Semiannual Progress Report Selection of Remedy – Edgewater Generating Station

Edgewater Generating Station
Sheboygan, Wisconsin

Prepared for:

Alliant Energy

SCS ENGINEERS

25225237.00 | March 13, 2026

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Table of Contents

Section Page

Tables

Figures

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1.0 INTRODUCTION AND PURPOSE

The Semiannual Progress Report for remedy selection at the Wisconsin Power and Light Company (WPL) Edgewater Generating Station (EDG) was prepared to comply with U.S. Environmental Protection Agency (U.S. EPA) regulations regarding the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities [40 CFR 257.50-107], or the "CCR Rule" (Rule). Specifically, the selection of remedy process was initiated to fulfill the requirements of 40 CFR 257.97.

1.1 BACKGROUND

The Assessment of Corrective Measures (ACM) for the EDG Closed CCR Surface Impoundments (CCR unit) was completed on September 22, 2025 [40 CFR 257.96]. The ACM was completed in response to the detection of lithium and molybdenum in groundwater at a statistically significant level (SSL) above the Groundwater Protection Standard (GPS) in compliance well MW-304. Following completion of the ACM, SSLs above the GPS were subsequently identified for arsenic in MW-303, lithium in MW-302, and molybdenum in MW-301 and MW-302.

A Selection of Remedy Report (SOR) will be developed based upon collection of additional information and evaluation of site-specific data. This Semiannual Progress Report summarizes data collected and remedy evaluation progress made since the September 2025 ACM and outlines planned future activities. This Semiannual Progress Report covers the 6-month period of September 2025 through February 2026.

1.2 SITE INFORMATION AND MAPS

EDG is located south of the City of Sheboygan, Wisconsin, adjacent to Lake Michigan at 3739 Lakeshore Drive (**Figure 1**). The facility consists of four closed coal combustion residuals (CCR) surface impoundments (Slag Pond, North A-Pond, South A-Pond, and B-Primary Pond) that were closed in 2021. A CCR landfill that is regulated by the state was closed in 1986 and is located immediately west of the closed CCR surface impoundments.

The surface impoundments CCR unit is monitored with a multi-unit groundwater monitoring system and is the subject of this Semiannual Progress Report. A map showing the surface impoundments CCR unit and all background (or upgradient) and downgradient monitoring wells with identification numbers for the CCR groundwater monitoring program wells and state monitoring program wells are shown on **Figure 2**. The CCR monitoring well network currently consists of an upgradient background well (2R-OW) and four compliance wells (MW-301, MW-302, MW-303, and MW-304). MW-301 is not downgradient under current conditions; however, it is retained as a compliance well because it is positioned to represent sample groundwater quality in an area that was previously downgradient and could have been impacted by CCR constituents passing the waste boundary of the surface impoundments CCR unit prior to closure. A downgradient delineation well, MW-305, was installed at the property boundary in August 2025.

The CCR wells are installed into the upper portion of the unconsolidated glacial aquifer. Shallow groundwater generally flows to south/southeast. Prior to impoundment closure and capping, there was a more easterly flow direction in the immediate vicinity of the ponds. Depth to groundwater as measured in the site CCR monitoring wells historically varies from 3 to 25 feet below well top of casings.

2.0 SUMMARY OF WORK COMPLETED

Work completed includes the semiannual October 2025 sampling event, finalizing a well documentation report for MW-305, finalizing the 2025 Annual Groundwater Monitoring and Corrective Action Report, and performing a statistical analysis and report for the October 2025 sampling event. In the reporting period, WPL also began evaluating locations for installation of additional monitoring wells to delineate the spatial extent of GPS exceedances to support a selection of remedy.

Work completed to support remedy selection for the EDG is summarized in **Table 1**.

2.1 MONITORING NETWORK CHANGES

Since finalizing the ACM in September 2025, there were no changes to the monitoring network during this reporting period. Monitoring well locations are shown on **Figure 2**.

2.2 GROUNDWATER MONITORING

Routine groundwater monitoring began at EDG in April 2016 and the CCR monitoring system was certified in October 2017. The monitoring system consists of one upgradient background well (2R-OW) and four compliance wells (MW-301, MW-302, MW-303, and MW-304). MW-301 was previously a downgradient well, but groundwater flow has generally changed direction due to closure of the impoundments and now appears to be more upgradient. MW-304 was installed as a compliance well in 2024 and MW-305 was installed as a downgradient delineation well in August 2025.

