solutions and action

Wisconsin Power and Light Company
Rock River Generating Station
Hazard Potential Classification Assessment – Revision 0
154.018.028.006.001
Report issued: May 6, 2026

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Executive Summary

This Hazard Potential Classification Assessment (Report) is prepared in accordance with the requirements of the United States Environmental Protection Agency (EPA) published Final Rule for Hazardous and Solid Waste Management System – Disposal of Coal Combustion Residual from Electric Utilities (40 CFR Parts 257 and 261, also known as the CCR Rule) published on April 17, 2015 (effective October 19, 2015) and subsequent amendments.

On May 8, 2024, the EPA issued the Final Legacy Coal Combustion Residual (CCR) Surface Impoundment Rule ("Legacy Surface Impoundment Rule") that established regulations for CCR surface impoundments at inactive facilities (40 C.F.R. § 257.100). The Legacy Surface Impoundment Rule requires that legacy surface impoundments that no longer receive CCR but contain both CCR and liquid on or after October 19, 2015 and that are located at an inactive electric utility, generally comply with the EPA requirements for inactive CCR surface impoundments in accordance with Title 40 of the Code of Federal Regulations, Part 257 Subpart D Hazardous and Solid Waste Management System; Disposal of CCR from Electric Utilities.

This is the initial Report at the Rock River Generating Station in Beloit, Wisconsin and is focused on classifying its legacy surface impoundment based on the probable loss of human life, and the impacts on economic, environmental, and lifeline interests in the event of an unintentional release from the ROR Final WPDES Settling Pond.

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1. INTRODUCTION

In accordance with the requirements set forth in §257.73(a)(2) of the CCR Rule, an owner or operator of an existing CCR surface impoundment or legacy surface impoundment must conduct initial and periodic hazard potential classification assessments of their CCR surface impoundment, except for those that are incised. The owner or operator must determine each CCR surface impoundment hazard potential classification through a hazard potential classification assessment.

This Report serves as the initial assessment and has been prepared in accordance with the requirements of §257.73(a)(2) of the CCR Rule and the Legacy CCR Surface Impoundment Rule amendment under § 257.100.

1.1 CCR Rule Requirements

The CCR Rule requires an initial and periodic hazard potential classification assessment by a qualified professional engineer (PE) for all CCR surface impoundments including existing, new, lateral expansions, and legacy CCR impoundments (§257.73(a)(2)(ii)).

1.2 Hazard Potential Classification Assessment Applicability

The Wisconsin Power and Light Company (WPL), Rock River Generating Station (ROR) in Beloit, Wisconsin (Figure 1) has one legacy CCR surface impoundment, identified as the Final WPDES Pond.

The former ROR ended coal combustion in 2000 and converted to the use of natural gas. The facility terminated generation in 2012 and was demolished in 2016. The surface impoundment has remained inactive since 2000. The Final WPDES Settling Pond has not received CCR since 2000.

2. FACILITY DESCRIPTION

ROR was located north of town on the western shore of the Rock River in Rock County at 827 W. B. R. Townline Road in Beloit, Wisconsin (Figure 1). ROR was bounded on the north by Townline Road, on the west by property owned by WPL known as Riverside Energy Center (REC), and on the south and east by the Rock River, which is a navigable body of water.

ROR was commissioned in 1954 as a coal-fired power plant. The facility consisted of two units. ROR ended coal combustion when the coal-fired boilers were converted to natural gas in 2000. The facility terminated generation of all electricity in 2012 and was demolished in 2017.

General Facility Information:

Date of Initial Facility Operations:		1954
Historical WPDES Wastewater Permit Number:		WI-0002402-05-0
Historical WPDES General Storm water Permit Number:		WI-S067857-3
Latitude / Longitude:	42°34’54.66”N	89°1’38.80”W
Unit Nameplate Ratings:	Unit 1 (1954) 75 MW - Coal	
	Unit 2 (1955) 75 MW - Coal	
Impoundment WDNR State ID	None	

2.1 ROR Final WPDES Settling Pond Location

The Final WPDES Settling Pond is located south of the Closed Ash Landfill and storm water retention pond. The eastern and southern embankments of the Final WPDES Settling Pond are bordered by the Rock River, while the western boundary is bordered by a set of railroad tracks. Figure 1 shows the location of the Final WPDES Settling Pond. As of 2012, the estimated volume of CCR in the surface impoundment was 2,000 cubic yards as identified within the December 2012 Settling Basin Abandonment Plan and Landfill Closure Plan Modification. Closure

construction has been initiated. The CCR has been removed from the Final WPDES Settling Pond as of October 2025.

The adjacent areas of the site comprise several components, including an Ash Disposal Facility (Landfill) Area, a former coal yard, a Storm Water Management Pond, an area surrounding the Final WPDES Settling Pond, and the ROR Final WPDES Settling Pond. Storm water from the former coal yard is conveyed through a 36-inch concrete pipe into the Storm Water Management Pond. Similarly, runoff from the Landfill Area is directed into the Storm Water Management Pond through open channel swales. The Storm Water Management Pond is constructed with an embankment height of 8 feet and serves as the primary collection point for site runoff. From there, storm water is discharged via a 24-inch concrete pipe located at elevation 745.8 feet into the Final WPDES Settling Pond. Additionally, surface runoff from the area surrounding the Final WPDES Settling Pond is also directed into the pond.

The Final WPDES Settling Pond is approximately 5.0 acres with embankments approximately 9 feet high relative to pond side and estimated at 20 feet high on the Rock River side based on stream bed information from available Federal Emergency Management Agency (FEMA) Flood Zone Profiles for Rock County, Wisconsin. Storm water exfiltrates into underlying and adjacent soils under normal conditions. However, during high-intensity storm events, excess water could be discharged through an approximate 10-foot wide, 1-foot deep emergency spillway installed on top of the southern embankment during closure construction set at elevation 753 feet.

3. HAZARD POTENTIAL CLASSIFICATION - §257.73(a)(2)

FEMA (FEMA Publication 333, Federal Guidelines for Dam Safety, Hazard Potential Classification System for Dams, April 2004) developed a hazard potential classification to classify surface impoundments based on the probable loss of human life, and the impacts on economic, environmental, and lifeline interests in the event of an unintentional release from a surface impoundment. Three hazard potential classification levels are identified as:

1. High Hazard Potential – Assigned to surface impoundments where failure or mis-operation will probably cause loss of human life.
2. Significant Hazard Potential – Assigned to surface impoundments where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, or disruption of lifeline facilities or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.
3. Low Hazard Potential – Assigned to surface impoundments where failure or mis-operation has no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

3.1 ROR Final WPDES Pond Siting Information

From the mid-1970s until the early 2000s, the Primary Ash Settling Basin was to be divided into four CCR handling areas, which included the Primary Fly Ash Settling Basin, Bottom Ash Settling Basin (aka Slag Pond), WPDES Pond 1, and WPDES Pond 2. WPDES Pond 1 and WPDES Pond 2 primarily received storm water runoff but may also have contained lesser amounts of bottom ash and fly ash.

The onsite landfill expansion in the early 2000s included the closure of the Primary Fly Ash Settling Basin area. In 2000, ROR ceased coal combustion which caused the Final WPDES Settling

Pond to dry out through exfiltration, while the Bottom Ash Settling Basin, WPDES Pond 1, and WPDES Pond 2 remained stagnant. The water levels mirrored those of the Rock River.

In 2015, the Bottom Ash Settling Basin, WPDES Pond 1, and WPDES Pond 2 were closed. The result of this was expansion of the onsite landfill and the Storm Water Management Pond, which had the ability to discharge into the Final WPDES Settling Pond.

In October 2025, vegetation was stripped from the crest and interior side slopes of the embankment, and the remaining CCR within the Final WPDES Settling Pond was removed. The WPDES Outfall 4 pipe was filled with hydraulic cement, the weir box was demolished, and the embankment was restored with stone as part of the CCR removal. The impoundment is currently in the process of formally initiating and completing closure in accordance with the CCR Rule.

Immediately to the north of the Final WPDES Pond is the closed ash landfill, which is higher in elevation than the Final WPDES Pond. Also to the north is a berm which separates the storm water retention pond and the Final WPDES Pond with a spillway connecting the two ponds. The east and south embankments of the Final WPDES Pond are bordered by the Rock River. Lastly, to the west is a railroad spur which is higher in elevation than the Final WPDES Pond embankment.

The U.S. Fish and Wildlife Service National Wetland Inventory indicates that there is a 6.38-acre freshwater emergent wetland (PEM1F) wetland on the eastern shore of the Rock River, and a 15.02-acre freshwater forested/shrub wetland (PF01C) located south of the Final WPDES Pond on the southern shore of the Rock River (Figure 2). The Final WPDES Settling Pond is approximately 5.0 acres with embankments approximately 9 feet high relative to pond side and estimated at 20 feet high on the Rock River side based on stream bed information from available

Federal Emergency Management Agency (FEMA) Flood Zone Profiles for Rock County, Wisconsin. Storm water exfiltrates into underlying and adjacent soils under normal conditions. However, during high-intensity storm events, excess water could be discharged through an approximate 10-foot wide, 1-foot deep emergency spillway installed on top of the southern embankment during closure construction set at elevation 753 feet.

