2016 CCR Fugitive Dust Control Report

IPL Petersburg Generating Station

12-19-2016

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

1. INTRODUCTION

1.1 PURPOSE OF THIS PLAN

The purpose of this plan is to minimize Coal Combustion Residuals (CCR) from becoming airborne at the Petersburg Generating Station (PGS). The primary sources of fugitive dust are listed in this plan. This Fugitive Dust Control Plan was developed to meet the requirements of 40 CFR 257.80.

1.2 STATION DESCRIPTION

PGS is located approximately three miles east-northeast of Petersburg in Pike County, Indiana. The generating station consists of four coal-fired units, Units 1 - 4. Units 1, 3 and 4 are equipped with electrostatic precipitators (ESP) for particulate control. Unit 2 has a baghouse for particulate control. Each unit is equipped with a wet flue gas desulfurization (FGD) system for SO_2 control. CCR waste product can go to an on-site landfill, ash ponds, or an offsite facility. The majority of disposal is off site.

The combustion byproducts of coal are bottom ash, fly ash, and FGD waste. Bottom ash is sluiced to an on-site settling pond. Fly ash is conveyed via dry ash handling system to storage silos. Depending upon the quality of the fly ash, the fly ash may be loaded into tanker trucks and enclosed railcars for beneficial use, or it may be loaded into trucks and sent to an on-site landfill, ash ponds, or an offsite facility.

The wet FGD systems use limestone to reduce SO_2 emissions and produce FGD byproduct. The FGD systems for Units 1, 2 and 4 produce gypsum, the majority of which is trucked off site for beneficial use. The FGD for Unit 3 produces byproduct that is mixed with fly ash, the majority of which is trucked offsite for disposal.

1.3 SOURCES OF CCR FUGITIVE DUST

Primary sources of fugitive CCR dust at PGS are:

a. Small spills of fly ash and bottom ash around pipes and other equipment
b. Equipment malfunction
c. Small amounts of fly ash generated by unloading fly ash from silos into trucks and railcars
d. Trucks carrying fly ash and FGD byproduct travelling on plant roads
e. Trucks carrying fly ash and FGD byproduct depositing material into the landfill
f. Active portions of the CCR landfill
g. Dried portions of the settling ponds

2. MONITORING

2.1 FREQUENCY OF MONITORING

Fugitive dust is monitored as part of normal plant operations.

2.2 MONITORING METHODS

For purposes of this fugitive dust control plan, fugitive dust is monitored visually. Action levels would be implemented as weather conditions, road conditions and source conditions warrant.

2.3 CONTROL MEASURES

The CCR handling equipment at PGS is designed to minimize CCR dust. The equipment handles boiler bottom ash, fly ash and FGD waste.

Bottom ash is sluiced with water and piped to dewatering bins, or to an on-site settling pond. The sluice water facilitates bottom ash handling and reduces the amount of dust that may be generated. Dewatered bottom ash can be loaded into trucks and sold to cement manufacturers for beneficial use.

Fly ash is conveyed via a dry handling system to storage silos. The conveyor system has enclosures installed at drop points on the system to reduce fugitive dust emissions. The fly ash storage silos employ baghouses to control fugitive dust emissions. The fly ash is conditioned with wet FGD byproduct from the Unit 3 FGD and loaded onto trucks for transportation to an on-site landfill, ash ponds, or an offsite facility. Conditioning ash with the wet FGD byproduct facilitates ash handling and reduces dust generation. Truck wheels are washed down as needed to reduce prevent tracking of sediment. Fly ash may also be loaded into tanker trucks or enclosed railcars for beneficial use. Transfer operations are monitored by station personnel to prevent or minimize fugitive dust emissions.

The wet FGD systems for Units 1, 2 and 4 produce gypsum which is stored in a covered building. The building reduces the amount of dust that may be generated. The majority of the gypsum is trucked off site for beneficial use. The FGD for Unit 3 produces byproduct that conditions the fly ash. The conditioned material and loaded onto trucks for transportation to an on-site landfill, ash ponds, or an

offsite facility is trucked offsite for disposal. The trucks are covered, which reduces fugitive dust. The majority of the conditioned material is trucked offsite for disposal.

Water spray is used at the landfill to reduce the amount of airborne fugitive dust. Water sprays are suitable for a range of climate conditions, including warm humid conditions like those of southern Indiana where PGS is located. Other dust control measures at the landfill involve compaction of the material with trucks and bulldozers, relocating activity, or reducing activity as needed. If necessary, truck wheels are washed to prevent tracking of sediment on plant roads.

The speed limit is 15 mph on plant roads and parking lots. Reduced speed limits at the landfill also minimize fugitive dust. Inactive portions of the landfill have vegetative cover.

Frequent inspections of piping and other CCR handling equipment at the plant and routine preventive maintenance help to minimize CCR emissions.

Table 1 lists corrective measures applicable to the respective potential dust source. Some sources have multiple means of controlling dust, while other sources are controlled most effectively by a single method. In practice, some activities may require multiple measures at the same time. For example, CCR dust control at the landfill may require conditioning with water and compaction of deposited materials. Application of these corrective measures is considered IPL's best effort to minimize fugitive dust at PGS.

Table 1: Corrective Measures		
Sources	**Corrective Measure**	**Description**
Small spills of fly ash resulting in fugitive dust emissions (example: windblown dust from small spills around leaking fly ash pipes)	1	Remove small fly ash spill
	2	Repair leak or other cause of the spill
Equipment malfunction	1	Repair equipment
	2	Reduce flows
Unloading fly ash from silos into trucks and railcars	1	Repair silo discharge dust collection equipment
Hauling trucks (fly ash and FGD byproduct) travelling on plant roads	1	Wash truck wheels
Fly ash and FGD byproduct disposal into the landfill	1	Apply water as needed
	2	Compact material as needed
	3	Reduce equipment speed
	4	Reduce drop distance
	5	Relocate activity on landfill
	6	Minimize activity on landfill
Active landfill (areas that have dried out)	1	Compact material as needed
	2	Apply water as needed
	3	Reduce equipment speed
	4	Relocate activity on landfill
	5	Minimize activity on landfill
Dried portions of settling ponds	1	Apply water as needed

Description of the Actions Taken to Control CCR Fugitive Dust

IPL Petersburg personnel monitor fugitive dust visually. Areas included in the inspection are: (1) FGD limestone and gypsum storage areas, (2) Material handling systems, (3) Plant roadways and parking areas, (4) Landfill, (5) Ash impoundments.

Control measures such as watering, street sweeping, wheel washes, housekeeping, reduced speed limits, and covered trucks have been observed being used throughout the year to control fugitive dust.

Record of Citizen Complaints

There have been no citizen complaints since the Fugitive Dust Control Plan was placed in the Operating Record.

Summary of Any Corrective Measures Taken

The control measures listed above are constantly being evaluated and utilized for fugitive dust control at the IPL Petersburg Generating Station.