

# **CCR Fugitive Dust Control Plan**

## **for Joppa Power Plant**

*Prepared for:*

**Electric Energy, Inc.**

**Joppa Power Plant  
2100 Portland Road  
Joppa, IL 62953**

*Prepared by:*

**Burns & McDonnell  
Kansas City, Missouri**

Amendment 1

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# 1 Introduction

This Coal Combustion Residuals (CCR) fugitive dust control plan has been prepared for the Joppa Power Plant, located in Massac County, Illinois. This plan addresses the air criteria in 40 C.F.R. § 257.80 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." The plan also addresses the air criteria in 35 I.A.C. 845.500 of the Illinois Environmental Protection Agency's CCR rule, which contains similar requirements to the federal CCR rule.

## 1.1 Facility Information

- Facility Name: Joppa Power Plant
- Facility Address: 2100 Portland Road, Joppa, IL 62953
- Owner/Operator: Electric Energy, Inc.
  - o Met-South, Inc., a wholly owned subsidiary of Electric Energy, Inc., operates the facility's Landfill and Fly Ash Handling Operations

## 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 C.F.R. § 257.80 and 35 I.A.C. 845.500. See 40 C.F.R. § 257.80(b)(7); 35 I.A.C. 845.500(b)(7).

I certify under penalty of law that, to the best of my knowledge, this plan meets the requirements of 40 C.F.R. § 257.80 and 35 I.A.C. 845.500. 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.

John R. Hesemann

Printed Name of Qualified Professional Engineer

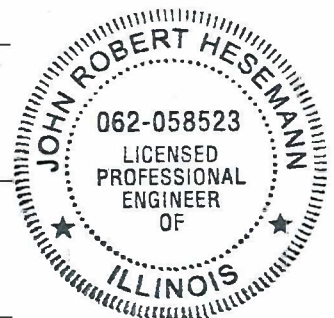
*John R. Hesemann*

9/09/2021

Signature of Qualified Professional Engineer and Date

062.058523 – Illinois – Expires 11/30/2021

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, an existing CCR landfill, CCR handling equipment and CCR transport in trucks. The CCR landfill has not yet received CCR. 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 currently manages CCR in surface impoundments. The facility also will manage CCR in its landfill once the landfill begins receiving CCR. 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	Condition CCR to be emplaced in the landfill as needed 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 conditioned CCR also achieves at least equivalent performance to conventional daily cover in terms of preventing wind entrainment.
	Wet management of CCR 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. Wetting activities will not generate "free liquids" within 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.
	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.
	Reduce or halt operations during high wind events, as necessary.	Reducing or halting operations during high wind events minimizes the potential for CCR fugitive dust generation.

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. When unloading the CCR fly ash silos for transport to and emplacement in the surface impoundments, a pug mill is used to condition the CCR fly ash as it is loaded into trucks. The pug mill will be used to condition CCR fly ash as it is loaded into trucks for transport to and emplacement in the landfill. Dry fly ash can also be unloaded dry into trucks using a telescoping chute. CCR bottom ash is wet sluiced into CCR surface impoundments. Fly ash from another Vistra facility is also unloaded from trucks into silos contained with bin vent filters. 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. 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 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.
	Condition CCR fly ash to be emplaced in the landfill before loading into trucks for transport to the landfill, as needed.	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).
	Condition CCR fly ash to be placed in the surface impoundments before loading into trucks for transport to the surface impoundments.	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 placement in the surface impoundments).
	Load CCR dry fly ash to transport trucks from the CCR fly ash silos using a chute or telescoping chute, when applicable.	Use of a chute, specifically 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, 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 and truck load-out systems.	Perform maintenance and repairs as needed to maintain dust controls in good operating condition minimizes the potential for CCR fugitive dust generation.
	Reduce or halt operations during high wind events, as necessary.	Reducing or halting operations during high wind events minimizes 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 will be 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 will be 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	Condition CCR to be emplaced in the landfill before it is 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 CCR fly ash to be placed in the surface impoundments before loading into trucks for transport to the surface impoundments	Conditioning CCR increases moisture content of the CCR and minimizes the potential for CCR fugitive dust generation during CCR transport (and placement in the surface impoundments).
	Cover or enclose trucks used to transport CCR onsite, as necessary.	Covering or enclosing trucks transporting CCR 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.
	Sweep or rinse CCR off of 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.
	Cover or enclose trucks used to transport CCR offsite.	Covering or enclosing trucks transporting CCR minimizes the potential for CCR fugitive dust generation from the CCR transport trucks.
	Condition CCR materials to be transported offsite before they are loaded into trucks, as necessary.	Conditioning CCR increases moisture content of the CCR and minimizes the potential for CCR fugitive dust generation during CCR transport.
	Condition CCR haul roads with water or dust suppressant, as necessary.	Watering CCR haul roads will minimize the potential for CCR fugitive dust generation in excessively dry or windy conditions.
	Remove CCR deposited on facility road surfaces during transport as necessary.	Removing CCR deposited on facility road surfaces as a result of transport minimizes the potential for CCR fugitive dust generation from vehicle traffic.
	Reduce or halt operations during high wind events, as necessary.	Reducing or halting operations during high wind events minimizes the potential for CCR fugitive dust generation.

Table 2-3. Control Measures for Transportation of CCR

### 3 Procedures for Periodic Assessment of Effectiveness 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 every citizen complaint 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 per 40 C.F.R. § 257.80(b)(4) and 35 I.A.C. 845.500(b)(3).

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 activities, 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 C.F.R. § 257.80(c) and 35 I.A.C. 845.500(c) will be placed in the facility's written operating record and posted to the company's CCR website in accordance with 40 C.F.R. § 257.105(g), § 257.107(g) and 845.800(d)(7), (14) and 845.810(e). 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 IEPA in accordance with 40 C.F.R. § 257.106(g). Any amendment of the fugitive dust control plan will be submitted to IEPA in accordance with 845.500(b)(5).

Additionally, pursuant to 845.500(b)(6), this fugitive dust control plan is being placed in facility's operating record and posted to the company's CCR website prior to the submission of any permits for the Joppa Power Plant.

## 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 actions taken to assess and resolve 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.

Pursuant to 35 I.A.C. 845.500(b)(2), quarterly reports will be submitted to IEPA no later than 14 days from the end of the quarter for all complaints received in that quarter. At a minimum, the quarterly report will include the date of the complaint, the date of the incident, the name and contact information of the complainant (if given), and all actions taken to assess and resolve the complaint.

## 6 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 C.F.R. § 257.105(g)(1) and 845.500(b)(6). Any amendment of the fugitive dust control plan will be submitted to IEPA in accordance with 845.500(b)(5). 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
Amendment 1 October 2021	Various	Administrative Changes and adjustments to site condition controls as appropriate	John R. Hesemann

Table 6-1. CCR Fugitive Dust Control Plan Amendments