The ACM process was initiated on July 23, 2025, in determining that lithium and molybdenum in groundwater were at SSLs above the GPSs.

Since the ACM was finalized in September 2025, the semiannual corrective action progress for this reporting period includes the following events:

- The October 2025 groundwater monitoring event was completed as part of the semiannual assessment monitoring program.
- The wells sampled and water levels measured included 2R-OW, MW-301, MW-302, MW-303, MW-304, and MW-305.

A summary of groundwater samples collected since submittal of the ACM is provided in **Table 2**.

2.3 STATISTICAL EVALUATION

Statistical evaluation of sampling results during the period covered by this update will be discussed in the 2026 Annual Groundwater Monitoring and Corrective Action Report, due on January 31, 2027.

Statistical evaluation of the October 2025 event indicated SSLs above the GPS were identified for the following:

- Arsenic: MW-303
- Lithium: MW-302, MW-304
- Molybdenum: MW-301, MW-302, MW-304

The October 2025 event was the first time that arsenic was identified as an SSL above the GPS. WPL has 90 days to complete a written alternative source demonstration or initiate an assessment of corrective measures for arsenic.

2.4 LANDFILL AND SURFACE IMPOUNDMENT CLOSURE

The EDG closed disposal facility served as ash settling ponds and landfill of fly ash, bottom ash, and slag. The CCR landfill was closed in 1987 prior to the effective date of the CCR Rule in 2015. The closed landfill is regulated by the Wisconsin Department of Natural Resources (DNR) as the Edgewater 1-4 Closed Ash Disposal Facility. The closure of the four CCR surface impoundments was initiated in 2020 and was completed in 2021. The Notification of Completion of Closure pursuant to 40 CFR 257.102(d) was entered into the Operating Record on August 10, 2021.

2.5 EVALUATION OF CORRECTIVE MEASURE ALTERNATIVES

A qualitative assessment of potential Corrective Measure Alternatives using the selection criteria in 40 CFR 257.97(b) and (c) was provided in the September 2025 ACM.

The ACM Report was prepared based on the potential relationship of the lithium and molybdenum impacts to the disposal of CCR. Additional assessment is necessary to relate arsenic impact to the disposal of CCR or a non-CCR source and an addendum to the original ACM may be necessary in the future.

Updates to the assessment and development of the evaluation of corrective measure alternatives discussed in the ACM will be completed in the future based on updates to the conceptual site model, delineation of the nature and extent of impacts, and collection of additional data relevant to remedy selection, as discussed below.

3.0 PLANNED ACTIVITIES

Planned activities within the next reporting period include the following:

- Complete evaluation of potential additional delineation well locations, including evaluation of installation feasibility given the presence of wetland areas around the site.
- Install additional delineation wells to further define the extent of groundwater impacts.
- Collect surface water and sediment samples to evaluate potential impacts from groundwater discharging into surface water features on the south side of Alliant property.
- Continue assessment monitoring for the existing monitoring well network.
- Continue the evaluation of groundwater flow and groundwater quality.
- Continue semiannual groundwater monitoring and corrective action reporting.
- Complete an alternative source demonstration (ASD) for arsenic by May 6, 2026, or add it as a constituent to be remediated as part of the groundwater corrective action.
- Prepare ACM Addendum No. 1.

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Tables

Table 1. Timeline for Completed Work - Selection of Remedy
Edgewater 1-4 Closed Ash Disposal Facility / SCS Engineers Project #25225237.00

Date	Activity
Work Completed During the Current Reporting Period	
October 2025	Conducted a semiannual groundwater sampling event.
October 10, 2025	Finalized a Well Documentation Report for MW-305.
January 30, 2026	Finalized the 2025 Annual Groundwater Monitoring and Corrective Action Report.
January-February 2026	Conducted initial evaluation of additional delineation well locations.
February 5, 2026	Finalized the Assessment of Groundwater Monitoring Results for October 2025.

Last revision by: MDB Date: 2/26/2026
Checked by: TK Date: 2/27/2026

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Table 2. Groundwater Samples Summary – Events Since ACM Submittal
Edgewater Generating Station / SCS Engineers Project #25225237.00

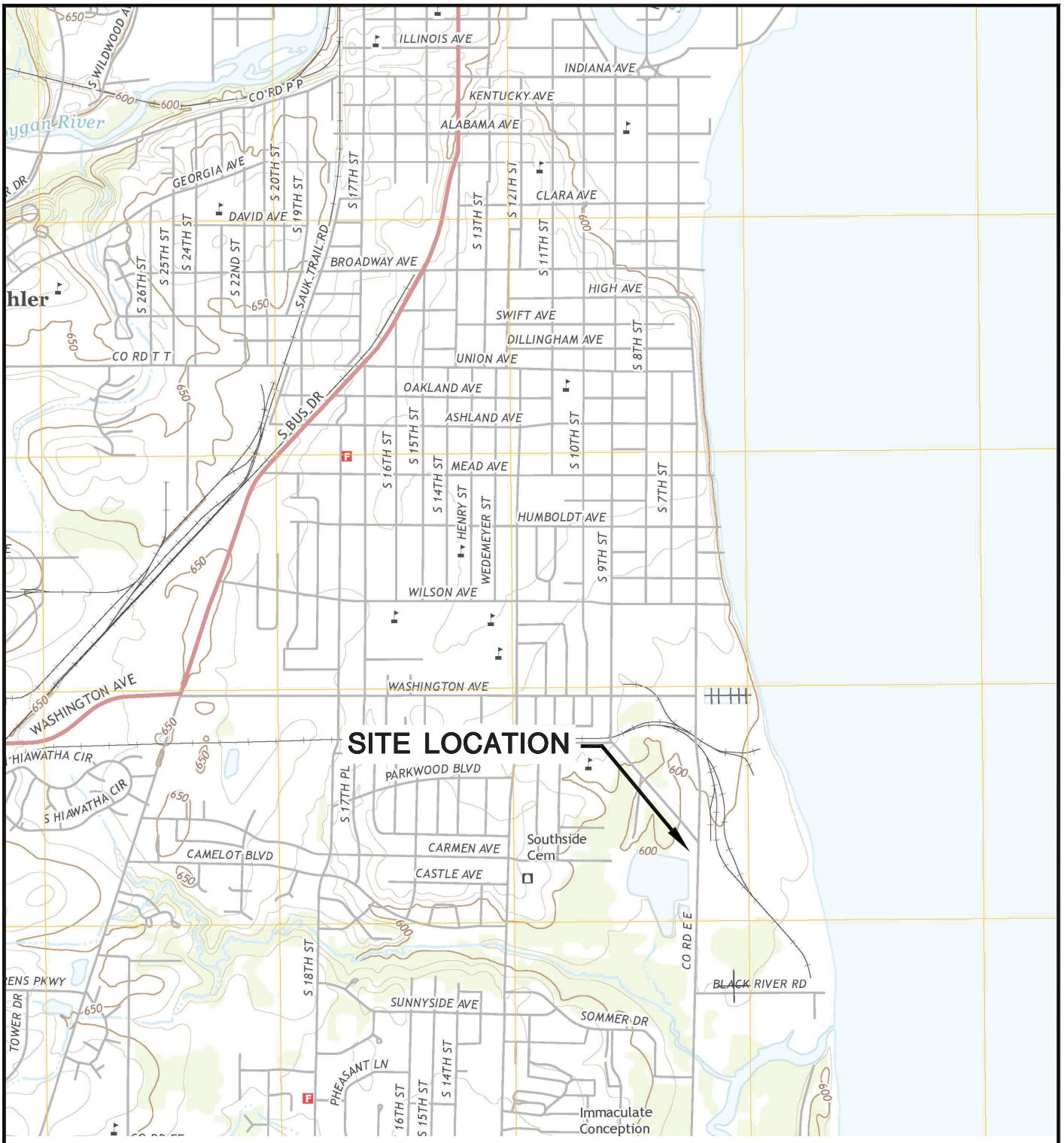
Sample Dates	Background Wells	Compliance Wells				Delineation Wells
	2R-OW	MW-301	MW-302	MW-303	MW-304	MW-305
October 7 - 9, 2025	A	A	A	A	A	A
Total Samples	1	1	1	1	1	1

Abbreviations:
A = Required by Assessment Monitoring Program
Add. = Additional Sampling Event
A-NE = Assessment monitoring for nature and extent, well sampled for select Appendix IV and selection-of-remedy parameters
N/A = Not Applicable. Water Level Only.
NI = Not Installed
-- = Not Sampled
ACM = Assessment of Corrective Measures

Last revision by:	NLB	2/9/2026
Checked by:	TK	2/25/2026

I:\25225237.00\Deliverables\Semiannual Progress Reports - 2026\March 2026 - Semiannual Progress Report\[Table 2_GW_Samples_Summary_Table_EDG.xlsx]GW Summary

Figures



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SHEBOYGAN FALLS QUADRANGLE
WISCONSIN–SHEBOYGAN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
2015
SCALE: 1" = 2,000'

CLIENT	ALLIANT ENERGY	SITE	WISCONSIN POWER AND LIGHT EDGEWATER I–43 (CLOSED) ASH DISPOSAL FACILITY SHEBOYGAN, WISCONSIN
			SITE LOCATION MAP

PROJECT NO.	25221068.00	DRAWN BY:	AHB
DRAWN:	02/08/16	CHECKED BY:	JR
REVISED:	02/09/16	APPROVED BY:	TK, 3/14/2022

ENGINEER

SCS ENGINEERS
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FIGURE
1

I:\25215135\Drawings\I-43\Site Loc.dwg, 2/9/2016 11:19:54 AM

LEGEND

- ABANDONED LEACHATE HEAD WELL
- ABANDONED MONITORING WELL
- ABANDONED STAFF GAUGE
- UPGRADIENT WELL (CCR AND STATE MONITORING PROGRAMS)
- CCR MONITORING WELL
- LEACHATE HEAD WELL
- MONITORING WELL
- PIEZOMETER
- CLOSED LANDFILL LIMITS
- DESIGN MANAGEMENT ZONE, WISCONSIN NR 140
- RAILROAD TRACK
- CCR UNIT
- 610 MAJOR TOPOGRAPHIC CONTOUR (10FT INTERVAL)
- MINOR TOPOGRAPHIC CONTOUR– (2FT INTERVAL

NOTES

1. IMAGERY SOURCE: VANTOR. DATE: 05/11/2025.

2. COORDINATE SYSTEM: NAD 1983 (2011) STATEPLANE WISCONSIN SOUTH FIPS 4803 (US FEET).

3. RAILROAD DATA FROM BUREAU OF TRANSPORTATION STATISTICS (BTS); FEDERAL RAILROAD ADMINISTRATION (FRA).

4. PARCEL DATA FROM SHEBOYGAN COUNTY GIS.

5. EXISTING TOPOGRAPHIC CONTOURS WITHIN THE CLOSED LANDFILL AND CCR UNIT BASED ON THE CONSTRUCTION DOCUMENTATION DRAWINGS FOR THE SUFACE IMPOUNDMENT CLOSURE AT THE EDGEWATER GENERATING STATION PREPARED BY SCS ENGINEERS DATED AUGUST 2021. EXISTING TOPOGRAPHIC CONTOURS OUTSIDE EH CLOSED LANDFIL AND CCR UNIT FROM SHEBOYGAN COUNTY GIS AND REPRESENT 2019 GRADES.

6. DESIGN MANAGEMENT ZONE LOCATION IS APPROXIMATE.

7. CCR MONITORING WELL INSTALLATION SUMMARY: MONITORING WELLS MW–301, MW–302 AND MW–303 WERE INSTALLED BY BADGER STATE DRILLING BETWEEN JANUARY 14 AND FEBRUARY 4, 2016. THESE WELLS WERE SURVEYED BY CQM, INC. OF GREEN BAY, WI ON FEBRUARY 12, 2016. MONITORING WELL MW–304 WAS INSTALLED BY HORIZON CONSTRUCTION AND EXPLORATION, LLC ON FEBRUARY 5, 2024. THIS WELL WAS SURVEYED BY CEDAR CREEK SURVEYING, LLC OF OOSTBURG, WI ON JUNE 26, 2024. MONITORING WELL MW–305 WAS INSTALLED BY ON–SITE ENVIRONMENTAL SERVICES, INC ON AUGUST 5, 2025. THIS WELL WAS SURVEYED BY CEDAR CREEK SURVEYING, LLC ON AUGUST 6, 2025.

8. MONITORING WELL AND OTHER SAMPLE LOCATIONS ARE APPROXIMATE.

500 0 500 '

SCALE: 1" = 500'

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DOCUMENT PATH: I:\25224068.00\DRAWINGS\GIS\EDGEWATER\EDGEWATER.APRX

PROJECT NO.	25225068.00	DRAWN BY:	AA
DRAWN:	05/02/2025	CHECKED BY:	NLB 01/20/2026
REVISED:	01/20/2026	APPROVED BY:	TK 01/29/2026

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SITE: EDGEWATER POND CLOSURE AREA AND CLOSED LANDFILL
ASH DISPOSAL FACILITY
SHEBOYGAN, WISCONSIN

SITE PLAN

FIGURE 2