3.2 Hazard Potential Classification

The Final WPDES Settling Pond has been assigned a **Significant Hazard Potential** classification as losses may not principally be limited to the owner's property. Mis-operation or failure will likely not result in loss of life as there are no occupied buildings or residences located in the immediate vicinity of the CCR surface impoundment, and the adjacent spaces are not generally occupied. Failure to the east or south would likely reach a navigable water body where the CCR has the potential to be transported downstream causing environmental damage, although as of October 2025, the CCR has been removed. A release to the north would be contained on WPL property and be limited to the storm water retention pond. A release to the west would likely be controlled and contained by the railroad spur, although it is possible for the failure to be redirected south and into the Rock River.

4. QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

To meet the requirements of 40 CFR 257.73(a)(2)(ii), I Mark W. Loerop hereby certify that I am a licensed Professional Engineer in the State of Wisconsin; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in 40 CFR 257.73(a)(2).

By: _____

Name: MARK LOEROP

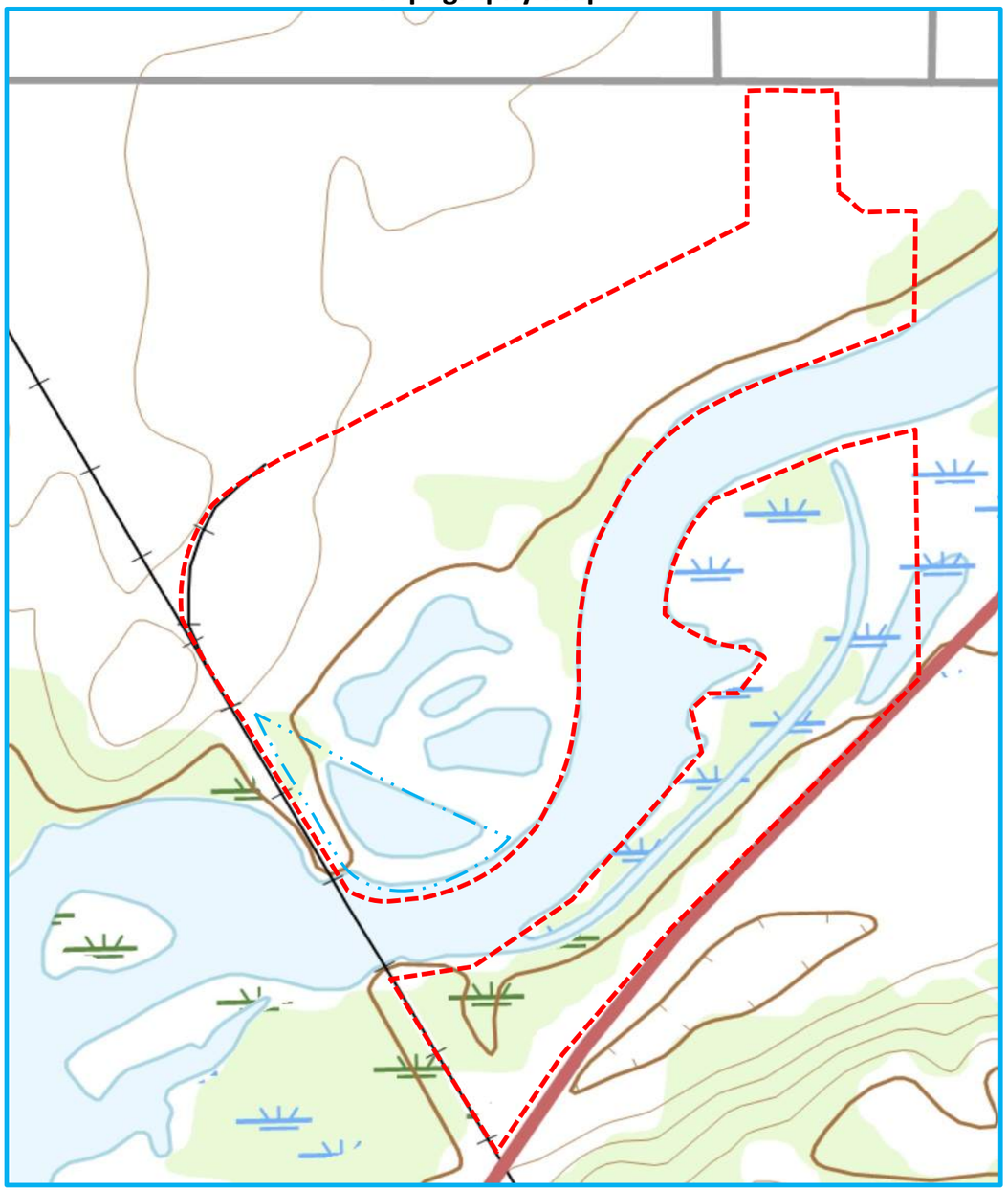
Date: MAY 6, 2026

FIGURES

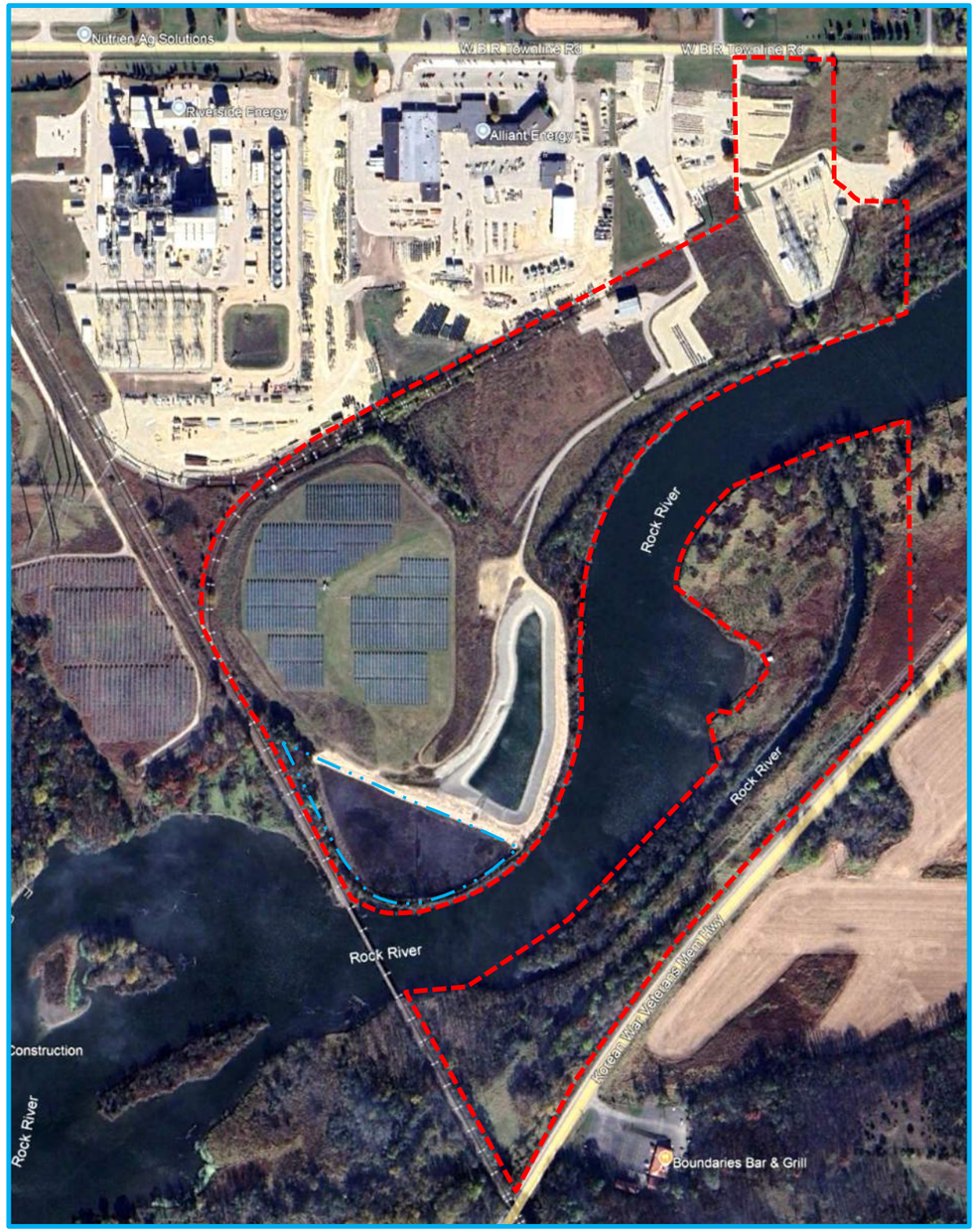
Alliant Energy
Wisconsin Power and Light Company
Rock River Generating Station
Beloit, Wisconsin

Hazard Potential Classification Assessment

Topography Map



Aerial Photo



Approximate Property Boundary

Final WPDES Settling Pond

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Site Location
Rock River Generating Station
Wisconsin Power and Light Company

Drawing
Figure 1

Date
4/28/2026

Approximate Property Boundary

Final WPDES Settling Pond

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