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Wisconsin Power and Light Company

Columbia Energy Center

CCR Surface Impoundment Annual Inspection Report

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Executive Summary

This annual inspection report for the Coal Combustion Residual (CCR) Columbia Energy Center (COL) Secondary Ash Pond has been prepared in accordance with the requirements of the United States Environmental Protection Agency published Final Rule for Hazardous and Solid Waste Management System – Disposal of CCR from Electric Utilities (40 CFR Parts 257 and 261, also known as CCR Rule) and Extension of Compliance Deadlines for Certain Inactive Surface Impoundments.

This annual inspection report has been prepared to assess the condition of an inactive CCR surface impoundment. Primarily, the annual inspection report focuses on the structural stability of the CCR surface impoundment and to ensure that the operation and maintenance of the CCR surface impoundment is in accordance with recognized and generally accepted good engineering standards.

After conducting the annual inspection, as well as review of available information provided by Wisconsin Power and Light Company pertaining to the status and condition of the CCR surface impoundment, and discussions with facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the CCR surface impoundment, there are no operating deficiencies and there have been no changes that have affected the stability or operation of the CCR surface impoundment since the previous annual inspection. The surface impoundment no longer receives process water or CCR materials.

Since the previous annual inspection, the plant has certified the COL Primary Ash Pond as closed and has continued the closure process for the COL Secondary Ash Pond. Consequently, only the COL Secondary Ash Pond has been inspected as part of this Report.

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1. INTRODUCTION

This annual inspection report has been prepared in accordance with the requirements of §257.83(b) and §257.100(a) of the United States Environmental Protection Agency (USEPA) published Final Rule for Hazardous and Solid Waste Management System – Disposal of Coal Combustion Residual (CCR), herein referenced as the CCR Rule.

1.1 CCR Rule Applicability

The CCR Rule requires annual inspections by a qualified professional engineer (PE) for both existing and inactive CCR surface impoundments with a height of 5 feet or more and a storage volume of 20 acre-feet or more or for CCR surface impoundments with a height of 20 feet or more (40 CFR §§ 257.73(b), 257.73(d), 257.83(b) and 257.100(a)).

1.2 Annual Inspection Applicability

The Wisconsin Power and Light Company (WPL) Columbia Energy Center (COL) in Pardeeville, Wisconsin has one inactive CCR surface impoundment that meets the requirements of Section 1.1, identified as the COL Secondary Ash Pond. The COL Secondary Ash Pond has not received CCR after October 2015. In 2023, closure earthwork was completed within both impoundments which involved dewatering, removal of CCR, backfilling, restoration, and CCR placement into the onsite landfill. Since the previous annual inspection, the plant has certified the COL Primary Ash Pond as closed.

The annual inspection of the CCR surface impoundment at COL was completed by a qualified PE on September 19th, 2025. The annual inspection was completed to ensure that the design, construction, operation, and maintenance of the CCR surface impoundment at COL are consistent with recognized and generally accepted good engineering standards.

The annual inspection of the CCR surface impoundment at COL included a review of available information regarding the status and condition of the CCR surface impoundment. The information reviewed included all relevant files available in the operating record at the time of the annual inspection, as well as the Alliant Energy CCR Rule Compliance Data and Information website entries for COL (ccr.alliantenergy.com). These files for the CCR surface impoundment at COL include, but are not limited to, CCR surface impoundment design and construction information (history of construction), hazard potential classification, structural stability assessment, safety factor assessment, hydrologic and hydraulic capacities (inflow flood control plan), results of 7-day inspections and instrumentation monitoring by a qualified person, and results of the previous annual inspection.

The annual inspection also included a visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures. Additionally, the visual inspection included hydraulic structures underlying the base of the CCR surface impoundment or passing through the dikes of the CCR surface impoundment for structural integrity and continued safe and reliable operation.

2. ANNUAL INSPECTION REPORTING CRITERIA

The following sub-sections address the annual inspection reporting criteria per §257.83(b)(2) of the CCR Rule for the inactive CCR surface impoundment located at COL.

2.1 COL Secondary Ash Pond (inactive)

2.1.1 Changes in Geometry (§257.83(b)(2)(i) and §257.100(a))

After conducting the annual inspection, as well as review of available information provided by COL pertaining to the status and condition of the CCR surface impoundment, and discussions with COL facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the CCR surface impoundment, there have been no identified changes in the geometry since the previous annual inspection other than the closure activities.

2.1.2 Existing Instrumentation (§257.83(b)(2)(ii))

The COL Secondary Ash Pond does not have permanent instrumentation that supports the operation of the CCR surface impoundment. CCR has been removed and placed into the onsite landfill. Water elevation data is no longer collected from the impoundment as the CCR materials have been removed and now the northern portion of the impoundment area is operated as an infiltration basin for stormwater only. No water elevations have been recorded within this stormwater impoundment.

2.1.3 Depth and Elevation of Impounded CCR and Water (§257.83(b)(2)(iii) and §257.100(a))

The approximate minimum, maximum, and present depths, and elevations of the impounded CCR and water in the COL Secondary Ash Pond since the previous annual inspection were determined using information that was collected during the annual inspection, as well as from historical information that was previously provided from WPL.

- At the time of the annual inspection, stormwater was present within the COL Secondary Pond. Water levels are no longer recorded because the CCR materials have been removed, the measurement devices have been removed, the area does not manage any CCR or non-CCR wastewaters, and construction closure activities are complete.
- From the 1975 original design drawing contours of the COL Secondary Ash Pond, the original design bottom contour elevation of the CCR surface impoundment was approximately 780 feet, which was prior to the closure activities.

2.1.4 Storage Capacity of Impounding Structure (§257.83(b)(2)(iv) and §257.100(a))

The storage capacity (i.e., water volume) of the COL Secondary Ash Pond at the time of the annual inspection was not estimated because the CCR has been removed from the impoundment and the construction closure activities have been completed. COL no longer manages CCR wastewaters and only stormwater runoff is contained within the impoundment.

2.1.5 Volume of Impounded CCR and Water (§257.83(b)(2)(v) and §257.100(a))

The volume of impounded CCR and water (i.e., total volume, not including freeboard) within the COL Secondary Ash Pond at the time of the annual inspection was not estimated because the CCR had been removed from the impoundment and the construction closure activities were complete. The remaining water within the impoundment is from stormwater runoff which infiltrates into the ground.

2.1.6 Structural Weaknesses and Disruptive Conditions (§257.83(b)(2)(vi) and §257.100(a))

After review of available information provided by COL pertaining to the status and condition of the CCR surface impoundment, discussions with COL facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the CCR surface impoundment, as well as conducting the on-site visual inspection of the CCR surface

impoundment, there have been no identified appearances of an actual or potential structural weakness of the CCR surface impoundment.

There were no conditions identified along the upstream and downstream slopes of the embankments that were disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment.

2.1.7 Other Changes Affecting Stability or Operation of Impounding Structure (§257.83(b)(2)(vii) and §257.100(a))

After review of available information provided by COL pertaining to the status and condition of the CCR surface impoundment, as well as discussions with COL facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the CCR surface impoundment, there have been no other identified changes that have affected the stability or operation of the COL Secondary Ash Pond since the previous annual inspection.



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3. CERTIFICATION

To meet the requirements of 40 CFR §§ 257.83(b) and 257.100(a), 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 §§ 257.83(b) and 257.100(a).

By: 

Name: MARK LOEROP

Date: NOV 25, 2025

