

CCR Fugitive Dust Control Plan

for

Duck Creek Power Station

Prepared for:



Illinois Power Resources Generating, LLC

**Duck Creek Power Station
17751 North Cilco Road
Canton, IL 61520**

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 Duck Creek Power Station, located in Fulton County, Illinois. 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: Duck Creek Power Station
- Facility Address: 17751 North Cilco Road, Canton, IL 61520
- Owner/Operator: Illinois Power Resources Generating, 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.

Wendy M. Pennington

10/7/15

Printed Name of Qualified Professional Engineer

Wendy M Pennington

Signature of Qualified Professional Engineer and Date

062.064098

Illinois

expires 11/30/15

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 units, 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 emplacement.	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.
	Cover exposed dry CCR in the landfill.	Applying approved cover material, such as conditioned fly ash, minimizes wind entrainment of CCR.
	Wet management of CCR bottom ash and flue gas desulfurization materials in CCR surface impoundments.	Wet management of CCR minimizes the potential for CCR fugitive dust generation.
	Water areas of exposed CCR in CCR units, as necessary.	Water will be applied to areas of exposed CCR to maintain moisture content to minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions.
	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.
	Apply chemical dust suppressant on areas of exposed CCR in CCR units, as necessary.	Mixing an appropriate chemical dust suppressant with water and applying 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 and flue gas desulfurization materials are wet sluiced into CCR surface impoundments. 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. Bottom ash is periodically removed from the CCR surface impoundments and remains sufficiently wet during and after handling activities, including dewatering, associated with transfer of the CCR. Occasionally, CCR from the maintenance of dust handling equipment is loaded into a vacuum truck and transported to the landfill for disposal. CCR from these maintenance activities will be conditioned prior to emplacement into the landfill. 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 and flue gas desulfurization materials to CCR surface impoundments.	Wet sluicing CCR minimizes the potential for CCR fugitive dust generation.
	CCR bottom ash removed from CCR surface impoundments 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.
	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 to be emplaced in the landfill is conditioned before emplacement.	Conditioning allows CCR to bind together and thus minimizes the potential for CCR fugitive dust generation.
	Load CCR transport trucks from the CCR fly ash silos in a partially enclosed area.	Partial enclosure of the CCR transport truck loading area reduces 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.
	Maintain and operate the bin vent filters on each CCR fly ash silo as needed during fly ash loadout.	The use of engineered equipment, such as a bin vent filter to capture dust particles during fly ash loading, minimizes the potential for CCR fugitive dust generation.
	Perform housekeeping, as necessary, in the fly ash loading area.	Good housekeeping measures, such as sweeping or wetting the loading area, minimizes 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, as well as CCR generated offsite that is authorized for placement in the facility's landfill, is conditioned before emplacement. 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 from the CCR fly ash silos to be emplaced in the landfill is conditioned before emplacement.	Conditioning CCR increases moisture content of the CCR and minimizes the potential for CCR fugitive dust generation.
	Cover or enclose trucks used to transport CCR fly ash.	Covering or enclosing trucks transporting CCR on facility roads minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	Limit the speed of vehicles to no more than 15 mph on facility roads.	Limiting the speed of vehicles traveling on facility roads minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	Cover or enclose trucks used to transport CCR other than fly ash, as necessary.	Covering or enclosing trucks transporting CCR on facility roads minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	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.
	Remove CCR, as necessary, deposited on facility road surfaces during transport.	Removing CCR deposited on facility road surfaces as a result of transport minimizes the potential for CCR fugitive dust generation from vehicle 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 information such as the name of the person conducting the inspection, the date and time of the inspection, the results of the 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. Explain 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 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.

Amendment Number and Date	Pages or Section	Description of Amendment	Professional Engineer Certifying Plan
Version 0 October 2015	--	Initial Plan	Wendy M. Pennington

Table 7-1. CCR Fugitive Dust Control Plan Amendments