

**MEMORANDUM**

16 October 2018  
File No. 130116

SUBJECT: Location Restriction Demonstration – Seismic Impact Zone  
Killen Electric Generating Station  
Collection Basin No. 1  
Manchester, Ohio

AES Ohio Generation, LLC (AES) operates the coal-fired Killen Electric Generating Station (Plant) located near Manchester, Ohio. The Collection Basin No. 1 (Unit) is an existing coal combustion residuals (CCR) surface impoundment at the Plant. This demonstration addresses the requirements of 40 CFR §257.63 *Seismic Impact Zones* of the US Environmental Protection Agency's (EPA) rule entitled *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities*. 80 Fed. Reg. 21302 (Apr. 17, 2015) (promulgating 40 CFR §257.63); 83 Fed. Reg. 36435 (July 30, 2018) (amending 40 CFR §257.63).

*§257.63(a): New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in seismic impact zones unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that all structural components including liners, leachate collection and removal systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.*

A Seismic Impact Zone is defined in the CCR Rule (40 CFR §257.63) as “an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth’s gravitational pull (g), will exceed 0.10 g in 50 years.” The 2014 US Geological Survey Hazard Map raw data for the Killen Electric Generating Station Collection Basin No. 1 indicates that the maximum expected horizontal acceleration for 2 percent probability of exceedance in 50 years is 0.09g. Accordingly, the Unit is not located in a seismic impact zone and a demonstration that the structural components have been designed to resist the maximum horizontal acceleration in lithified earth material for the site is not required.

*§257.63(b): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration meets the requirements of paragraph (a) of this section.*

I, Steven F. Putrich, being a Registered Professional Engineer in good standing in the State of Ohio, do hereby certify, to the best of my knowledge, information, and belief, that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, that the CCR Unit is not located in a seismic impact zone as included in the Location Restrictions Evaluation memorandum dated 12 October 2018 and, therefore, meets the requirements of 40 CFR §257.63(a).

Signed:   
Consulting Engineer

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

Professional Engineer's Seal:

