

2018 CCR Fugitive Dust Control Report - Killen Generating Station

AES Ohio Generation, LLC

This document has been prepared to meet the requirements of 40 CFR Part 257, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule April 17, 2015



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Introduction

Killen Generating Station (Killen) is located in a rural area between U.S. Route 52 and the Ohio River in Adams County, Ohio. Killen was in operation from 1981 until May 2018 and had a capacity of 618 megawatts. The plant consisted of one coal-fired boiler (600 megawatts) and one combustion turbine (18 megawatts). The coal unit was equipped with a flue gas desulfurization (FGD) system to control sulfur dioxide emissions, a selective catalytic reduction (SCR) system to control nitrogen oxides emissions, and an electrostatic precipitator system to control particulate emissions.

Coal ash and gypsum are the coal combustion residuals managed at the site. The plant currently has one pond (Killen Pond) that is divided into a section for bottom ash and a section for fly ash, and Collection Basins 1 and 2 used for FGD wastewater that contains residual gypsum and other wastewaters.

Killen mixed the fly ash (ash that is removed from the air stream by the electrostatic precipitator), with water and wet sluiced it to the fly ash section of the Killen Pond. The majority of the wastewater from the fly ash section of the pond discharges into the Ohio River, with the exception of a portion that was recirculated for ash sluice water and FGD make-up water.

Killen also wet sluiced the bottom ash (ash from the bottom of the boiler which contains boiler slag, pyrites, ash from the economizer and other non-combustible material) to a segregated portion of Killen Pond. The wastewater is ultimately discharged to the Ohio River via the fly ash section of the Killen Pond. Coal pyrites (rock material in the coal supply) and ash from the boiler economizer was also sluiced to the bottom ash pond.

In the FGD system, the combustion gases containing sulfur dioxide mixed with limestone slurry in a reaction vessel. The limestone reacted with the sulfur dioxide creating gypsum (calcium sulfate). The gypsum was dewatered and conveyed to a stack out area. If the gypsum was to be reused, it was then loaded onto a conveyor to be transported to a river barge or it was loaded into trucks. Gypsum that was slated for disposal was loaded into trucks or barges and transported to a landfill. The FGD vessel also generated wastewater that contains residual gypsum which was discharged into one of two ponds, Collection Basins 1 and 2. This gypsum material was excavated and landfilled. The wastewater from the Collection Basins flows into Killen Pond prior to ultimate discharge into the Ohio River.

Even though the plant shut down earlier this year and specific actions have been taken to reduce the likelihood of fugitive dust (e.g., burned all usable coal, transported all salable gypsum off-site, cleaned all conveyor systems, and cleaned gypsum stack out pads), there remains activities/materials on-site that require fugitive dust monitoring.

The fugitive dust control measures that are currently being used were primarily selected in accordance to the measures contained in the Killen Title V Permit.

Description of the Actions Taken to Control CCR Fugitive Dust

Killen personnel use an inspection form to document weekly inspections required by the Fugitive Dust Control Plan. Areas included in the inspection are: (1) FGD limestone and gypsum storage piles, (2) material handling systems, (3) plant roadways and parking areas, and (4) surface impoundments. Review of completed inspection forms demonstrates that the inspections are being performed. Control measures such as watering, housekeeping, reduced speed limits, and covered trucks have been used throughout the year to control fugitive dust.

Record of Citizen Complaints

There have been no citizen complaints during the time period of this report.

Summary of Any Corrective Measures Taken

Since there have been no citizen complaints during the time period of this report, there have not been any corrective measures required to be taken.