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**Interstate Power and Light Company**

Sixth Street Generating Station

CCR Surface Impoundment Annual Inspection Report

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## Executive Summary

This initial annual inspection report for legacy Coal Combustion Residual (CCR) Closed Ash Pond surface impoundment at the former Sixth Street Generating Station (SSS) 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), Extension of Compliance Deadlines for Certain Inactive Surface Impoundments, and Legacy CCR Surface Impoundment Rule.

The former SSS stopped coal combustion and was retired in 2008. The facility was demolished in 2015. The Closed Ash Pond was historically referred to as Ash Pond 1, Ash Pond 2, Ash Pond 3, and Ash Pond 4. These ash ponds were operated collectively, contiguous to one another, and were closed in place under one continuous cover system. Because of this, ash ponds are being considered a single legacy surface impoundment. An engineered soil final cover system was installed in 2017 and 2018 according to the October 2018 Construction Documentation Report for the Settling Pond Closure at the Former SSS.

This initial annual inspection report has been prepared to assess the condition of legacy CCR surface impoundment. Primarily, the annual inspection is focused 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 initial annual inspection, reviewing available information provided by the Interstate Power and Light Company pertaining to the status and condition of the legacy CCR surface impoundment, and having discussions with facility personnel who oversee and perform

the operation, maintenance, and inspection activities of the CCR surface impoundment, we conclude that there are no operating deficiencies. The impoundment vegetation is well managed except for certain areas on the downstream side slopes beyond the fence line where the vegetation is overgrown. Left unmanaged, this could lead to a disrupting condition.

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## 1. INTRODUCTION

This initial annual inspection report has been prepared in accordance with the requirements of §257.83(b) and §257.100(a)(2) 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, including Extension of Compliance Deadlines for Certain Inactive Surface Impoundments, and Legacy CCR Surface Impoundment Rule.

### 1.1 CCR Rule Applicability

The CCR Rule requires annual inspections by a qualified professional engineer (PE) for both inactive and legacy CCR surface impoundments with a height of 5-feet or more and a storage volume of 20 acre-feet or more or the CCR surface impoundment has 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 Interstate Power and Light Company (IPL), former Sixth Street Generating Station (SSS) in Cedar Rapids, Iowa has one legacy CCR surface impoundment that meets the requirements of Section 1.1, identified as the SSS Closed Ash Pond.

The former SSS ended coal combustion and retired in 2008 and was demolished in 2015. Interstate 380 is located directly over the central portion of the SSS Closed Ash Pond, which includes several abutments throughout the impoundment. The Closed Ash Pond was historically referred to as Ash Pond 1, Ash Pond 2, Ash Pond 3, and Ash Pond 4. These ash ponds were operated collectively, contiguous to one another, and were closed in place under one continuous cover system. Because of this, the ash ponds are being considered a single legacy surface impoundment. An engineered soil final cover system was installed in 2017 and 2018 according

to the October 2018 Construction Documentation Report for the Settling Pond Closure at the Former SSS.

The CCR surface impoundment has been assigned a state identification number by the Iowa Department of Natural Resources (IDNR), which is 57-SDP-34-04C.

The initial annual inspection of the CCR surface impoundment at SSS was completed by a qualified PE on October 6<sup>th</sup>, 2024. The inspection was completed to ensure that the design, construction, operation, and maintenance of the CCR surface impoundment at SSS is consistent with recognized and generally accepted good engineering standards.

The initial annual inspection of the CCR surface impoundment at SSS included a review of available but limited information regarding the status and condition of the CCR surface impoundment. Currently there are no available files recorded within the Alliant Energy CCR Rule Compliance Data and Information website entries for SSS ([ccr.alliantenergy.com](http://ccr.alliantenergy.com)).

The initial annual inspection included a visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundments 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 legacy CCR surface impoundment located at SSS.

### 2.1 SSS Closed Ash Pond

#### 2.1.1 Changes in Geometry (§257.83(b)(2)(i))

After conducting the initial annual inspection, as well as review of available information provided by SSS pertaining to the status and condition of the legacy CCR surface impoundment, and discussions with SSS facility personnel who oversee and perform the operation, maintenance, and inspection activities of the legacy CCR surface impoundment, there have been no changes in the geometry since the engineered soil final cover system was installed in 2017 and 2018.

#### 2.1.2 Exiting Instrumentation (§257.83(b)(2)(ii))

Historical instrumentation that supported the operation of the SSS Closed Ash Pond included flow monitoring equipment and discharge piping. As part of the closure activities all associated discharge structures were demolished and removed. The impoundment currently includes a small stormwater pond with a geosynthetic clay liner (GCL) atop the engineered soil cap. This water largely evaporates, although during significant precipitation events, stormwater can discharge southwest through an overflow pipe. This piping was inspected, and no deficiencies were observed.

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

The approximate minimum, maximum, and present depths, and elevations of the impounded CCR and water in the SSS Closed 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 IPL.

- At the time of the annual inspection, stormwater was present within the GCL lined pond atop the engineered soil final cover system. The as-built information may be reviewed in the October 2018 Construction Documentation Report for the Settling Pond Closure at the Former SSS.
- Water levels are no longer recorded because the CCR materials have been covered with an engineered soil cap, the impoundment no longer manages CCR wastewaters, and construction closure activities are complete. As result, the minimum, maximum, and present depths of water are no longer collected.
- The original base of CCR materials was approximately 720 feet in elevation and after closure the subgrade maximum elevation is 733 giving a maximum thickness of 13 feet.

#### **2.1.4 Storage Capacity of Impounding Structure (§257.83(b)(2)(iv))**

The storage capacity (i.e. water volume) of the CCR surface impoundment at the time of the annual inspection was not estimated because the CCR construction closure activities have been completed, 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))**

The volume of impounded CCR (i.e. total volume, not including freeboard) within the SSS Closed Ash Pond at the time of the annual inspection was estimated based on the February 28, 2013 Coal Ash Impoundment Site Assessment Final Report. The volume of CCR within the closed impoundment is approximately 40,000 cubic yards.

The volume of water was not measured because the closure activities have been completed, SSS Closed Ash Pond no longer manages CCR wastewaters and only stormwater runoff is contained within a GCL lined pond within the footprint of the impoundment.



### **2.1.6 Structural Weaknesses and Disruptive Conditions (§257.83(b)(2)(vi))**

After review of available information provided by SSS pertaining to the status and condition of the legacy CCR surface impoundment, discussions with facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the legacy CCR surface impoundment, as well as conducting the on-site visual inspection of the legacy CCR surface impoundment, there have been no identified structural weaknesses of the legacy CCR surface impoundment. There is potential to lead to structural weakness if the areas of tall vegetation and trees are not properly managed. The areas of tall vegetation and trees are located on the downstream slopes of the embankment in several areas of the impoundment.

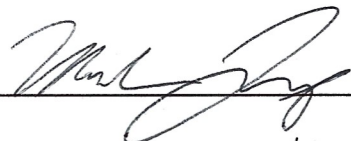
There were no disruptive conditions identified along the upstream and downstream slopes of the embankments. Although overgrown vegetation that exists in several areas of the downstream slopes have the potential to disrupt the operation and safety of the legacy CCR surface impoundment if the vegetation is left unmanaged.

### **2.1.7 Other Changes Affecting Stability or Operation of Impounding Structure (§257.83(b)(2)(vii))**

After review of available information provided by SSS pertaining to the status and condition of the legacy CCR surface impoundment, as well as discussions with SSS facility personnel who oversee and maintain the operation, maintenance, and inspection activities of the legacy CCR surface impoundment, there have been no identified changes since the closure activities in 2018.

### 3. CERTIFICATION

To meet the requirements of 40 CFR 257.83(b), I, Mark W. Loerop, hereby certify that I am a licensed professional engineer in the State of Iowa; 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).

By: 

Name: MARK W. LOEROP

Date: DECEMBER 23, 2024

