



Indianapolis Power & Light Company
Harding Street Generating Station

Structural Stability Assessment of
CCR Surface Impoundments

Prepared by



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1 PURPOSE

This document provides the initial structural stability assessment for the coal combustion residual (CCR) surface impoundments at Indianapolis Power & Light Company's (IPL) Harding Street Generating Station for compliance with 40 CFR 257.73(d). Based on the applicability criteria presented in 40 CFR 257.73(b), the following existing CCR surface impoundments are addressed herein:

- Pond 1,
- Pond 2A/2B, and
- Pond 3.

2 STRUCTURAL STABILITY ASSESSMENT RESULTS

To develop the assessment presented herein, a review of the available construction documents, soil borings through the dikes, the annual inspection by a third party professional engineer, and IPL'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 CCR storage capacity.

2.2 ADEQUATE SLOPE PROTECTION

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

The slopes 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 [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 existing vegetation is considered to be appropriate slope protection against erosion.

2.5 SPILLWAY

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

The dikes, which are perched, do not incorporate spillways. The Station's Inflow Design Flood Control System Plan [40 CFR 257.82(c)] indicates that spillways are not required for these CCR surface impoundments.

2.6 HYDRAULIC STRUCTURES

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

An interceptor sewer line owned by Citizens Energy Group extends below the southeastern dike of Pond 3. IPL is currently collaborating with Citizens Energy Group to obtain inspection records and, if required, to conduct an investigation into the structural integrity of the sewer line. However, since inspection records have yet to be obtained, the condition of this sewer line is unknown.

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 CORRECTIVE MEASURES

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

As previously mentioned, the condition of an interceptor sewer line underlying the southeastern dike of Pond 3 is unknown. As required by the 40 CFR 257.73(d)(2), corrective measures shall be implemented as soon as feasible. IPL, in collaboration with Citizens Energy Group, is currently working toward obtaining inspection records and, if required, will conduct an investigation into the structural integrity of the sewer line. In addition, IPL has chosen to close Pond 3 under 40 CFR 257.102(d), and the required preparatory steps have been implemented to facilitate this closure. Both actions are considered to be appropriate corrective measures.

4 CONCLUSION

This structural stability assessment concludes that existing CCR surface impoundments Pond 1 and Pond 2A/2B at the Harding Street Generating Station have been designed, constructed, operated, and maintained to provide structural stability consistent with recognized and generally accepted good engineering practices.

The condition and structural integrity of an interceptor sewer line owned by Citizens Energy Group underlying the southeastern dike of Pond 3 is unknown. IPL is currently collaborating with Citizens Energy Group to obtain inspection records and, if required, to conduct an investigation into the structural integrity of the sewer line. IPL has also initiated the steps required to close this existing CCR surface

impoundment in accordance with 40 CFR 257.102(d). Both actions are considered to be appropriate corrective measures.

5 CERTIFICATION

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

This initial structural stability assessment was conducted in accordance with the requirements of 40 CFR 257.73(d).

I certify that this document was prepared by me or under my direct supervision and that I am a registered professional engineer under the laws of the State of Indiana.

Certified By: _____



Date: _____

10-14-2016

Seal:



10-14-2016

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