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12 October 2016
File No. 40373-455

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

Attention: Mr. Craig Spangler
Commodities Manager

Subject: Initial Hazard Potential Classification Assessment
Collection Basin No. 1
Killen Electric Generating Station
Manchester, Ohio

Mr. Spangler:

This letter presents the results of our Initial Hazard Potential Classification Assessment for Collection Basin No. 1 located at Dayton Power & Light Company (DP&L) Killen Electric Generating Station near Manchester, 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 Collection Basin No. 1

Collection Basin No. 1 is located immediately to the east of the Killen Station power plant. Collection Basin No. 2 is located south of Collection Basin No. 1 and shares a common embankment between the two basins. The Cleaning Waste Retention Basin is located immediately to the north of Collection Basin No. 1 and shares a common embankment along the eastern half of Collection Basin No. 1.

Collection Basin No. 1 was originally designed by Ebasco Services in 1979 and constructed sometime between 1980 and 1982. Basin No. 1 was constructed at the original site grades. The embankments were constructed by initially placing fill on the original grade, and adding successive lifts to build the embankment to the design crest elevation. During construction, the site grades outside the embankments were also raised to within 3 ft of the embankment crest. The grades immediately outside the embankments were raised in subsequent years and are currently about the same elevation of the embankment crests.

Collection Basin No. 1 includes a partial height intermediate "splitter" dike constructed of CCR and stone material that divides the basin into east and west sub-basins. The collection basins are the primary settling basin for all plant waste water including gypsum produced in the flue gas desulfurization (FGD) process is pumped to the west sub-basin of Collection Basin No. 1 for temporary wet storage. The east

sub-basin includes a separate pump system from which the pond is periodically drained and the accumulated waste material removed.

Collection Basin No. 1 has an area of approximately 1.9 acres and a total storage volume of approximately 19.4 acre-feet.

The Ebasco drawings indicate a design crest elevation of El. 535 and bottom elevation at “natural grade”. Recent topographic survey of the basin performed by DP&L in September 2016 identify the interior floor elevation is approximately El.516. The design drawings also indicate raising grades outside Collection Basin No. 1 by up to 16 ft to a final grade of El. 532. The Ebasco drawings indicate the design mean water level (MWL) in the basin is El. 532 (same elevation as design grades outside the pond).

Based on the recent topographic survey, the site grades outside Collection Basin No. 1 are currently at El. 534 to El. 535 for a distance of 30 ft or more from the edge of the pond. From there, grades slope downward to the general site grades of El. 530 to El. 532. Therefore, based on the September 2016 survey, the mean water level in Collection Basin No. 1 is typically 2 to 3 ft below the existing site grades outside the basin, and about the same elevation or up to 2 ft higher than the general site grades.

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 our review of available information, Haley & Aldrich has judged Collection Basin No. 1 as having **Low** Hazard Potential Classification in accordance with §257.73(a)(2). The **Low** Hazard Potential Classification is due to no probable loss of life in the event of a failure, low economic and environmental impacts, and losses principally limited to the impoundment owner's property.

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 the Collection Basin No. 1 surface impoundment at Killen 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:

