



Indianapolis Power & Light Company
Harding Street Generating Station

Hazard Potential Classification Assessment of
CCR Surface Impoundments

Prepared by



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1 PURPOSE

This document provides the initial hazard potential classification assessment for the existing coal combustion residual (CCR) surface impoundments at Indianapolis Power & Light Company's (IPL) Harding Street Generating Station for compliance with 40 CFR 257.73(a)(2). Based on its applicability criteria, 40 CFR 257.73(a)(2) applies to Ponds 1, 2A/2B, and 3 at the Harding Street Generating Station.

2 BASIS FOR HAZARD POTENTIAL CLASSIFICATION

This assessment considered hypothetical dike breaches at any of the existing CCR surface impoundments' dikes regardless of potential causes and/or apparent dike stability. Each surface impoundment was considered independently from the other surface impoundments and, at the time of the hypothetical failure, was considered to be filled with liquid.

2.1 POTENTIAL FOR LOSS OF HUMAN LIFE

The following items were considered when evaluating the potential for a general loss of human life should a hypothetical failure or mis-operation occur at any of the existing CCR surface impoundments:

- Absence of nearby residences, businesses, and public buildings,
- Absence of nearby campgrounds and public spaces, and
- Absence of nearby public roads, railroads, and highways.

Based on the preceding observations, a loss of human life in areas accessible to the general public is not probable should a hypothetical failure or mis-operation occur at Ponds 1, 2A/2B, or 3.

The following items were considered when evaluating the potential for loss of Station personnel lives should a hypothetical failure or mis-operation occur at any of the existing CCR surface impoundments:

- Proximity to the Station's power block and balance-of-plant structures,
- Frequency of Station personnel activity near the surface impoundments, and
- Topography of the ground surface between the CCR surface impoundments and the Station's facilities.

The northern dikes of Ponds 1 and 3 are approximately 150 feet south of the Station's cooling towers and Unit 7's boiler building, respectively. Lick Creek, however, provides separation between the surface impoundments and the aforementioned Station facilities. The creek should contain flow from a breach and direct it downstream, away from the plant. No other major Station facilities or other areas regularly occupied by Station personnel are located near Ponds 1, 2A/2B, and 3. Therefore, a loss of Station personnel lives is not probable should a hypothetical failure or mis-operation occur at Ponds 1, 2A/2B, or 3.

The following items were considered when evaluating the potential for loss of Hanson Aggregates-Harding Street Quarry personnel lives should a hypothetical failure or mis-operation occur at any of the existing CCR surface impoundments:

- Proximity to the quarry and corresponding structures, roads, and other areas accessed by quarry personnel to the CCR surface impoundments, and

- Topography of the ground surface between the CCR surface impoundments and the quarry.

The southern boundary of Pond 2A/2B is adjacent to a material and equipment laydown area used by the quarry. Immediately south thereof is an access road that is used by quarry personnel. This road traverses the area at a higher elevation than the elevation of Pond 2A/2B's southern boundary. Therefore, the southern boundary of Pond 2A/2B does not have a diked portion which may fail since it is effectively incised into the topography adjacent to the quarry. Therefore, a loss of quarry personnel lives is not probable should a hypothetical failure or mis-operation occur at Ponds 1, 2A/2B, or 3.

Per the preceding observations, a loss of human life is not probable should a hypothetical failure or mis-operation occur at Ponds 1, 2A/2B, or 3.

2.2 POTENTIAL FOR ECONOMIC & ENVIRONMENTAL LOSSES

The following items were considered when evaluating the risks of economic and environmental losses should a hypothetical failure or mis-operation occur at any of the existing CCR surface impoundments:

- Proximity to Lick Creek and the White River,
- Potential disruption of lifeline facilities, such as the nearby electrical transmission towers and electrical transmission poles,
- Potential disruption of or damage to the nearby gypsum handling conveyor and transfer station,
- Potential disruption of or damage to the adjacent quarry,
- Topography of the ground surface between the CCR surface impoundments and the aforementioned features.

Although Pond 2A/2B is adjacent to several of the preceding items, it is unlikely to cause economic or environmental damage, disruption of lifeline facilities, or impact other concerns. The interior peninsula therein supports three electrical transmission poles that are part of a system transmitting electricity from the generating station to a power grid north of the White River. Because this peninsula does not provide containment of the water and CCR within the pond, a failure along this peninsula and subsequent disruption to the aforementioned power grid is unlikely. As previously mentioned, the pond's southern boundary does not have a diked portion which may fail. In addition, breaches in Pond 2A/2B's northern and eastern dikes are unlikely to extend beyond the limits of Ponds 1 and 3 since the three ponds have approximately the same crest elevations, and the latter (Ponds 1 and 3) have greater storage capacities. Therefore, should a diked portion of Pond 2A/2B fail, any subsequent losses should be principally limited to IPL's property.

Ponds 1 and 3 are immediately south of and adjacent to Lick Creek. Because the topography adjacent to these ponds' northern dikes slopes down into the creek, CCR could be deposited into Lick Creek and eventually spread into the White River and the immediate downstream area, should a hypothetical failure or mis-operation occur at these ponds. Therefore, a hypothetical failure or mis-operation at Ponds 1 or 3 could cause environmental damages beyond IPL's property.

The environmental damage to the White River and other areas immediately downstream that could result from a hypothetical failure or mis-operation at Ponds 1 or 3 is enough alone to justify classifying each

surface impoundment as a significant hazard potential, even without accounting for the aforementioned potential economic losses.

2.3 SUMMARY OF HAZARD POTENTIAL CLASSIFICATION ASSESSMENTS

Hypothetical failures or mis-operations at Ponds 1, 2A/2B, and 3 result in no probable loss of human life. However, hypothetical failures or mis-operations at Ponds 1 and 3 could result in environmental damages to the White River and other areas immediately downstream that are beyond IPL's property. A hypothetical failure or mis-operation at Pond 2A/2B results in low economic and/or environmental losses that are principally limited to IPL's property.

3 CONCLUSION


The following initial hazard potential classifications have been assigned to the existing CCR surface impoundments at the Harding Street Generating Station in accordance with 40 CFR 257.73(a)(2):

- Pond 1: significant hazard potential,
- Pond 2A/2B: low hazard potential, and
- Pond 3: significant hazard potential.

4 CERTIFICATION

This initial hazard potential classification assessment meets the requirements of 40 CFR 257.73(a)(2).

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:

