mineral Separation and Identification:

Clay minerals are typically fine-grained (<2 µm) phyllosilicates in sedimentary rock. Due to the poor crystallinity and fine size of clay minerals, separation of the clay fraction from bulk samples by centrifuge is required. A slide of the oriented clay fraction is prepared and scanned followed by a series of procedures (the addition of ethylene glycol and high temperature heating). Clay minerals are identified by their individual diffraction patterns and changes in their diffraction pattern after different treatments. Clay speciation and mineral identification of the bulk sample are performed using DIFFRACplus EVA (Bruker AXS).

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	MW-358 (13-15)	MW-358 (47-49)	MW-358 (86-88)	MW-392 (80-82)	MW-392 (32-33.5)	MW-393 (24-25.5)	MW-394 (20.5-22)	MW-392 (66-68)
	DEC4508-1 (wt %)	DEC4508-2 (wt %)	DEC4508-3 (wt %)	DEC4508-4 (wt %)	DEC4508-5 (wt %)	DEC4508-6 (wt %)	DEC4508-7 (wt %)	DEC4508-8 (wt %)
Quartz	52.7	29.2	30.7	29.8	52.1	64.1	55.4	22.7
Muscovite	7.7	18.8	19.7	13.1	9.0	5.5	7.6	15.9
Albite	12.3	0.4	2.5	0.6	9.1	6.4	12.8	0.6
Microcline	7.3	8.6	5.9	1.0	6.5	10.1	7.3	5.1
Diaspore	0.3	-	-	-	-	0.2	0.5	2.8
Magnetite	0.9	0.5	0.3	1.4	0.1	0.0	0.1	0.1
Anatase	0.2	0.8	1.8	0.8	0.6	0.3	0.3	1.0
Calcite	-	0.5	1.0	28.1	0.0	0.0	0.2	14.9
Fluorapatite	-	-	-	2.7	0.3	-	0.2	0.2
Ankerite	-	-	-	-	1.4	0.9	0.5	0.8
<i>Clay</i>								
Kaolinite	5.3	4.8	15.0	5.5	6.8	3.2	4.2	3.6
Montmorillonite-12A	4.9	6.8	4.8	-	-	-	-	5.8
Montmorillonite-14A	-	-	-	3.5	3.3	3.5	3.6	-
Nontronite	0.6	4.6	4.3	4.2	1.6	1.4	0.5	3.3
Illite/Mont - 11A	-	8.8	2.7	3.6	2.7	2.1	3.0	7.1
Illite	5.0	15.0	9.2	4.1	0.7	1.0	0.6	10.4
Chlorite IIb	2.6	1.3	2.0	1.6	5.8	1.2	3.1	6.1
TOTAL	100	100	100	100	100	100	100	100

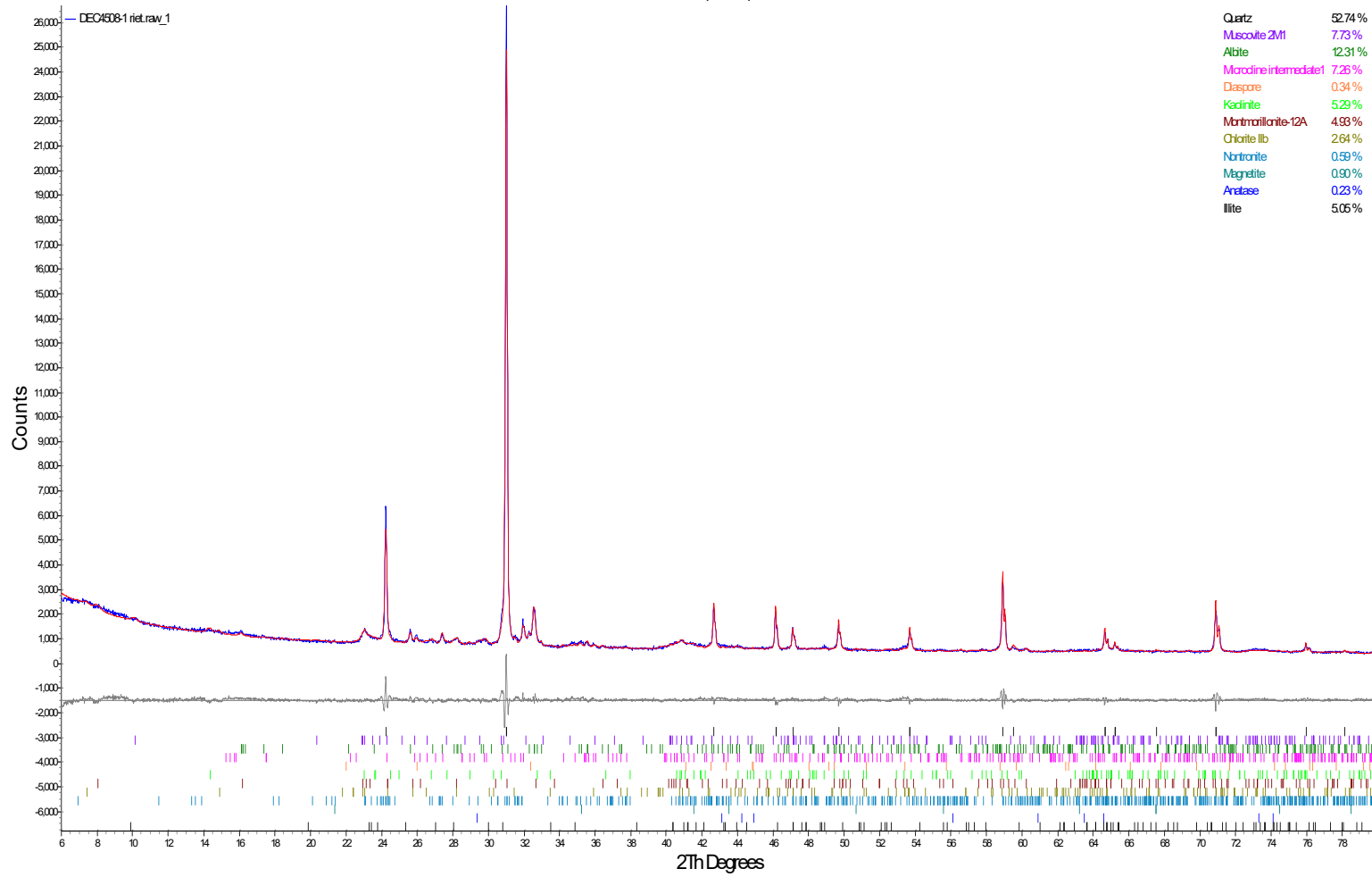
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

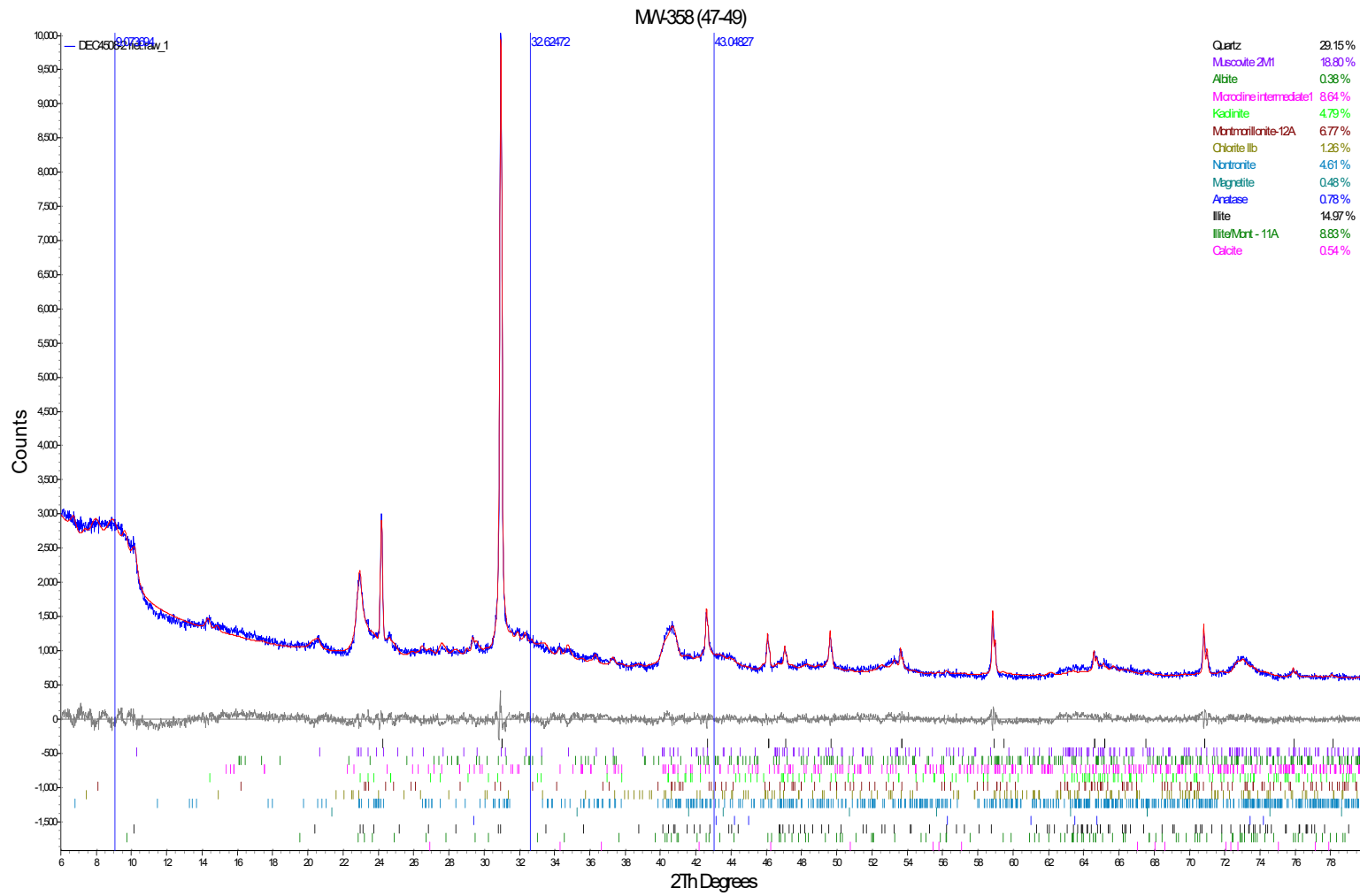
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

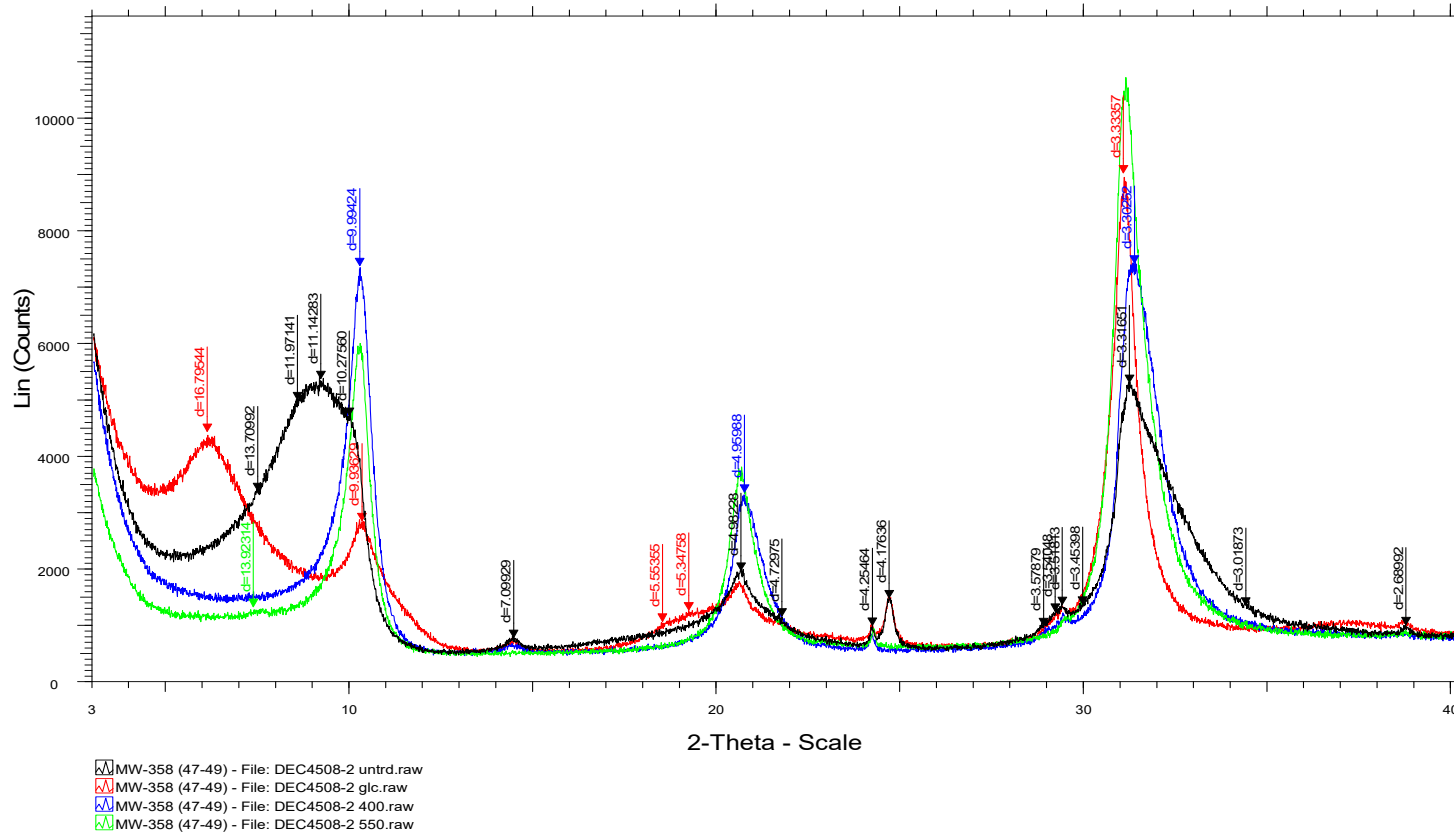
Mineral/Compound	Formula
Quartz	SiO ₂
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Albite	NaAlSi ₃ O ₈
Microcline	KAlSi ₃ O ₈
Diaspore	αAlO ₃ ·OH
Magnetite	Fe ₃ O ₄
Anatase	TiO ₂
Calcite	CaCO ₃
Fluorapatite	Ca ₅ (PO ₄) ₃ F
Ankerite	CaFe(CO ₃) ₂
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Montmorillonite	(Na,Ca) _{0.3} (Al,Mg) ₂ Si ₄ O ₁₀ (OH) ₂ ·10H ₂ O
Nontronite	Fe ₂ (Al,Si) ₄ O ₁₀ (OH) ₂ Na _{0.3} (H ₂ O) ₄
Illite/Mont	KAl ₄ (Si,Al) ₈ O ₁₀ (OH) ₄ ·4H ₂ O
Illite	(K,H ₃ O)(Al,Mg,Fe) ₂ (Si,Al) ₄ O ₁₀ [(OH) ₂ ·(H ₂ O)]
Chlorite	(Fe,(Mg,Mn) ₅ ,Al)(Si ₃ Al)O ₁₀ (OH) ₈

MM-358 (13-15)

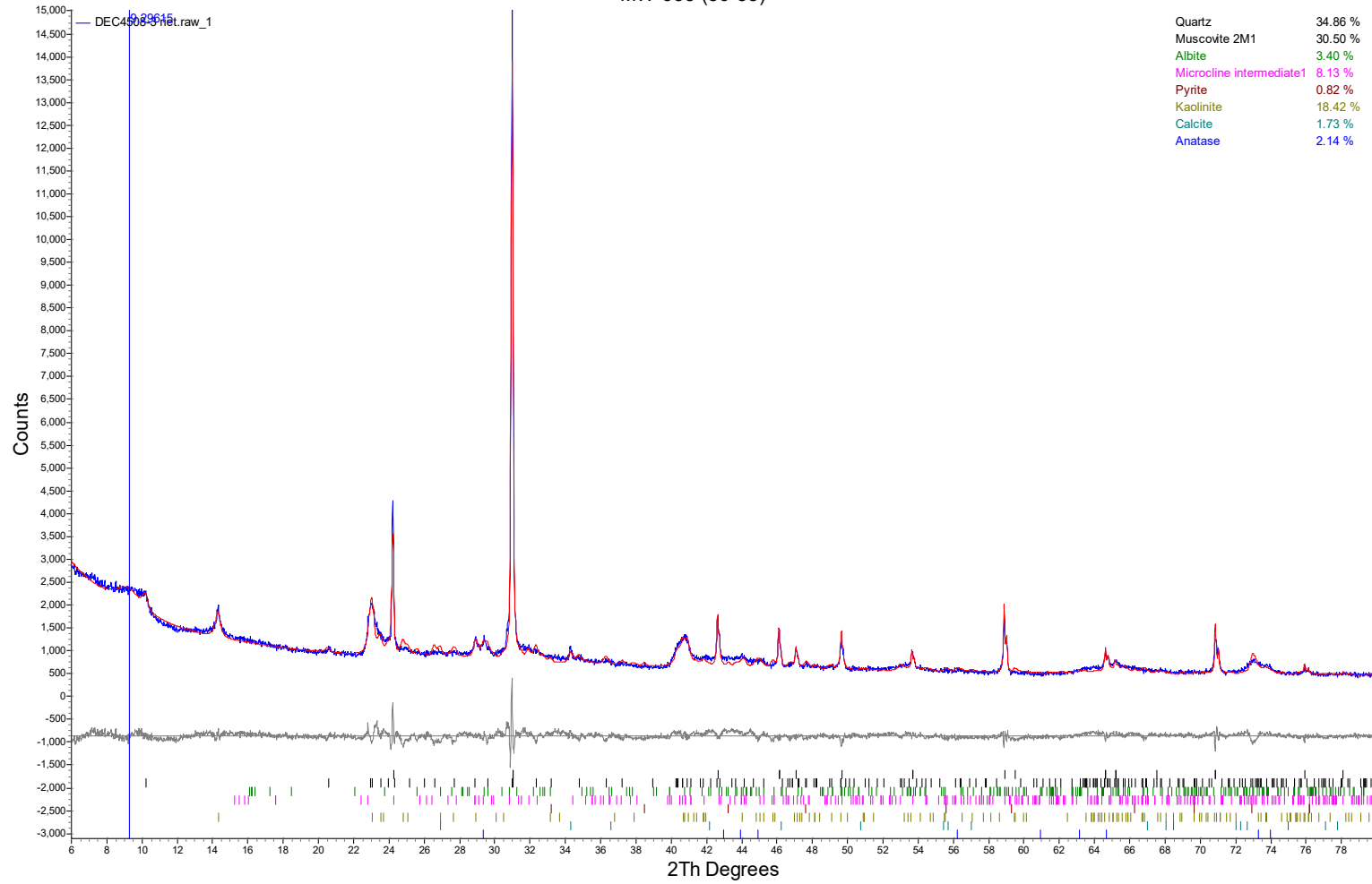




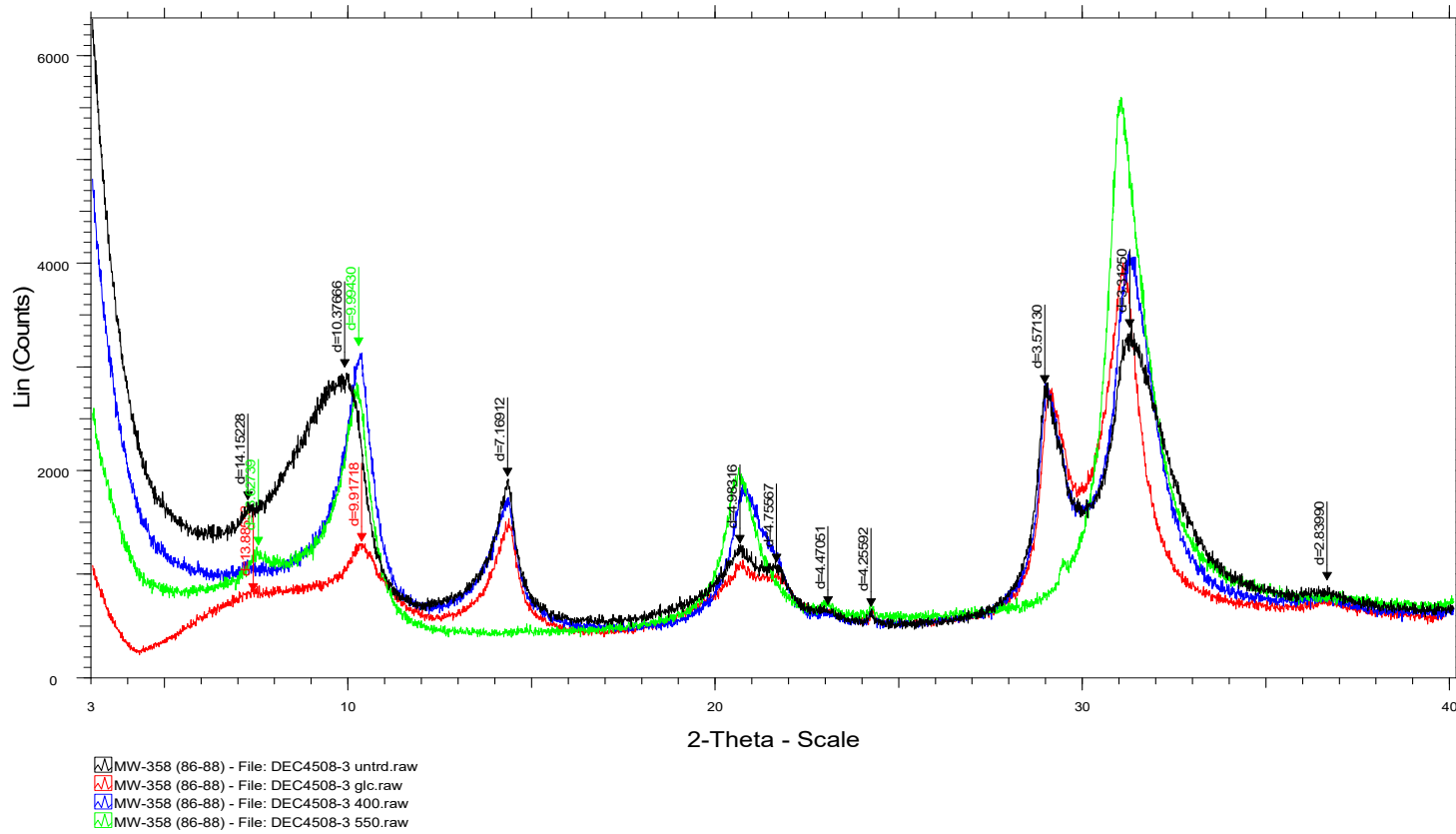
MW-358 (47-49)

