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12 October 2016
File No. 40373-345

Dayton Power & Light Company
P.O. Box 468
Aberdeen, Ohio 45101

Attention: Mr. Craig Spangler
Commodities Manager

Subject: Initial Hazard Potential Classification Assessment
Pond 5
J.M. Stuart Electric Generating Station
Aberdeen, Ohio

Mr. Spangler:

This letter presents the results of our Initial Hazard Potential Classification Assessment for Pond 5 located at Dayton Power & Light Company (DP&L) J.M. Stuart Electric Generating Station in Aberdeen, Ohio. This work was completed in accordance with the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257, specifically §257.73(a)(2).

Description of Pond 5

Pond 5 is a Coal Combustion Residuals (CCR) surface impoundment located just to the west of the J.M. Stuart Station power plant. The pond was designed by DP&L and constructed in the early 1970s.

The impoundment receives sluiced bottom ash, cooling tower and FGD blow-down, and liquid collected in area drains located at the plant. These influents are initially discharged into settling bays that have been excavated within the permanently filled eastern portion of Pond 5. After primary settling of solids, decant from the bays flows through five HDPE pipes which penetrate an interior embankment that separates the eastern (permanently filled) portion and the western (liquid filled) portion of Pond 5. Discharge from the HDPE pipes enters the western portion of Pond 5 where secondary settling occurs.

Pond 5 is bounded by earthen embankments which have a total length of approximately 4,200 ft and maximum embankment height of 41 feet. The pond has an area of 41.1 acres at the crest and a storage volume of approximately 1,100 acre-feet¹ to the crest of the unit, including the permanently filled eastern portion of the impoundment.

¹ Ohio Department of Natural Resources, "Dam Safety Inspection Report – J.M. Stuart Station Ash Pond No. 5," dated June 27, 2013.

The Pond 5 decant structure is located at the west end of the impoundment and consists of a steel sheet pile structure. Water entering the structure flows through a 60-inch diameter corrugated metal pipe to the nearby treatment building where it is filtered.

Hazard Potential Classification Assessment

GENERAL

The Hazard Potential Classification of a CCR surface impoundment is based on the potential for loss of human life, economic losses, environmental damage, and/or disruption to lifelines caused by failure or mis-operation of the surface impoundment.

EPA's Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 requires the owner or operator of a CCR surface impoundment to determine which of the following three hazard potential classifications characterizes their CCR unit:

- High Hazard Potential Classification – A diked surface impoundment where failure or mis-operation will probably cause loss of human life.
- Significant Hazard Potential Classification – A diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.
- Low Hazard Potential Classification – A diked surface impoundment where failure or mis-operation results in no probable loss of life, and low economic and/or environmental losses. Losses are principally limited to the surface impoundment's owner's property.


HAZARD POTENTIAL CLASSIFICATION

Based on observations during our 17 March 2016 site visit and our review of available information, Pond 5 is judged to have a **Significant** Hazard Potential Classification in accordance with 40 CFR Part 257. The **Significant** Hazard Potential Classification is due primarily to no probable loss of life in the event of a failure, but with potential adverse impacts to the environment, specifically the Ohio River, which is located immediately adjacent to the impoundment.

Professional Engineer Certification

§257.73(a)(2)(ii): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.

I certify that this initial hazard potential classification for Pond 5 surface impoundment at J.M. Stuart Electric Generating Station was conducted in accordance with §257.73(a)(2) of the CCR Rule.

Signed: 
Consulting Engineer

Print Name: Steven F. Putrich
Ohio License No.: 67329
Title: Vice President
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal and date:

