

# 2021 CCR Surface Impoundment Structural Stability Assessment



**Revision 0**  
**October 5, 2021**  
**Issue Purpose: Use**  
**Project No.: 10572-141**

## 1.0 PURPOSE

AES Indiana's Harding Street Generating Station ("Harding Street" or the "Station") has three existing coal combustion residual (CCR) surface impoundments, Ponds 1, 2A/2B, and 3, that are regulated by the U.S. Environmental Protection Agency's (EPA) "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," 40 CFR Part 257 Subpart D, also referred to herein as the Federal CCR Rule. In accordance with 40 CFR 257.73(d)(1), this report documents the 2021 structural stability assessment for Ponds 1, 2A/2B, and 3 at Harding Street. Pursuant to 40 CFR 257.73(f), this structural stability assessment was conducted and completed within five years of the previous assessment.

## 2.0 STRUCTURAL STABILITY ASSESSMENT RESULTS

To develop the assessment presented herein, a review of the available construction documents, soil borings through the dikes, the annual inspections conducted to date by a qualified professional engineer in accordance with 40 CFR 257.83(b)(1), and AES Indiana's observations of the dikes has been completed. Pursuant to 40 CFR 257.73(d)(1), the standard for this evaluation is consistent with recognized and generally accepted good engineering practices.

### 2.1 STABLE FOUNDATIONS & ABUTMENTS

#### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(i)**

The soils supporting the exterior dikes of Ponds 1, 2A/2B, and 3 are considered stable for the maximum volume of CCR and CCR wastewater which can be impounded therein.

### 2.2 ADEQUATE SLOPE PROTECTION

#### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(ii)**

The slopes of the dikes are adequately protected against surface erosion, wave action, and adverse effects of sudden drawdown.

### 2.3 COMPACTED DIKES

#### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(iii)**

As documented by the Station's Safety Factor Assessment (completed in accordance with 40 CFR 257.73(e)), the dikes are adequately compacted to provide the required engineering properties to achieve the stability safety factors for the required loading conditions.

## 2.4 VEGETATED SLOPES

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(iv)**

The requirement that vegetation on slopes of dikes and surrounding areas “not...exceed a height of six inches above the slope of the dike” was vacated by the U.S. Court of Appeals, District of Columbia Circuit after the provision was challenged following publication of the Federal CCR Rule in April 2015. See *USWAG et al. v. EPA*, No. 15-1219 (D.C. Circ. 2015). The U.S. EPA has yet to finalize a rule that re-establishes vegetative cover height limitations for CCR surface impoundments.

## 2.5 SPILLWAY

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(v)**

The dikes, which are perched, do not have spillways. The Station’s Inflow Design Flood Control System Plan (completed in accordance with 40 CFR 257.82(c)) indicates that spillways are not required for these CCR surface impoundments to adequately manage flow during and following the design storm event.

## 2.6 HYDRAULIC STRUCTURES

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(vi)**

An interceptor sewer line owned by Citizens Energy Group is located below the southeastern dike of Pond 3 for which Citizens Energy Group is responsible for maintaining and periodically inspecting. Citizens Energy Group has represented to AES Indiana in a recorded amendment to the easement for the sewer line that, as of the date of the amended easement (July 19, 2018), the sewer line under the southeastern dike of Pond 3 is “in good and working condition free of any material defects that could impact its integrity.” Citizens Energy Group has not performed an inspection of the sewer line since the date of the amended easement.

## 2.7 ADJACENT WATER BODIES

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(1)(vii)**

The downstream slopes of the exterior dikes are appropriate for the flooding risks of the adjacent White River and Lick Creek.

## 3.0 CORRECTIVE MEASURES

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(2)**

No corrective measures are recommended.

## 4.0 CONCLUSION

This structural stability assessment confirms that the three existing CCR surface impoundments at Harding Street – Pond 1, Pond 2A/2B, and Pond 3 – have been designed, constructed, operated, and maintained consistent with recognized and generally accepted good engineering practices to provide structural stability for the maximum volume of CCR and CCR wastewater which can be impounded therein.

## 5.0 CERTIFICATION

### **Federal CCR Rule Reference: 40 CFR 257.73(d)(3)**

I certify that:

- This periodic structural stability assessment was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 40 CFR 257.73(d).
- I am a registered professional engineer under the laws of the State of Indiana.

Certified By: David E. Nielson

Date: October 5, 2021

Seal:

