

CCR Fugitive Dust Control Plan

for
Zimmer Power Station

Prepared for:



Dynegy Zimmer, LLC

Zimmer Power Station
1781 US Rt. 52
Moscow, OH 45153

Prepared by:

AECOM

October 2015

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1 Introduction

This Coal Combustion Residuals (CCR) fugitive dust control plan has been prepared for the Zimmer Power Station, located in Clermont County, Ohio. This plan addresses the 40 CFR 257.80 air operating criteria of the United States Environmental Protection Agency's CCR rule, which requires the owner or operator of a CCR unit to adopt measures that will effectively minimize CCR from becoming airborne at the facility and to prepare and operate in accordance with a CCR fugitive dust control plan.

1.1 Facility Information

- Facility Name: Zimmer Power Station
- Facility Address: 1781 US Rt. 52, Moscow, OH 45153
- Operator: Dynegy Zimmer, LLC

1.2 Certification

The owner or operator must obtain a certification from a qualified professional engineer that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of 40 CFR 257.80.

I certify under penalty of law that, to the best of my knowledge, this plan meets the requirements of 40 CFR 257.80. This certification is based on my review of the document and conditions at the site and on my inquiry of the person or persons who managed the preparation of this document.

Peter J. Kroll

Printed Name of Qualified Professional Engineer

Peter J. Kroll 10/9/15

Signature of Qualified Professional Engineer and Date

E-61248, Ohio

Registration Number and State



2 CCR Fugitive Dust Control Measures and Appropriateness

CCR fugitive dust has the potential to become airborne at the facility during periods of CCR management in the CCR units, CCR handling and CCR transport. Areas at the facility that have the potential for airborne CCR fugitive dust are CCR surface impoundments, a CCR landfill, CCR handling equipment and CCR transport in trucks. This section identifies and describes the control measures selected and adopted by the facility to minimize CCR from becoming airborne at the facility and explains how the selected measures are applicable and appropriate for site conditions. The control measures may be adjusted or modified based on observed effectiveness of minimizing CCR from becoming airborne and weather conditions.

2.1 Management of CCR in the CCR Units

The facility manages CCR in surface impoundments and a landfill located at the facility. Table 2-1 below identifies CCR fugitive dust control measures that have been selected for use by the facility during CCR management in the CCR units, including placement of CCR into the CCR unit, and explains how the selected measures are applicable and appropriate for site conditions. The facility will use the identified measures during CCR management in the CCR units to minimize CCR from becoming airborne at the facility.

CCR Activity	CCR Fugitive Dust Control Measure	Applicability and Appropriateness of Control Measure
Management of CCR in the facility's CCR units	CCR to be emplaced in the landfill is conditioned before loading into vehicles for transport to the landfill.	Conditioning CCR to be placed in the landfill allows CCR to bind together and thus minimizes the potential for CCR fugitive dust generation when CCR is managed in the landfill. The added moisture content will prevent wind dispersal of the CCR, but will not result in free liquids.
	Use of natural wind barriers, where possible, while unloading trucks at the landfill.	Use of natural barriers minimizes the fugitive dust emissions caused by wind during unloading operations.
	Wet management of CCR bottom ash in bottom ash dewatering bins.	Wet management of CCR minimizes the potential for CCR fugitive dust generation.
	Water, or cover with soil, areas of exposed CCR in CCR units, as necessary.	Water will be applied to areas of exposed CCR as needed to maintain moisture content to minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions. Soil cover can be added to minimize fugitive dust emissions.
	Use of a water spray system at landfill during load-in activities.	Use of a water spray system minimizes fugitive dust generation when emplacing CCR at the landfill.
	Naturally occurring grass vegetation in areas of exposed CCR in CCR surface impoundments.	Vegetation provides a wind screen and/or cover and reduces wind entrainment of CCR.
	Avoid emplacing CCR materials at the landfill during wind conditions that will cause excessive CCR fugitive dust.	Avoidance of CCR management activities during wind conditions minimizes wind entrainment of CCR.
	Apply chemical dust suppressant on areas of exposed CCR in CCR units, as necessary.	Mixing an appropriate chemical dust suppressant with water and applying as needed to areas of exposed CCR will minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions.

Table 2-1. Control Measures for CCR Management in CCR Units

2.2 Handling of CCR

CCR is regularly removed from the boiler system and conveyed to the CCR handling system, which includes silos and truck loading areas. CCR fly ash is pneumatically conveyed in an enclosed system from the boiler system to storage silos. CCR bottom ash materials are wet sluiced to dewatering bins. The dewatered bottom ash materials are loaded into trucks for transport and placement into the landfill. The bottom ash material remains sufficiently wet after dewatering as not to pose a fugitive dust issue. Fly ash materials are pneumatically transported to enclosed fly ash silos. When unloading the CCR fly ash silos for transport to and emplacement in the CCR landfill, a pug mill is used to condition the CCR fly ash as it is loaded into trucks. CCR flue gas desulfurization product material (gypsum) is wet sluiced in the process and dewatered via a vacuum belt. The CCR flue gas desulfurization material remains sufficiently wet after dewatering as not to pose a fugitive dust concern. Table 2-2 below identifies CCR fugitive dust control measures that have been selected for use by the facility during handling of CCR and explains how the selected measures are applicable and appropriate for site conditions. The facility will use the identified measures when handling CCR to minimize CCR from becoming airborne at the facility.

CCR Activity	CCR Fugitive Dust Control Measure	Applicability and Appropriateness of Control Measure
Handling of CCR at the facility	Wet sluice CCR bottom ash to the bottom ash dewatering bins.	Wet sluicing CCR minimizes the potential for CCR fugitive dust generation.
	CCR bottom ash is dewatered and loaded into trucks for transport remains conditioned during handling.	Conditioned CCR allows CCR to bind together and thus minimizes the potential for CCR fugitive dust generation when CCR is handled.
	Wet sluiced flue gas desulfurization product materials (gypsum) is dewatered via a vacuum belt and remains sufficiently wet for placement at the FGD pad as well as transporting to the landfill.	Conditioned CCR allows CCR to bind together and thus minimizes the potential for CCR fugitive dust generation when CCR is handled.
	Pneumatically convey dry CCR fly ash to storage silos in an enclosed system.	Conveying CCR fly ash in an enclosed system minimizes the potential for CCR fugitive dust generation.
	CCR fly ash to be emplaced in the landfill is conditioned before loading into trucks for transport to the landfill.	Conditioning allows CCR to bind together and thus minimizes the potential for CCR fugitive dust generation while loading CCR into trucks (and during transport and emplacement in the landfill).
	Load CCR transport trucks from the CCR fly ash silos in an enclosed area with water sprays at the enclosure entrance.	Enclosure of the CCR transport truck loading area and use of water sprays at the enclosure entrance minimizes the potential for wind to cause CCR fugitive dust to become airborne.
	Load CCR transport trucks from the CCR fly ash silos using a telescoping chute.	Use of a telescoping chute reduces the drop height from the end of the chute into the truck and minimizes the potential for CCR fugitive dust to become airborne.
	Perform housekeeping, as necessary, in the fly ash loading area.	Good housekeeping measures, such as sweeping or wetting the loading area, minimize the potential for CCR fugitive dust generation during handling activities.
	Operate fly ash handling system in accordance with good operating practices.	Operation in accordance with good operating practices minimizes the potential for CCR fugitive dust generation.
	Maintain and repair as necessary dust controls on the fly ash handling system.	Maintenance and repairs are performed as needed to maintain dust controls in good operating condition to minimize the potential for CCR fugitive dust generation.

Table 2-2. Control Measures for Handling CCR

2.2.1 Conditioning of CCR Prior to Emplacement in CCR Landfill

Conditioned CCR is CCR that has been wetted with water or an appropriate chemical dust suppressant. Water or a chemical dust suppressant is added to raise the moisture content of the CCR to prevent wind dispersal but will not result in free liquids. Conditioning allows for the CCR to bind together, which minimizes the potential for CCR fugitive dust.

All CCR generated on site that is placed into the facility's landfill is conditioned in a pug mill or otherwise conditioned prior to loading into trucks for transport to the landfill. Therefore, all CCR that is added to the facility's landfill is emplaced in the landfill as conditioned CCR.

2.3 Transportation of CCR

CCR is transported via truck at the facility using a combination of paved and unpaved facility roads. Table 2-3 below identifies CCR fugitive dust control measures that have been selected for use by the facility during transport of CCR. The facility will use the identified measures when transporting CCR to minimize CCR from becoming airborne at the facility.

CCR Activity	CCR Fugitive Dust Control Measure	Applicability and Appropriateness of Control Measure
Transportation of CCR at the facility	CCR to be emplaced in the landfill is conditioned before loaded into vehicles for transport to the landfill.	Conditioning CCR increases moisture content of the CCR and minimizes the potential for CCR fugitive dust generation during CCR transport (and emplacement in the landfill).
	Condition, cover or enclose all materials placed in trucks used to transport CCR materials to the landfill.	Conditioning CCR increases moisture content of the CCR in trucks transporting CCR on facility roads which minimizes the potential for CCR fugitive dust generation from the CCR transport trucks. Covering or enclosing trucks transporting CCR also minimizes the potential for CCR fugitive dust generation.
	Limit the speed of vehicles to no more than 15 mph on non-landfill facility roads.	Limiting the speed of vehicles traveling on facility roads minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	Limit the speed of vehicles traveling on paved landfill roads to no more than 30 mph and the speed of vehicles traveling on unpaved landfill roads to no more than 15 mph.	Limiting the speed of vehicles traveling on paved and unpaved landfill roads minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	Condition, cover or enclose all materials placed in trucks used to transport CCR materials on facility roads, other than the landfill roads, as necessary.	Conditioning CCR increases moisture content of the CCR in trucks transporting CCR on facility roads which minimizes the potential for CCR fugitive dust generation from the CCR transport trucks. Covering or enclosing trucks transporting CCR also minimizes the potential for CCR fugitive dust generation.
	Sweep or rinse off the outside of the trucks transporting CCR, as necessary.	Removing CCR present on the outside of the truck minimizes the potential for movement of the truck or wind to cause CCR fugitive dust to become airborne.
	Use of a water washing system for the wheels of haul trucks using the landfill roads and parking areas.	Removing CCR present on truck wheels minimizes the potential for CCR fugitive dust generation from vehicle traffic.
	Remove CCR, as necessary, deposited on facility paved road surfaces during transport.	Removing CCR deposited on facility paved road surfaces as a result of transport minimizes the potential for CCR fugitive dust generation from vehicle traffic.
	Apply chemical dust suppressant on unpaved landfill roads at least bi-monthly, or as necessary.	Mixing an appropriate chemical dust suppressant with water and applying to unpaved landfill roads minimizes potential for CCR fugitive dust from vehicular traffic.

Table 2-3. Control Measures for Transportation of CCR

3 Procedures for Periodic Assessment of the Plan

The facility conducts inspections associated with CCR fugitive dust control. The facility also uses the procedures identified in section 5 of this plan to log citizen complaints involving CCR fugitive dust events at the facility. These inspections and the investigations of citizen complaints will be used to periodically assess the effectiveness of the CCR fugitive dust control plan.

The facility routinely performs inspections to verify the effectiveness of the CCR fugitive dust control measures used at the facility. Inspections are conducted during daylight working hours and include observing for the presence of CCR fugitive dust emissions from vehicles transporting CCR on facility roads, CCR handling and CCR management, including CCR placement in CCR units. Inspection records include the name of the person conducting the inspection, the date and time of the inspection, the results of each inspection, and any corrective action taken.

When a CCR fugitive dust event is observed or a citizen complaint involving a CCR fugitive dust event at the facility is received, current CCR management practices will be reviewed to see that the selected control measures are being properly implemented. If the control measures are not being properly implemented, relevant operating personnel will be notified and, as warranted, re-trained in the proper implementation of CCR fugitive dust control measures. If appropriate, use of revised and/or additional control measures will be evaluated. As warranted, revised and/or additional control measures found to be applicable and appropriate to control CCR fugitive dust emissions will be incorporated into an amended CCR fugitive dust control plan.

The plan also will be reassessed in the event of material changes in site conditions potentially resulting in CCR fugitive dust becoming airborne at the facility.

4 Recordkeeping, Notification, Internet Site

The written CCR fugitive dust control plan, any amendment of the written plan, and the annual CCR fugitive dust control report required by 40 CFR 257.80(c) will be placed in the facility's written operating record and posted to the Internet site in accordance with 40 CFR 257.105(g) and 257.107(g). Notification of the availability of the CCR fugitive dust control plan, any amendment of the plan, and the annual CCR fugitive dust control report will be provided to the State Director in accordance with 40 CFR 257.106(g).

5 Procedures to Log Citizen Complaints

In the event the owner or operator of the facility receives a citizen complaint involving a CCR fugitive dust event at the facility, relevant information about the complaint will be logged. Information that will be recorded includes, as applicable:

- Date/Time the complaint is received
- Date/Time and duration of the CCR fugitive dust event
- Description of the nature of the CCR fugitive dust event
- Name of the citizen entering the complaint
- Address & phone number of citizen entering the complaint
- Name of the personnel who took the complaint

All citizen complaints involving CCR fugitive dust events at the facility will be investigated promptly. As deemed appropriate or necessary, corrective measures will be taken and a follow-up response will be provided to the complainant.

6 Regulatory Cross Reference

40 CFR 257 Citation	Regulatory Requirement	CCR Fugitive Dust Control Plan Section
.80(b)(1)	Identify and describe CCR fugitive dust control measures the owner or operator will use to minimize CCR from becoming airborne at the facility. Explanation of how the CCR fugitive dust control measures selected are applicable and appropriate for site conditions	2
.80(b)(2)	Procedures to emplace CCR into landfill as conditioned CCR	2.2.1
.80(b)(3)	Procedures to log citizen complaints involving CCR fugitive dust events at the facility	5
.80(b)(4)	Periodic assessment of effectiveness of CCR Fugitive Dust Control Plan	3
.80(b)(5)	Date of initial CCR Fugitive Dust Control Plan	7
.80(b)(6)	Amendment of CCR Fugitive Dust Control Plan	7
.80(b)(7)	Certification of CCR Fugitive Dust Control Plan	1.2

Table 6-1. CCR Fugitive Dust Control Plan Regulatory Cross Reference

7 Amendments

The written CCR fugitive dust control plan may be amended at any time provided that the revised plan is placed in the facility's operating record as required by 40 CFR 257.105(g)(1). The written CCR fugitive dust control plan must be amended whenever there is a change in conditions that would substantially affect the written plan in effect. The plan amendment log is presented as Table 7-1.

Amendment Number and Date	Pages or Section	Description of Amendment	Professional Engineer Certifying Plan
Version 0 October 2015	--	Initial Plan	Peter Kroll

Table 7-1. CCR Fugitive Dust Control Plan Amendments