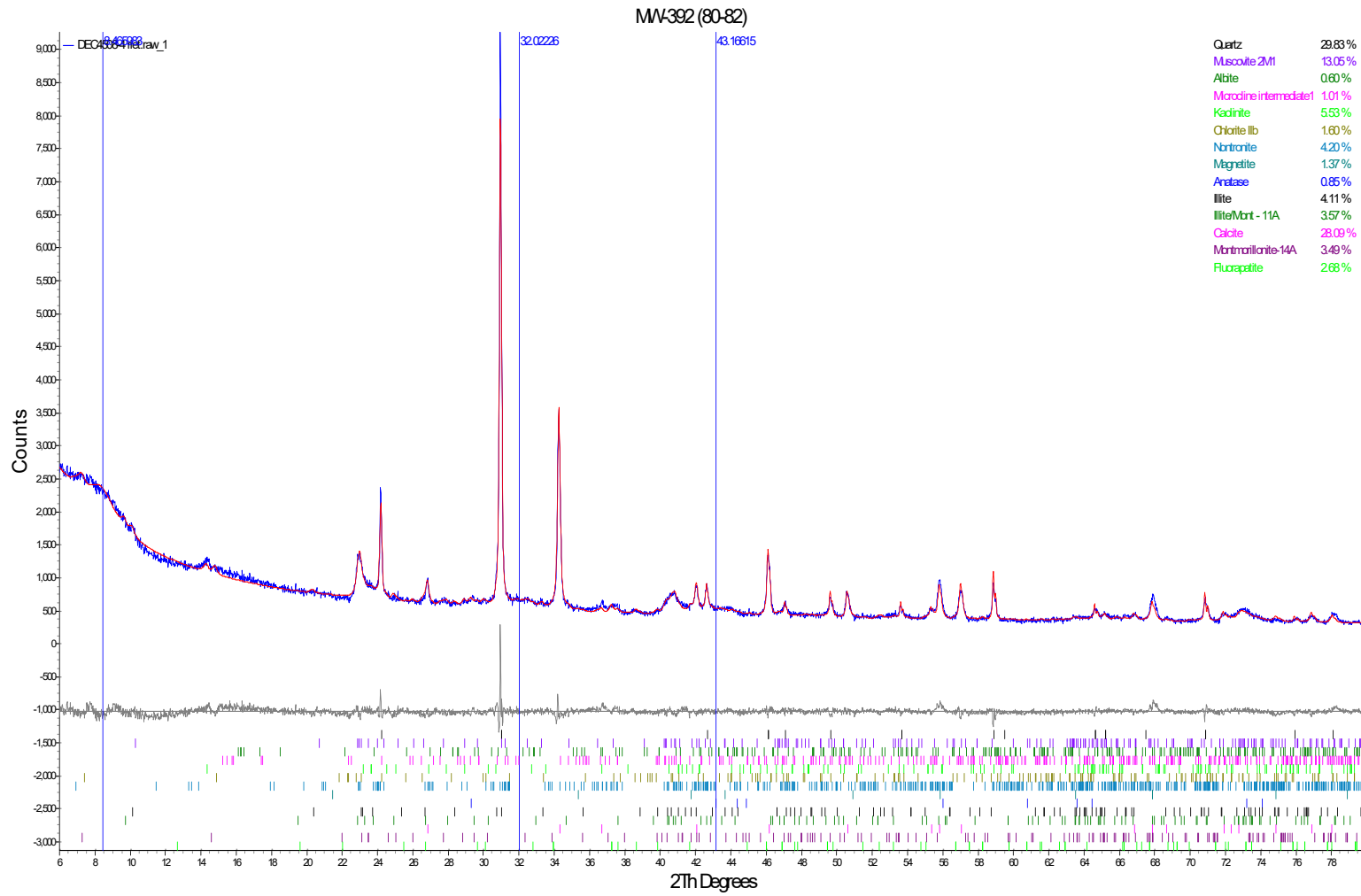


MW-358 (86-88)

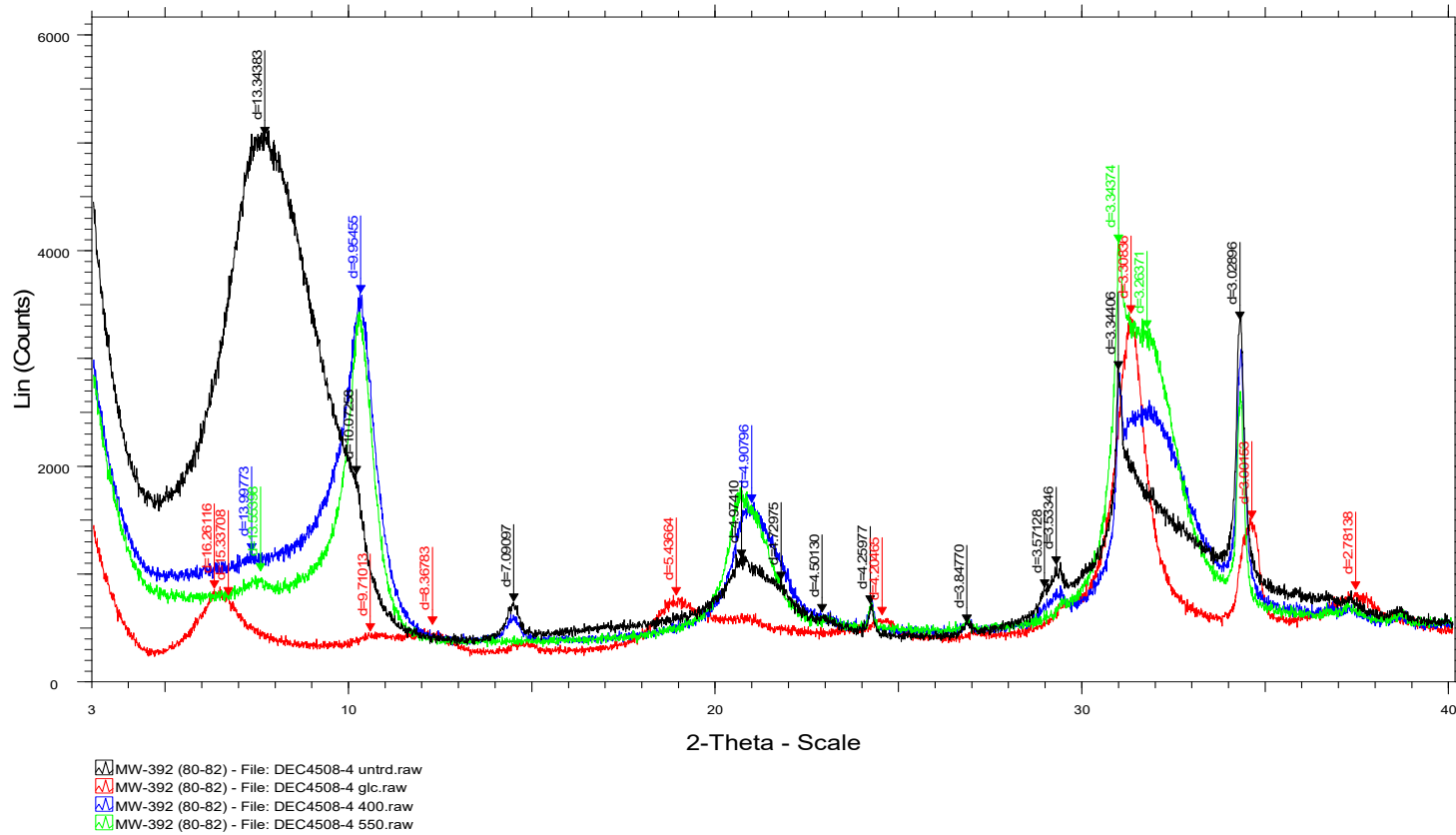


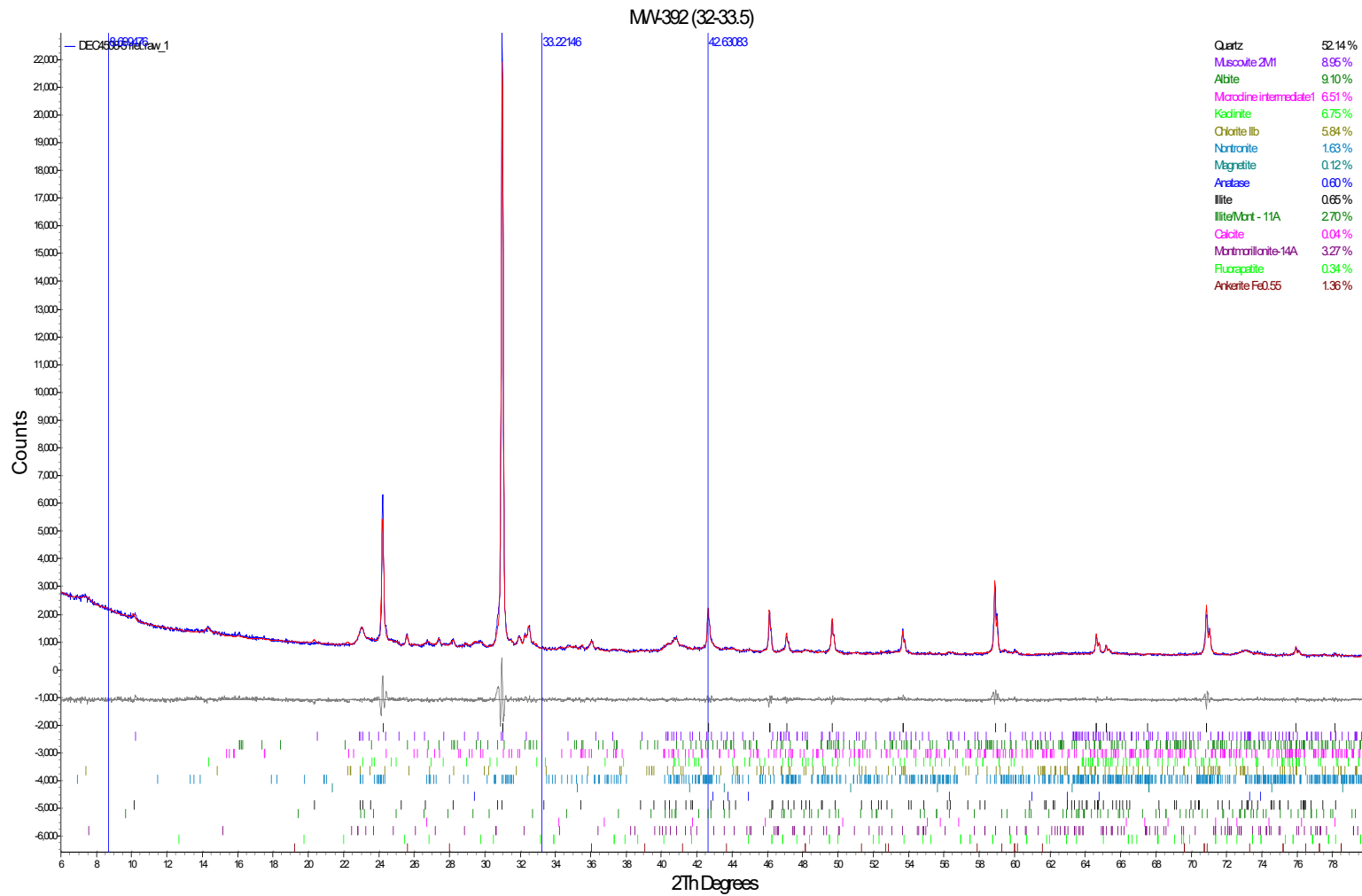
MW-358 (86-88)



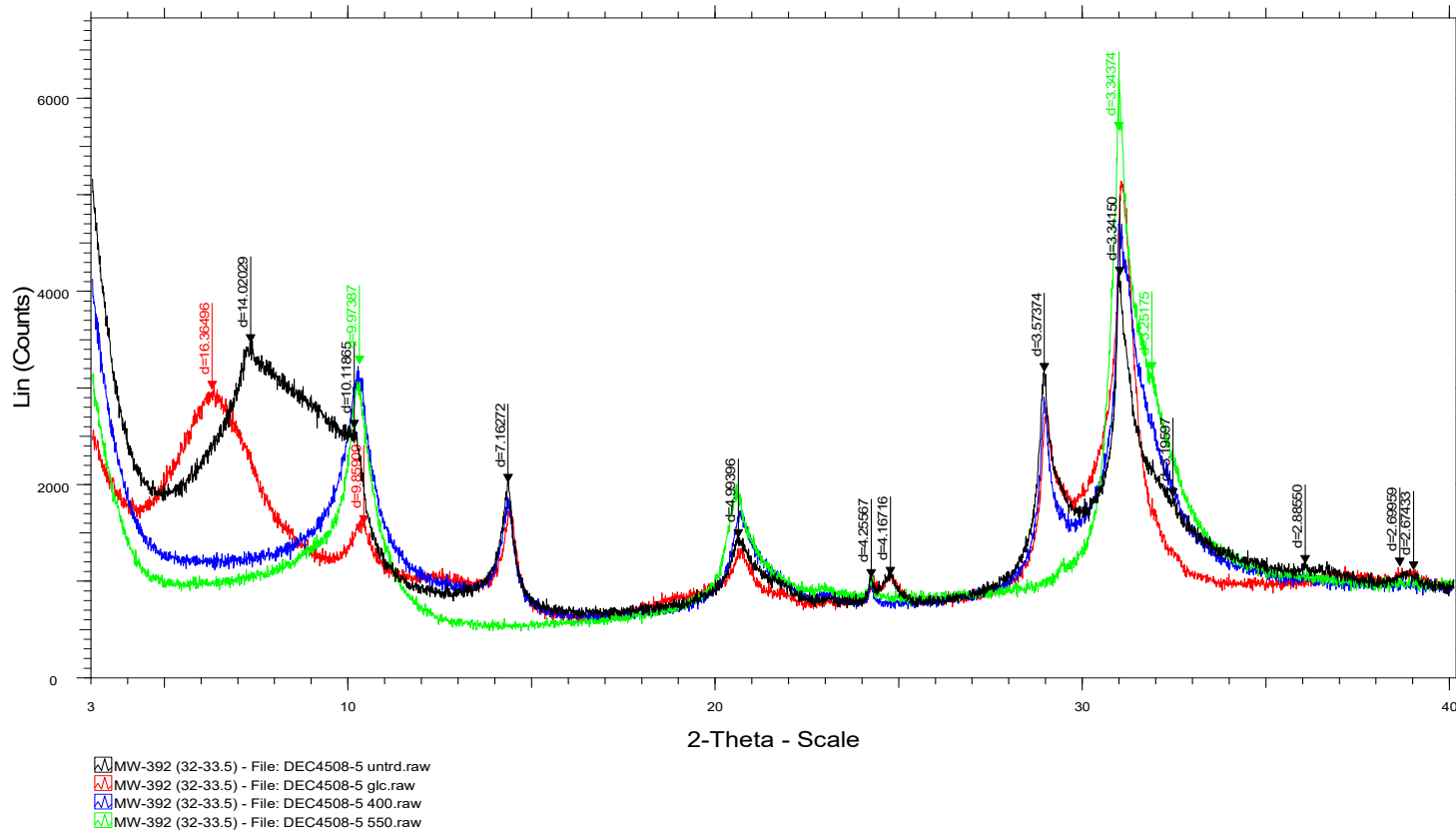


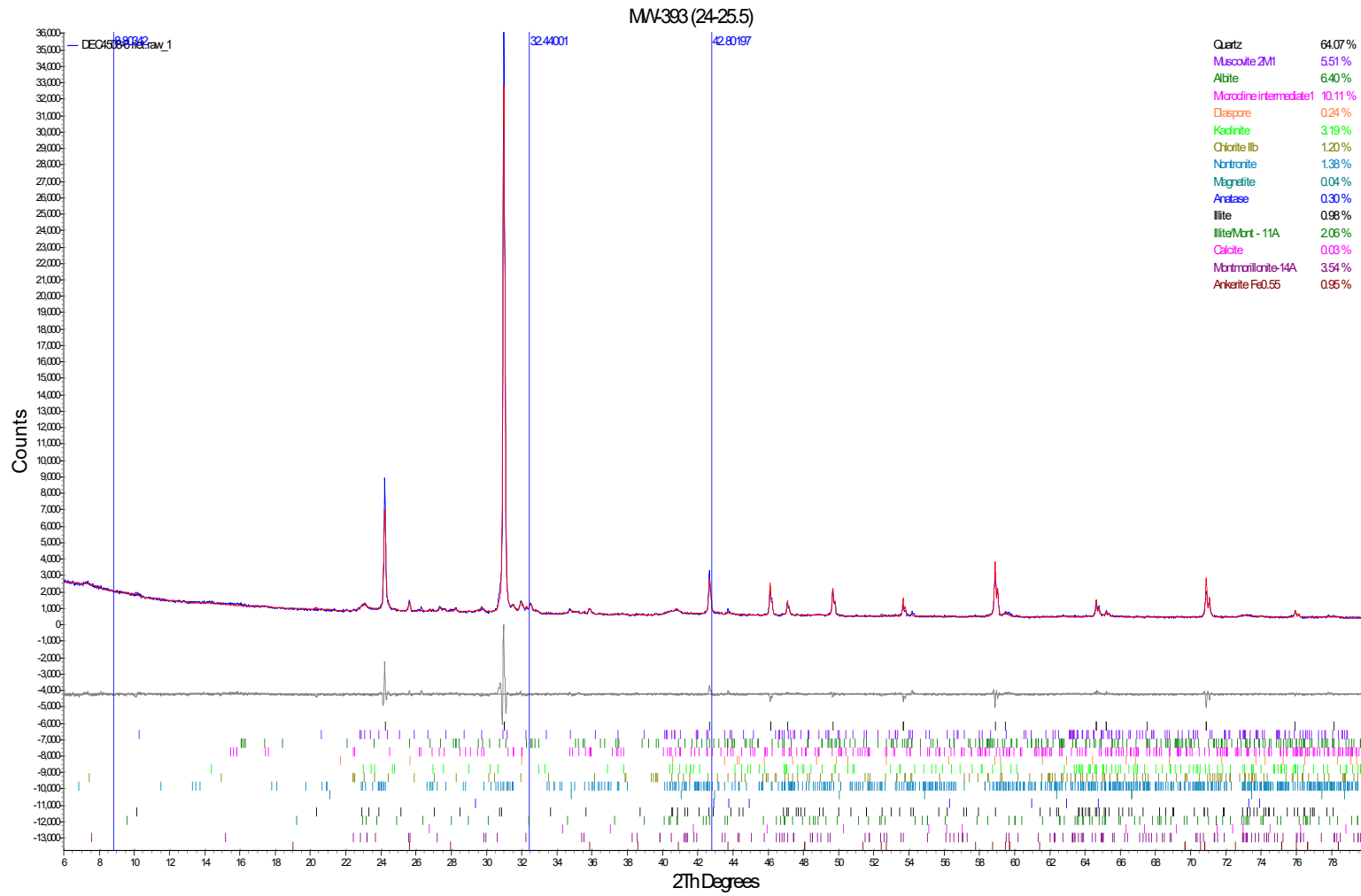
MW-392 (80-82)

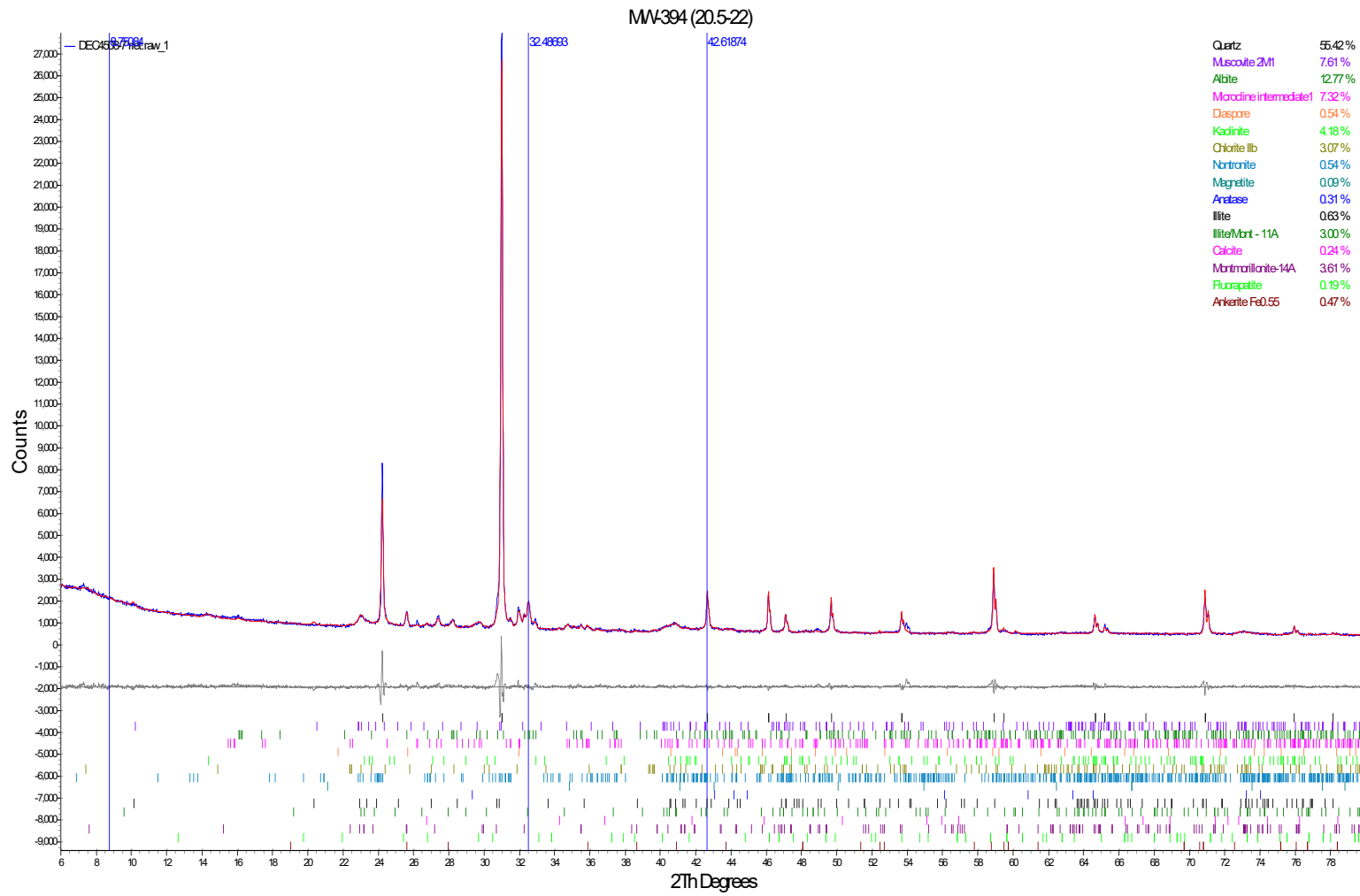


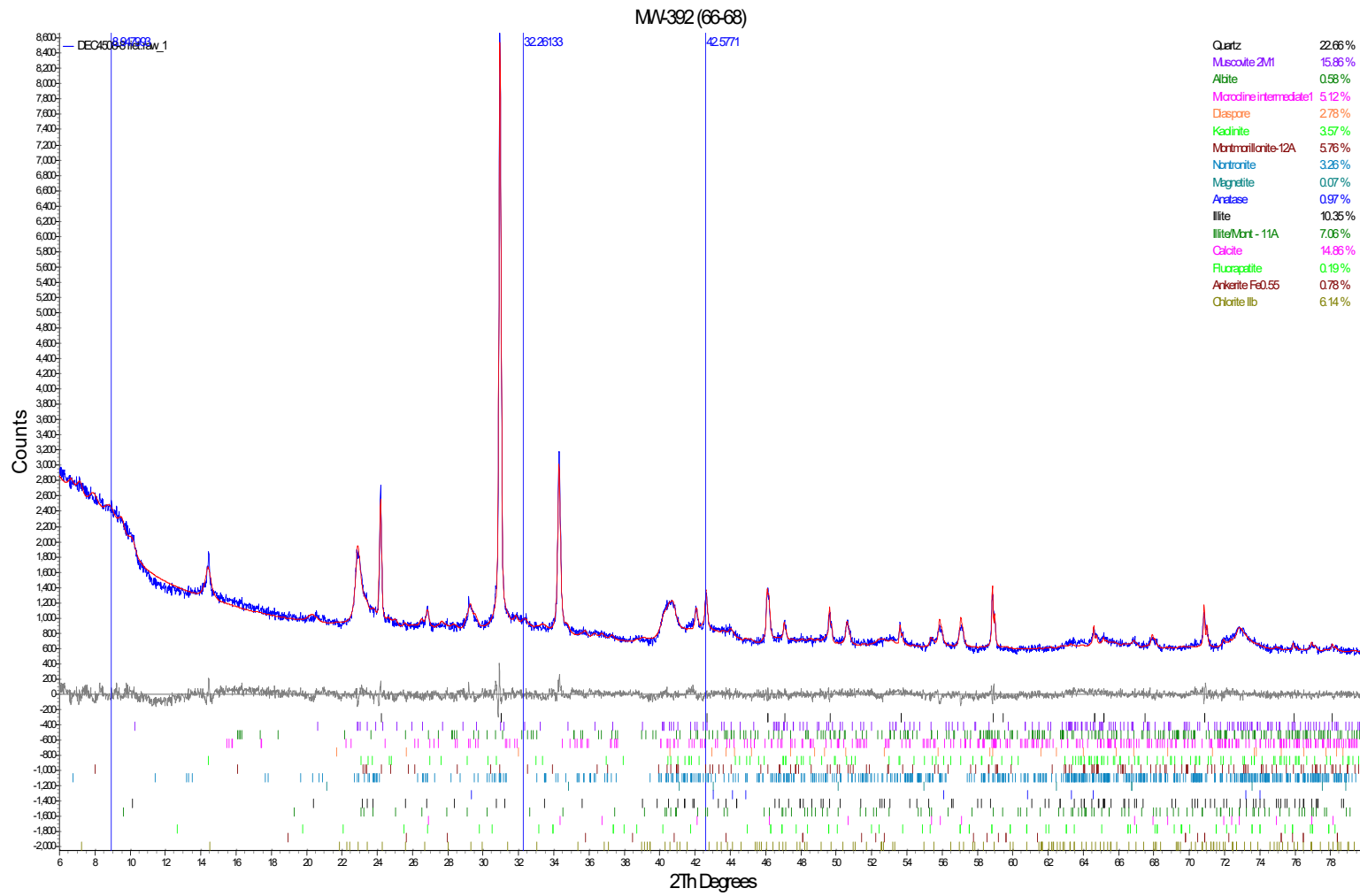


MW-392 (32-33.5)

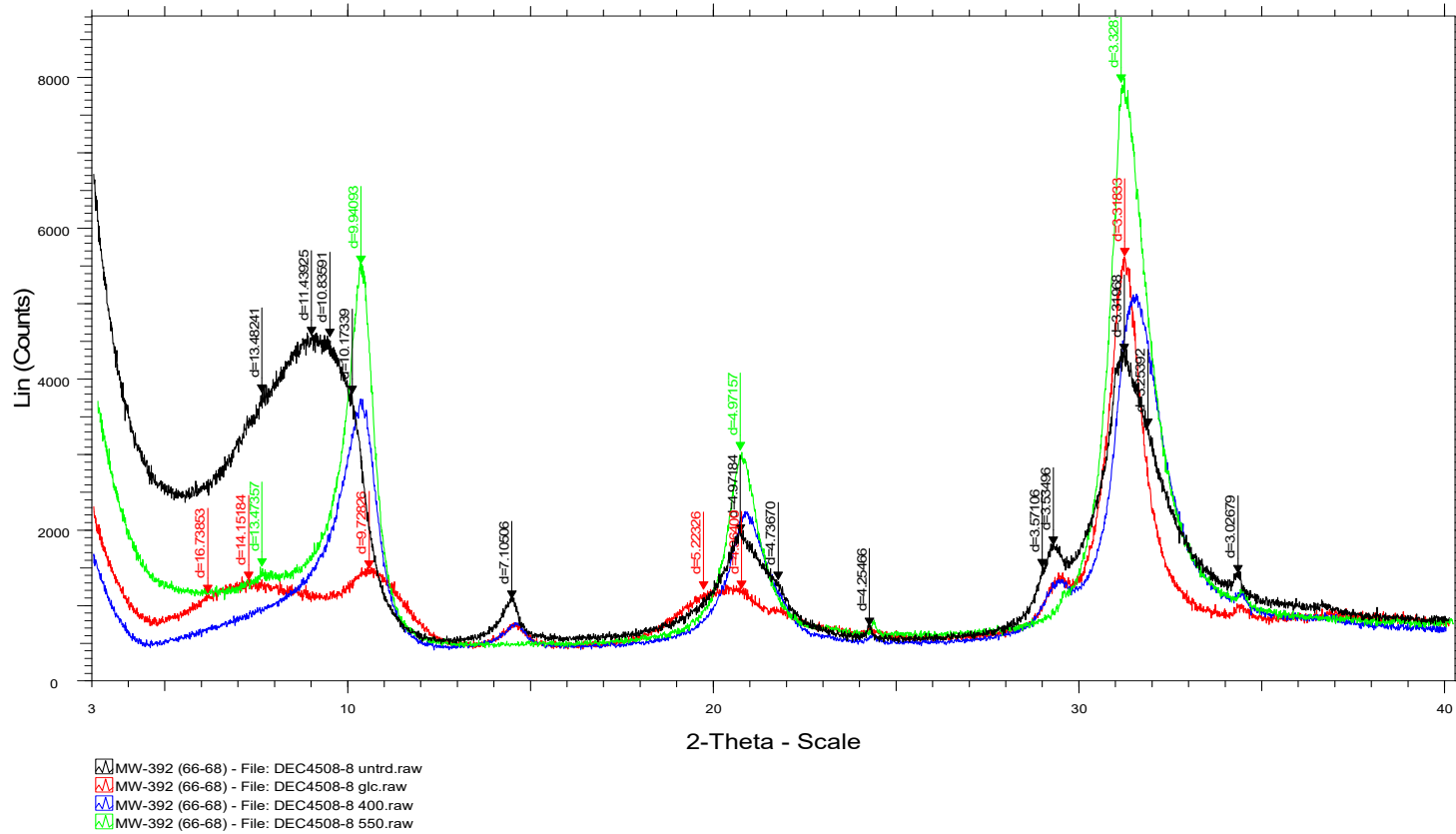








MW-392 (66-68)





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

November 28, 2023

Phil Morris
Illinois Power Generating Company
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Re: Baldwin Power Plant Bottom Ash Pond; W1578510001-06
Alternative Source Demonstration (ASD) Submittal

Dear Mr. Morris:

The purpose of this correspondence is to notify you that the Illinois Environmental Protection Agency (Illinois EPA) concurs with the Baldwin Power Plant Bottom Ash Pond Alternative Source Demonstration dated October 27, 2023, and the additional evidence provided on November 10, 2023.

Based on the provided evidence, the Illinois EPA concurs that the chloride and fluoride exceedances found in MW-370 and MW-393, respectively, do not come from the Baldwin Power Plant Bottom Ash Pond. The Illinois EPA also concurs that the likely source of the exceedances come from native bedrock. Therefore, the groundwater monitoring may continue in accordance with Section 845.650(e)(5). The ASD provided must be included in the annual groundwater monitoring report and the corrective action report as required by Section 845.610(e).

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

Sincerely,

Michael Summers, P.G.
Manager, Groundwater Section
Division of Public Water Supplies
Bureau of Water

ATTACHMENT C COMPARISON OF STATISTICAL RESULTS TO BACKGROUND

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

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-192	UU	E001	Antimony, total	mg/L	10/27/22 - 05/16/23	8	75	CI around median	0.001	0.0023
MW-192	UU	E001	Arsenic, total	mg/L	10/27/22 - 05/16/23	8	25	CI around geomean	0.00146	0.0104
MW-192	UU	E001	Barium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0825	0.261
MW-192	UU	E001	Beryllium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0005	0.0005
MW-192	UU	E001	Boron, total	mg/L	10/27/22 - 05/16/23	8	25	CI around mean	0.0241	2.16
MW-192	UU	E001	Cadmium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002
MW-192	UU	E001	Chloride, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	18.9	1,370
MW-192	UU	E001	Chromium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.005	0.0125
MW-192	UU	E001	Cobalt, total	mg/L	10/27/22 - 05/16/23	8	38	CI around mean	0.00091	0.0022
MW-192	UU	E001	Fluoride, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.403	3.84
MW-192	UU	E001	Lead, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.0022
MW-192	UU	E001	Lithium, total	mg/L	10/27/22 - 05/16/23	8	12	CI around mean	0.00725	0.14
MW-192	UU	E001	Mercury, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0002	0.0002
MW-192	UU	E001	Molybdenum, total	mg/L	10/27/22 - 05/16/23	8	12	CI around mean	0.00248	0.0782
MW-192	UU	E001	pH (field)	SU	10/27/22 - 05/16/23	8	0	CI around median	6.5/7.0	7.51/11.11
MW-192	UU	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/16/23	8	0	CI around mean	0.244	3.76
MW-192	UU	E001	Selenium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.001	0.0032
MW-192	UU	E001	Sulfate, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	11	762
MW-192	UU	E001	Thallium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002
MW-192	UU	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	432	3,260
MW-193	UU	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.0023
MW-193	UU	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.00124	0.0104
MW-193	UU	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0703	0.261
MW-193	UU	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.0005
MW-193	UU	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.0287	2.16
MW-193	UU	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-193	UU	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	34.8	1,370

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-193	UU	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	75	CI around median	0.0015	0.0125
MW-193	UU	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	88	Most recent sample	0.001	0.0022
MW-193	UU	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	0.191	3.84
MW-193	UU	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0075	0.0022
MW-193	UU	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	25	CI around mean	0.00474	0.14
MW-193	UU	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.0002
MW-193	UU	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.0015	0.0782
MW-193	UU	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	6.7/7.2	7.51/11.11
MW-193	UU	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.376	3.76
MW-193	UU	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.0032
MW-193	UU	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	152	762
MW-193	UU	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-193	UU	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	523	3,260
MW-356	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	23	91	CI around median	0.001	0.0023
MW-356	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	26	81	CI around median	0.001	0.0104
MW-356	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	26	0	CI around median	0.0297	0.261
MW-356	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0005	0.0005
MW-356	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	27	0	CI around median	1.94	2.16
MW-356	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002
MW-356	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	28.6	1,370
MW-356	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	25	100	All ND - Last	0.005	0.0125
MW-356	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	24	100	All ND - Last	0.001	0.0022
MW-356	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	1.9	3.84
MW-356	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	24	96	CI around median	0.001	0.0022
MW-356	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	26	0	CB around linear reg	0.0551	0.14
MW-356	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0002	0.0002
MW-356	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	26	58	CI around median	0.0015	0.0782

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-356	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	27	0	CI around median	7.7/7.8	7.51/11.11
MW-356	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	26	0	CI around median	0.1	3.76
MW-356	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	23	100	All ND - Last	0.001	0.0032
MW-356	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	44.4	762
MW-356	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002
MW-356	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	26	0	CI around mean	663	3,260
MW-369	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	17	76	CB around T-S line	-0.00196	0.0023
MW-369	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	20	10	CI around geomean	0.00151	0.0104
MW-369	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	20	0	CB around T-S line	0.073	0.261
MW-369	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0005	0.0005
MW-369	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	-0.171	2.16
MW-369	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002
MW-369	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around geomean	84.1	1,370
MW-369	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	19	90	CB around T-S line	0.00145	0.0125
MW-369	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	18	83	CI around median	0.001	0.0022
MW-369	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	21	0	CB around T-S line	-1.07	3.84
MW-369	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	18	94	CI around median	0.001	0.0022
MW-369	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	20	5	CI around mean	0.0212	0.14
MW-369	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0002	0.0002
MW-369	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	20	5	CB around T-S line	-0.00666	0.0782
MW-369	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	21	0	CB around linear reg	6.5/8.1	7.51/11.11
MW-369	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	20	0	CI around mean	0.376	3.76
MW-369	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	17	59	CB around T-S line	-0.0273	0.0032
MW-369	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	21	0	CB around T-S line	-73.6	762
MW-369	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002
MW-369	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	21	0	CI around median	726	3,260
MW-370	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	23	74	CB around T-S line	-0.000389	0.0023

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-370	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	26	54	CB around T-S line	0.000139	0.0104
MW-370	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	26	0	CB around T-S line	0.0241	0.261
MW-370	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0005	0.0005
MW-370	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	27	0	CI around median	1.79	2.16
MW-370	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002
MW-370	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	1,380	1,370
MW-370	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	25	96	CB around T-S line	0.00142	0.0125
MW-370	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	24	96	CI around median	0.001	0.0022
MW-370	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	2.97	3.84
MW-370	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	24	100	All ND - Last	0.0075	0.0022
MW-370	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	26	0	CI around mean	0.13	0.14
MW-370	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.0002	0.0002
MW-370	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	26	4	CB around linear reg	0.00644	0.0782
MW-370	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	27	0	CB around linear reg	7.3/7.6	7.51/11.11
MW-370	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	26	0	CI around geomean	0.517	3.76
MW-370	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	23	96	Most recent sample	0.001	0.0032
MW-370	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	27	0	CI around mean	248	762
MW-370	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	21	100	All ND - Last	0.002	0.002
MW-370	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	27	0	CB around linear reg	2,940	3,260
MW-382	UA	E001	Antimony, total	mg/L	12/29/15 - 05/16/23	17	100	All ND - Last	0.001	0.0023
MW-382	UA	E001	Arsenic, total	mg/L	12/29/15 - 05/16/23	20	25	CI around median	0.0011	0.0104
MW-382	UA	E001	Barium, total	mg/L	12/29/15 - 05/16/23	20	0	CI around mean	0.0172	0.261
MW-382	UA	E001	Beryllium, total	mg/L	12/29/15 - 05/16/23	15	93	CI around median	0.001	0.0005
MW-382	UA	E001	Boron, total	mg/L	12/29/15 - 05/16/23	21	0	CI around median	1.72	2.16
MW-382	UA	E001	Cadmium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002
MW-382	UA	E001	Chloride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around mean	34.9	1,370
MW-382	UA	E001	Chromium, total	mg/L	12/29/15 - 05/16/23	19	10	CB around linear reg	0.00577	0.0125

ATTACHMENT C.
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BOTTOM ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-382	UA	E001	Cobalt, total	mg/L	12/29/15 - 05/16/23	18	72	CB around T-S line	0.001	0.0022
MW-382	UA	E001	Fluoride, total	mg/L	12/29/15 - 05/16/23	21	0	CI around geomean	2.78	3.84
MW-382	UA	E001	Lead, total	mg/L	12/29/15 - 05/16/23	18	67	CB around T-S line	0.001	0.0022
MW-382	UA	E001	Lithium, total	mg/L	12/29/15 - 05/16/23	20	0	CI around mean	0.058	0.14
MW-382	UA	E001	Mercury, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.0002	0.0002
MW-382	UA	E001	Molybdenum, total	mg/L	12/29/15 - 05/16/23	20	20	CB around T-S line	0.00222	0.0782
MW-382	UA	E001	pH (field)	SU	12/29/15 - 05/16/23	21	0	CI around mean	7.7/7.9	7.51/11.11
MW-382	UA	E001	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 05/16/23	20	0	CI around geomean	0.289	3.76
MW-382	UA	E001	Selenium, total	mg/L	12/29/15 - 05/16/23	17	100	All ND - Last	0.001	0.0032
MW-382	UA	E001	Sulfate, total	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	354	762
MW-382	UA	E001	Thallium, total	mg/L	12/29/15 - 05/16/23	15	100	All ND - Last	0.002	0.002
MW-382	UA	E001	Total Dissolved Solids	mg/L	12/29/15 - 05/16/23	21	0	CB around linear reg	1,060	3,260
MW-392	UA	E001	Antimony, total	mg/L	10/27/22 - 05/16/23	8	75	CI around median	0.001	0.0023
MW-392	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/16/23	8	50	CI around geomean	0.000901	0.0104
MW-392	UA	E001	Barium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0345	0.261
MW-392	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0005	0.0005
MW-392	UA	E001	Boron, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	1.58	2.16
MW-392	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002
MW-392	UA	E001	Chloride, total	mg/L	10/27/22 - 05/16/23	8	0	CI around median	334	1,370
MW-392	UA	E001	Chromium, total	mg/L	10/27/22 - 05/16/23	8	62	CI around median	0.0015	0.0125
MW-392	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.0022
MW-392	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/16/23	8	0	CB around linear reg	3.63	3.84
MW-392	UA	E001	Lead, total	mg/L	10/27/22 - 05/16/23	8	88	CI around median	0.001	0.0022
MW-392	UA	E001	Lithium, total	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	0.0497	0.14
MW-392	UA	E001	Mercury, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.0002	0.0002
MW-392	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/16/23	8	62	CI around median	0.0015	0.0782
MW-392	UA	E001	pH (field)	SU	10/27/22 - 05/16/23	8	0	CI around mean	7.3/7.9	7.51/11.11

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BOTTOM ASH POND
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-392	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/16/23	8	0	CI around mean	0.237	3.76
MW-392	UA	E001	Selenium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.001	0.0032
MW-392	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/16/23	8	0	CI around geomean	45.9	762
MW-392	UA	E001	Thallium, total	mg/L	10/27/22 - 05/16/23	8	100	All ND - Last	0.002	0.002
MW-392	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/16/23	8	0	CI around mean	1,410	3,260
MW-393	UA	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	75	CI around median	0.001	0.0023
MW-393	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.0104
MW-393	UA	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around geomean	0.0224	0.261
MW-393	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.0005
MW-393	UA	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1.47	2.16
MW-393	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-393	UA	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	617	1,370
MW-393	UA	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.0015	0.0125
MW-393	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	88	CI around median	0.001	0.0022
MW-393	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	7.49	3.84
MW-393	UA	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0075	0.0022
MW-393	UA	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0519	0.14
MW-393	UA	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.0002
MW-393	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	38	CI around mean	-0.000199	0.0782
MW-393	UA	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	7.7/8.4	7.51/11.11
MW-393	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0868	3.76
MW-393	UA	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.001	0.0032
MW-393	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	104	762
MW-393	UA	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-393	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around median	826	3,260
MW-394	UA	E001	Antimony, total	mg/L	10/27/22 - 05/15/23	8	50	CI around mean	0.00085	0.0023
MW-394	UA	E001	Arsenic, total	mg/L	10/27/22 - 05/15/23	8	25	CI around median	0.001	0.0104

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-394	UA	E001	Barium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0258	0.261
MW-394	UA	E001	Beryllium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0005	0.0005
MW-394	UA	E001	Boron, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1.53	2.16
MW-394	UA	E001	Cadmium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-394	UA	E001	Chloride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	490	1,370
MW-394	UA	E001	Chromium, total	mg/L	10/27/22 - 05/15/23	8	50	CI around mean	-6.91e-06	0.0125
MW-394	UA	E001	Cobalt, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.0022
MW-394	UA	E001	Fluoride, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	3.25	3.84
MW-394	UA	E001	Lead, total	mg/L	10/27/22 - 05/15/23	8	62	CI around median	0.001	0.0022
MW-394	UA	E001	Lithium, total	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	0.0438	0.14
MW-394	UA	E001	Mercury, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.0002	0.0002
MW-394	UA	E001	Molybdenum, total	mg/L	10/27/22 - 05/15/23	8	12	CI around mean	0.00443	0.0782
MW-394	UA	E001	pH (field)	SU	10/27/22 - 05/15/23	8	0	CI around mean	7.6/8.1	7.51/11.11
MW-394	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 05/15/23	8	0	CI around mean	0.301	3.76
MW-394	UA	E001	Selenium, total	mg/L	10/27/22 - 05/15/23	8	88	Most recent sample	0.001	0.0032
MW-394	UA	E001	Sulfate, total	mg/L	10/27/22 - 05/15/23	8	0	CB around linear reg	77.3	762
MW-394	UA	E001	Thallium, total	mg/L	10/27/22 - 05/15/23	8	100	All ND - Last	0.002	0.002
MW-394	UA	E001	Total Dissolved Solids	mg/L	10/27/22 - 05/15/23	8	0	CI around mean	1,770	3,260
OW-256	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0023
OW-256	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.01	0.0104
OW-256	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.102	0.261
OW-256	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.0005
OW-256	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.187	2.16
OW-256	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
OW-256	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	54	1,370
OW-256	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.005	0.0125
OW-256	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.0015	0.0022

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
OW-256	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.25	3.84
OW-256	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0075	0.0022
OW-256	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.005	0.14
OW-256	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.0002
OW-256	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.0782
OW-256	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.7/6.7	7.51/11.11
OW-256	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.717	3.76
OW-256	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0032
OW-256	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	64	762
OW-256	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
OW-256	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	514	3,260
OW-257	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.005	0.0023
OW-257	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.103	0.0104
OW-257	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.975	0.261
OW-257	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.0097	0.0005
OW-257	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.49	2.16
OW-257	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.0045	0.002
OW-257	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	7	1,370
OW-257	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.214	0.0125
OW-257	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.203	0.0022
OW-257	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.37	3.84
OW-257	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	33	Most recent sample	0.214	0.0022
OW-257	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.207	0.14
OW-257	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.0002
OW-257	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	67	Most recent sample	0.01	0.0782
OW-257	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.8/6.8	7.51/11.11
OW-257	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	25.3	3.76

ATTACHMENT C.
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OW-257	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0032
OW-257	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	118	762
OW-257	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.002
OW-257	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	1,270	3,260
PZ-170	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.001	0.0023
PZ-170	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.0104
PZ-170	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0975	0.261
PZ-170	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.0005
PZ-170	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.267	2.16
PZ-170	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
PZ-170	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	35	1,370
PZ-170	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.005	0.0125
PZ-170	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0046	0.0022
PZ-170	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.18	3.84
PZ-170	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0075	0.0022
PZ-170	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0291	0.14
PZ-170	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.0002
PZ-170	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.0782
PZ-170	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.5/6.5	7.51/11.11
PZ-170	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.181	3.76
PZ-170	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0032
PZ-170	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	170	762
PZ-170	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
PZ-170	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	730	3,260
PZ-182	PMP	E001	Antimony, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0023
PZ-182	PMP	E001	Arsenic, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.01	0.0104
PZ-182	PMP	E001	Barium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0692	0.261

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
PZ-182	PMP	E001	Beryllium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0005	0.0005
PZ-182	PMP	E001	Boron, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.484	2.16
PZ-182	PMP	E001	Cadmium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
PZ-182	PMP	E001	Chloride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	88	1,370
PZ-182	PMP	E001	Chromium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.005	0.0125
PZ-182	PMP	E001	Cobalt, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.001	0.0022
PZ-182	PMP	E001	Fluoride, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.19	3.84
PZ-182	PMP	E001	Lead, total	mg/L	03/14/23 - 05/17/23	2	50	Most recent sample	0.0075	0.0022
PZ-182	PMP	E001	Lithium, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.0069	0.14
PZ-182	PMP	E001	Mercury, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.0002	0.0002
PZ-182	PMP	E001	Molybdenum, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.01	0.0782
PZ-182	PMP	E001	pH (field)	SU	03/14/23 - 05/17/23	2	0	Most recent sample	6.6/6.6	7.51/11.11
PZ-182	PMP	E001	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 05/17/23	2	0	Most recent sample	0.925	3.76
PZ-182	PMP	E001	Selenium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.001	0.0032
PZ-182	PMP	E001	Sulfate, total	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	254	762
PZ-182	PMP	E001	Thallium, total	mg/L	03/14/23 - 05/17/23	2	100	Most recent sample	0.002	0.002
PZ-182	PMP	E001	Total Dissolved Solids	mg/L	03/14/23 - 05/17/23	2	0	Most recent sample	1,120	3,260

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

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Notes:

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

HSU = hydrostratigraphic unit:

PMP = Potential Migration Pathway

UA = Uppermost Aquifer

UU = Upper Unit

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

R = resample

SU = standard units

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

Statistical Calculation = method used to calculate the statistical result:

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

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

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

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

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

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

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-192	UU	E002	Antimony, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.001	0.00230
MW-192	UU	E002	Arsenic, total	mg/L	10/27/22 - 08/04/23	9	22	CI around geomean	0.0016	0.0104
MW-192	UU	E002	Barium, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.0878	0.261
MW-192	UU	E002	Beryllium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.0005
MW-192	UU	E002	Boron, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.0263	2.16
MW-192	UU	E002	Cadmium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.002
MW-192	UU	E002	Chloride, total	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	15.8	1,370
MW-192	UU	E002	Chromium, total	mg/L	10/27/22 - 08/04/23	9	89	CI around median	0.0015	0.0125
MW-192	UU	E002	Cobalt, total	mg/L	10/27/22 - 08/04/23	9	33	CI around mean	0.000988	0.00220
MW-192	UU	E002	Fluoride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.407	3.84
MW-192	UU	E002	Lead, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.001	0.00220
MW-192	UU	E002	Lithium, total	mg/L	10/27/22 - 08/04/23	9	11	CB around linear reg	-0.0254	0.140
MW-192	UU	E002	Mercury, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.0002	0.0002
MW-192	UU	E002	Molybdenum, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.00191	0.0782
MW-192	UU	E002	pH (field)	SU	10/27/22 - 08/04/23	9	0	CI around mean	6.7/7.0	7.5/11.1
MW-192	UU	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/04/23	9	0	CI around mean	0.26	3.76
MW-192	UU	E002	Selenium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.00320
MW-192	UU	E002	Sulfate, total	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	1.99	762
MW-192	UU	E002	Thallium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.002	0.002
MW-192	UU	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/04/23	9	0	CB around linear reg	140	3,260
MW-193	UU	E002	Antimony, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.00230
MW-193	UU	E002	Arsenic, total	mg/L	10/27/22 - 08/04/23	9	11	CI around mean	0.00125	0.0104
MW-193	UU	E002	Barium, total	mg/L	10/27/22 - 08/04/23	9	0	CI around geomean	0.0719	0.261
MW-193	UU	E002	Beryllium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.0005
MW-193	UU	E002	Boron, total	mg/L	10/27/22 - 08/04/23	9	11	CI around mean	0.0318	2.16
MW-193	UU	E002	Cadmium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.002
MW-193	UU	E002	Chloride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	34.8	1,370

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-193	UU	E002	Chromium, total	mg/L	10/27/22 - 08/04/23	9	78	CI around median	0.0015	0.0125
MW-193	UU	E002	Cobalt, total	mg/L	10/27/22 - 08/04/23	9	89	Most recent sample	0.001	0.00220
MW-193	UU	E002	Fluoride, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	0.241	3.84
MW-193	UU	E002	Lead, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.00220
MW-193	UU	E002	Lithium, total	mg/L	10/27/22 - 08/04/23	9	22	CI around mean	0.00458	0.140
MW-193	UU	E002	Mercury, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.0002	0.0002
MW-193	UU	E002	Molybdenum, total	mg/L	10/27/22 - 08/04/23	9	67	CI around median	0.0015	0.0782
MW-193	UU	E002	pH (field)	SU	10/27/22 - 08/04/23	9	0	CI around mean	6.6/7.2	7.5/11.1
MW-193	UU	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/04/23	9	0	CI around mean	0.413	3.76
MW-193	UU	E002	Selenium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.001	0.00320
MW-193	UU	E002	Sulfate, total	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	151	762
MW-193	UU	E002	Thallium, total	mg/L	10/27/22 - 08/04/23	9	100	All ND - Last	0.002	0.002
MW-193	UU	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/04/23	9	0	CI around mean	531	3,260
MW-356	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	24	92	CI around median	0.001	0.00230
MW-356	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	27	82	CI around median	0.001	0.0104
MW-356	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around median	0.0297	0.261
MW-356	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.0005
MW-356	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	28	0	CI around median	1.94	2.16
MW-356	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.002
MW-356	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	28.1	1,370
MW-356	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	26	100	All ND - Last	0.0015	0.0125
MW-356	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	25	100	All ND - Last	0.001	0.00220
MW-356	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	1.95	3.84
MW-356	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	25	96	CI around median	0.001	0.00220
MW-356	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.0524	0.140
MW-356	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.0002	0.0002
MW-356	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	27	59	CI around median	0.0015	0.0782

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-356	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	28	0	CI around median	7.7/7.8	7.5/11.1
MW-356	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	27	0	CI around median	0.1	3.76
MW-356	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	24	100	All ND - Last	0.001	0.00320
MW-356	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	28	0	CI around mean	44.4	762
MW-356	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.002	0.002
MW-356	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	27	0	CI around mean	658	3,260
MW-369	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	18	78	CB around T-S line	-0.00132	0.00230
MW-369	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	21	14	CI around geomean	0.00138	0.0104
MW-369	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	21	0	CB around T-S line	0.0794	0.261
MW-369	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.0005
MW-369	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	-0.189	2.16
MW-369	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.002
MW-369	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around geomean	82	1,370
MW-369	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	20	90	CB around T-S line	0.00135	0.0125
MW-369	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	19	84	CI around median	0.001	0.00220
MW-369	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	22	0	CB around T-S line	-1.2	3.84
MW-369	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	19	95	CI around median	0.001	0.00220
MW-369	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	21	5	CI around mean	0.0206	0.140
MW-369	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.0002	0.0002
MW-369	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	21	5	CB around T-S line	-0.00682	0.0782
MW-369	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	22	0	CI around mean	7.3/8.1	7.5/11.1
MW-369	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	21	0	CI around mean	0.399	3.76
MW-369	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	18	61	CB around T-S line	-0.0221	0.00320
MW-369	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	22	0	CB around T-S line	-107	762
MW-369	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.002	0.002
MW-369	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	22	0	CI around median	720	3,260
MW-370	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	24	75	CB around T-S line	-0.000263	0.00230

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-370	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	27	56	CB around T-S line	0.000178	0.0104
MW-370	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	27	0	CB around T-S line	0.0261	0.261
MW-370	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.0005
MW-370	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	28	0	CI around median	1.77	2.16
MW-370	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.001	0.002
MW-370	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	1,370	1,370
MW-370	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	26	96	CB around T-S line	0.00143	0.0125
MW-370	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	25	96	CI around median	0.001	0.00220
MW-370	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	2.98	3.84
MW-370	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	25	100	All ND - Last	0.001	0.00220
MW-370	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.129	0.140
MW-370	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.0002	0.0002
MW-370	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	27	4	CB around linear reg	0.00585	0.0782
MW-370	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	28	0	CB around linear reg	7.3/7.6	7.5/11.1
MW-370	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	27	0	CI around geomean	0.527	3.76
MW-370	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	24	96	Most recent sample	0.001	0.00320
MW-370	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	28	0	CI around mean	248	762
MW-370	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	22	100	All ND - Last	0.002	0.002
MW-370	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	28	0	CB around linear reg	2,930	3,260
MW-382	UA	E002	Antimony, total	mg/L	12/29/15 - 08/03/23	18	100	All ND - Last	0.001	0.00230
MW-382	UA	E002	Arsenic, total	mg/L	12/29/15 - 08/03/23	21	24	CI around median	0.0012	0.0104
MW-382	UA	E002	Barium, total	mg/L	12/29/15 - 08/03/23	21	0	CI around mean	0.0176	0.261
MW-382	UA	E002	Beryllium, total	mg/L	12/29/15 - 08/03/23	16	94	CI around median	0.001	0.0005
MW-382	UA	E002	Boron, total	mg/L	12/29/15 - 08/03/23	22	0	CI around median	1.71	2.16
MW-382	UA	E002	Cadmium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.001	0.002
MW-382	UA	E002	Chloride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around mean	34.3	1,370
MW-382	UA	E002	Chromium, total	mg/L	12/29/15 - 08/03/23	20	10	CB around linear reg	0.00687	0.0125

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-382	UA	E002	Cobalt, total	mg/L	12/29/15 - 08/03/23	19	68	CB around T-S line	0.001	0.00220
MW-382	UA	E002	Fluoride, total	mg/L	12/29/15 - 08/03/23	22	0	CI around geomean	2.78	3.84
MW-382	UA	E002	Lead, total	mg/L	12/29/15 - 08/03/23	19	63	CB around T-S line	0.001	0.00220
MW-382	UA	E002	Lithium, total	mg/L	12/29/15 - 08/03/23	21	0	CI around mean	0.0578	0.140
MW-382	UA	E002	Mercury, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.0002	0.0002
MW-382	UA	E002	Molybdenum, total	mg/L	12/29/15 - 08/03/23	21	19	CB around T-S line	0.00221	0.0782
MW-382	UA	E002	pH (field)	SU	12/29/15 - 08/03/23	22	0	CI around mean	7.7/7.9	7.5/11.1
MW-382	UA	E002	Radium 226 + Radium 228, total	pCi/L	12/29/15 - 08/03/23	21	0	CI around geomean	0.308	3.76
MW-382	UA	E002	Selenium, total	mg/L	12/29/15 - 08/03/23	18	100	All ND - Last	0.001	0.00320
MW-382	UA	E002	Sulfate, total	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	344	762
MW-382	UA	E002	Thallium, total	mg/L	12/29/15 - 08/03/23	16	100	All ND - Last	0.002	0.002
MW-382	UA	E002	Total Dissolved Solids	mg/L	12/29/15 - 08/03/23	22	0	CB around linear reg	1,030	3,260
MW-392	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	78	CI around median	0.001	0.00230
MW-392	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.001	0.0104
MW-392	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0355	0.261
MW-392	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.0005
MW-392	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1.61	2.16
MW-392	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.002
MW-392	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around median	648	1,370
MW-392	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.0125
MW-392	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.00220
MW-392	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	3.65	3.84
MW-392	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.00220
MW-392	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0532	0.140
MW-392	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.0002
MW-392	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.0782
MW-392	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.4/7.9	7.5/11.1

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-392	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.322	3.76
MW-392	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.00320
MW-392	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	47.2	762
MW-392	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002
MW-392	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1,460	3,260
MW-393	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	78	CI around median	0.001	0.00230
MW-393	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.0104
MW-393	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	0.023	0.261
MW-393	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.0005
MW-393	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around geomean	1.54	2.16
MW-393	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.002
MW-393	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	480	1,370
MW-393	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.0015	0.0125
MW-393	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	89	CI around median	0.001	0.00220
MW-393	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	6.17	3.84
MW-393	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.00220
MW-393	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0529	0.140
MW-393	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.0002
MW-393	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	44	CI around mean	-2.82e-05	0.0782
MW-393	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.8/8.4	7.5/11.1
MW-393	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.165	3.76
MW-393	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.00320
MW-393	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	61.3	762
MW-393	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002
MW-393	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around median	1,870	3,260
MW-394	UA	E002	Antimony, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.001	0.00230
MW-394	UA	E002	Arsenic, total	mg/L	10/27/22 - 08/03/23	9	33	CI around median	0.001	0.0104

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
MW-394	UA	E002	Barium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0271	0.261
MW-394	UA	E002	Beryllium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.0005
MW-394	UA	E002	Boron, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1.49	2.16
MW-394	UA	E002	Cadmium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.001	0.002
MW-394	UA	E002	Chloride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	438	1,370
MW-394	UA	E002	Chromium, total	mg/L	10/27/22 - 08/03/23	9	56	CI around median	0.0015	0.0125
MW-394	UA	E002	Cobalt, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.00220
MW-394	UA	E002	Fluoride, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	2.99	3.84
MW-394	UA	E002	Lead, total	mg/L	10/27/22 - 08/03/23	9	67	CI around median	0.001	0.00220
MW-394	UA	E002	Lithium, total	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	0.0441	0.140
MW-394	UA	E002	Mercury, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.0002	0.0002
MW-394	UA	E002	Molybdenum, total	mg/L	10/27/22 - 08/03/23	9	11	CI around mean	0.00514	0.0782
MW-394	UA	E002	pH (field)	SU	10/27/22 - 08/03/23	9	0	CI around mean	7.6/8.0	7.5/11.1
MW-394	UA	E002	Radium 226 + Radium 228, total	pCi/L	10/27/22 - 08/03/23	9	0	CI around mean	0.358	3.76
MW-394	UA	E002	Selenium, total	mg/L	10/27/22 - 08/03/23	9	89	Most recent sample	0.001	0.00320
MW-394	UA	E002	Sulfate, total	mg/L	10/27/22 - 08/03/23	9	0	CB around linear reg	45.3	762
MW-394	UA	E002	Thallium, total	mg/L	10/27/22 - 08/03/23	9	100	All ND - Last	0.002	0.002
MW-394	UA	E002	Total Dissolved Solids	mg/L	10/27/22 - 08/03/23	9	0	CI around mean	1,670	3,260
OW-256	PMP	E002	Antimony, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.00230
OW-256	PMP	E002	Arsenic, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0013	0.0104
OW-256	PMP	E002	Barium, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.0915	0.261
OW-256	PMP	E002	Beryllium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.0005
OW-256	PMP	E002	Boron, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.187	2.16
OW-256	PMP	E002	Cadmium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.002
OW-256	PMP	E002	Chloride, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	55	1,370
OW-256	PMP	E002	Chromium, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.002	0.0125
OW-256	PMP	E002	Cobalt, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0011	0.00220

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

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
OW-256	PMP	E002	Fluoride, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.25	3.84
OW-256	PMP	E002	Lead, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.0023	0.00220
OW-256	PMP	E002	Lithium, total	mg/L	03/14/23 - 08/03/23	3	33	Most recent sample	0.0082	0.140
OW-256	PMP	E002	Mercury, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.0002	0.0002
OW-256	PMP	E002	Molybdenum, total	mg/L	03/14/23 - 08/03/23	3	67	Most recent sample	0.0016	0.0782
OW-256	PMP	E002	pH (field)	SU	03/14/23 - 08/03/23	3	0	Most recent sample	6.8/6.8	7.5/11.1
OW-256	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/03/23	3	0	Most recent sample	0.66	3.76
OW-256	PMP	E002	Selenium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.001	0.00320
OW-256	PMP	E002	Sulfate, total	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	69	762
OW-256	PMP	E002	Thallium, total	mg/L	03/14/23 - 08/03/23	3	100	All ND - Last	0.002	0.002
OW-256	PMP	E002	Total Dissolved Solids	mg/L	03/14/23 - 08/03/23	3	0	Most recent sample	478	3,260
PZ-170	PMP	E002	pH (field)	SU	03/14/23 - 08/04/23	3	0	Most recent sample	6.6/6.6	7.5/11.1
PZ-170	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/04/23	3	0	Most recent sample	1.16	3.76
PZ-182	PMP	E002	Antimony, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.00230
PZ-182	PMP	E002	Arsenic, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.0104
PZ-182	PMP	E002	Barium, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.0712	0.261
PZ-182	PMP	E002	Beryllium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.0005
PZ-182	PMP	E002	Boron, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.476	2.16
PZ-182	PMP	E002	Cadmium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.002
PZ-182	PMP	E002	Chloride, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	40	1,370
PZ-182	PMP	E002	Chromium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0015	0.0125
PZ-182	PMP	E002	Cobalt, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.00220
PZ-182	PMP	E002	Fluoride, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.16	3.84
PZ-182	PMP	E002	Lead, total	mg/L	03/14/23 - 08/15/23	3	67	Most recent sample	0.001	0.00220
PZ-182	PMP	E002	Lithium, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	0.0155	0.140
PZ-182	PMP	E002	Mercury, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0002	0.0002
PZ-182	PMP	E002	Molybdenum, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.0015	0.0782

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

845 QUARTERLY REPORT
BALDWIN POWER PLANT
BOTTOM ASH POND
BALDWIN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
PZ-182	PMP	E002	pH (field)	SU	03/14/23 - 08/15/23	3	0	Most recent sample	6.4/6.4	7.5/11.1
PZ-182	PMP	E002	Radium 226 + Radium 228, total	pCi/L	03/14/23 - 08/15/23	3	0	Most recent sample	1.4	3.76
PZ-182	PMP	E002	Selenium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.001	0.00320
PZ-182	PMP	E002	Sulfate, total	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	172	762
PZ-182	PMP	E002	Thallium, total	mg/L	03/14/23 - 08/15/23	3	100	All ND - Last	0.002	0.002
PZ-182	PMP	E002	Total Dissolved Solids	mg/L	03/14/23 - 08/15/23	3	0	Most recent sample	772	3,260

Notes:

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

HSU = hydrostratigraphic unit:

PMP = Potential Migration Pathway

UA = Uppermost Aquifer

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

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

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