2016 CCR Fugitive Dust Control Report - Killen Generating Station

The Dayton Power and Light Company

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

December 19, 2016

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 has a capacity of approximately 600 megawatts and has been in operation since 1981. There is one coal-fired boiler that is 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 mixes the fly ash (ash that is removed from the air stream by the electrostatic precipitator), with water and wet sluices 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 is recirculated for ash sluice water and FGD make-up water.

Killen also wet sluices 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 is also sluiced to the bottom ash pond.

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

Killen also markets cenospheres which are harvested from the pond water surface. This material is typically trucked off-site as it is harvested and processed.

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 these forms demonstrate 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 was one citizen complaint since the Fugitive Dust Control Plan was placed in the Operating Record on October 19, 2015. See Appendix A for details.

Summary of Any Corrective Measures Taken

While reviewing the inspection records it was observed that the fugitive dust inspections of the surface impoundments were not being separately documented, but rather being included as part of roadways, grounds, and parking lots. To ensure inspection documentation aligns with the Fugitive Dust Control Plan, the Killen Station CCR Unit 7-Day Inspection Sheet was modified to include a separate item for surface impoundment fugitive dust inspections.

While there was one citizen complaint directly to the Portsmouth Local Air Agency, a subsequent site visit found no issues; therefore, no corrective measures were required to be taken.

Appendix A

Killen Generating Station CCR Citizen Complaint Log

Date Received	Date of Incident	Name of Person Receiving Complaint	Name of Complainant	Description of Incident, including CCR Unit(s) Involved	Complainant Contact Information	Name Responsibility Assigned*
3/8/16	2/26/16	Matt Freeman, Portsmouth Local Air Agency	Anonymous DP&L employee	A formal complaint was logged into the Portsmouth Local Air Agency asserting that there was fugitive dust being generated by gypsum trucking activities at Killen Station and causing dusting at the plant site and U.S. Highway 52.	N/A	The EPA came onsite and inspected and found no issues; therefore, no corrective actions were taken.

*Document response in a separate report. Report to include the following: action items completed; other individuals or agency personnel outside of the company contacted; copy of response to complainant; date(s) response provided to complainant and any other communications to complainant; and any other pertinent information. If a root cause analysis completed, this report could meet this obligation.