



CCR Fugitive Dust Control Plan



MidAmerican Energy Company

George Neal Station North
Project No. 86609

Revision A
September 25, 2015



CCR Fugitive Dust Control Plan

prepared for

**MidAmerican Energy Company
George Neal Station North
Sergeant Bluff, Iowa**

Project No. 86609

**Revision A
September 25, 2015**

prepared by

**Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri**

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INDEX AND CERTIFICATION

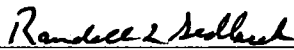
MidAmerican Energy Company CCR Fugitive Dust Control Plan Project No. 86609

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Certification

I hereby certify, as a Professional Engineer in the state of Iowa, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the MidAmerican Energy Company or others without specific verification or adaptation by the Engineer.



Randell L Sedlacek, P.E.

Date: 9/25/15

Randell L Sedlacek
License Number 16384

My license renewal date is December 31, 2015

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
CCR	Coal Combustion Residuals
EPA	Environmental Protection Agency
MEC	MidAmerican Energy Company
MW	Megawatts

1.0 INTRODUCTION

On April 17, 2015, the Environmental Protection Agency (EPA) issued the final version of the federal coal combustion residuals rule (CCR Rule) to regulate the disposal of CCR materials generated at coal-fired units. The rule is being administered as part of the Resource Conservation and Recovery Act (RCRA, 42 U.S.C. §6901 et seq.), using the Subtitle D approach.

MidAmerican Energy Company (MEC) is subject to the CCR Rule and as such has developed a Fugitive Dust Control Plan for all sites handling and disposing of CCR per 40 CFR 257.80. This report provides the Fugitive Dust Control Plan for the George Neal Station North (Neal North) located near Sergeant Bluff, Iowa.

This Fugitive Dust Control Plan is in addition to, not in place of, any other applicable site permits, environmental standards, or work safety practices.

2.0 PLAN OBJECTIVES

The Fugitive Dust Control Plan identifies MEC control measures and practices to minimize and control fugitive dust as required by the CCR Rule. The plan defines the ways in which MEC personnel and subcontractors will mitigate CCR dust emissions at the plant.

To meet these objectives, the Fugitive Dust Control Plan:

- Identifies potential CCR fugitive dust sources at the facility
- Identifies control measures and practices to control and minimize fugitive dust.
- Identifies fugitive dust control record keeping requirements.
- Identifies fugitive dust control notification requirements.

3.0 FUGITIVE DUST SOURCES AND CONTROLS

MEC owns and operates the George Neal Station North (Neal North), which includes three coal-fired units and is located near Sergeant Bluff, Iowa. The three units include a 164 megawatt (MW) unit (Unit 1), a 349 MW unit (Unit 2), and a 550 MW unit (Unit 3). Coal combustion residuals produced at Neal North include fly ash, bottom ash/economizer ash, and waste ash, which are currently either utilized for beneficial reuse or disposed of in onsite impoundments or the onsite Monofill. In addition to the controls outlined in this plan, MEC adheres to controls and Best Management Practices that are required and outlined in site permits and plans. MEC also holds subcontractors responsible for controlling fugitive dust. Headwaters Resources, Inc. (Headwaters) conducts CCR disposal operations and maintenance activities within the site Monofill and impoundment.

Table 3-1 lists the CCR related fugitive dust sources identified at the facility, briefly describing measure and practices employed to control fugitive dust at each source.

Table 3-1: CCR Fugitive Dust Sources

Source Name	Description
Bottom Ash/Economizer Ash Handling	Sluiced to impoundments 3B North, and 3B South
Fly Ash Handling	Pneumatic transport to silos
Waste Ash Handling	Pneumatic transport to silos
Haul Roads	Transport road between plant and monofill
Monofill	Truck unloading/material placement
CCR Impoundment	Disposal area for wet sluiced CCR

3.1 Bottom Ash/Economizer Ash Handling

Identification: Bottom ash and economizer ash is handled wet and sluiced to CCR impoundments onsite. Since the CCR is sluiced in a wet condition via pipeline to site impoundments, there are no potential fugitive dust sources in the handling of bottom/economizer ash both at the source of the CCR and at the discharge point in the impoundments. MEC is currently evaluating converting the system to dry handling; should dry handling be implemented for any of the units at Neal North, there will be an amendment to this plan to address dust controls for drying handling.

3.2 Fly Ash Handling

Identification: Unit 1 fly ash is sluiced to the CCR impoundment. Since this CCR material is sluiced in a wet condition via pipeline to the site impoundment, there are no potential fugitive dust sources in the handling of Unit 1 fly ash both at the source of the CCR and at the discharge point in the CCR impoundment. Fugitive dust controls at the impoundment are described in Section 3.6. Unit 2 and Unit 3 fly ash is pneumatically transported from the precipitators and temporarily stored in fly ash silos. Fly ash is generally unloaded from the silos dry into trucks and transported to the onsite Monofill. At the Monofill the CCR is conditioned by water trucks. Following conditioning, the fly ash may be processed into C-Stone for beneficial reuse. Fly ash not processed into C-Stone for reuse remains in the Monofill. Dust control measures are described in Table 3-2.

Table 3-2: Fly Ash Handling Control Measures

Control/Activity	Description
General Silo Controls	Storage silo is equipped with bin vent filter.
Dry Unloading	The dry unloading process includes a telescopic chute that lowers into tanker trucks to minimize material fall distance. The loading chute has over-suction to prevent fugitive dust emissions during unloading. Trucks are enclosed.
Monofill Placement	Dry fly ash is sent to the Monofill and conditioned. After the conditioned fly ash has become solidified, it may be ground into a product called C-Stone that can be beneficially reused. Water trucks are also used during the grinding process to minimize potential of fugitive dust emissions. Hauling and disposal activities are halted when wind conditions are extreme when operationally feasible.

3.3 Waste Ash Handling

Identification: Waste ash is conditioned via pug mill prior to unloading, hauling, and disposal. Dust control measures are described in Table 3-3.

Table 3-3: Waste Ash Control Measures

Control/Activity	Description
General Silo Controls	Storage silo is equipped with bin vent filter.
Wet Unloading	Waste ash is conditioned to at least 20% moisture content via pug mill within the silo enclosure prior to unloading.

Control/Activity	Description
Haul Truck Loading/Unloading	Belt skirting on the silo chute minimizes potential of fugitive dust emissions during truck loading by providing a somewhat enclosed drop zone. When the material is placed at the monofill it has already been conditioned. Personnel unloading the trucks are responsible for observing the condition of the ash, and adding water during unloading if necessary. Hauling and disposal activities are halted when wind conditions are extreme if operationally feasible.

3.4 Haul Roads

Identification: The plant has haul roads connecting the plant to the Monofill site. Haul trucks utilize the haul road to transport CCR materials from the storage silos to the Monofill. Dust control measures are described in Table 3-4.

Table 3-4: Haul Roads Control Measures

Control/Activity	Description
Street Cleaning	The plant utilizes street sweepers on paved roads on a daily basis to clean haul roads of CCR material.
Water Trucks	Water trucks are used as necessary to prevent fugitive dust from becoming airborne
Dust Suppressant Chemical	If water trucks are not adequate for mitigating fugitive dust, chemical dust suppressant is sprayed on haul roads
Enclosed/Covered Trucks	All haul trucks are enclosed or covered to minimize fugitive dust

3.5 Monofill

Identification: CCR materials are taken to the onsite permitted Monofill for disposal. Dust control measures are described in Table 3-5.

Table 3-5: Monofill Control Measures

Control/Activity	Description
Water Trucks	Water trucks are used as necessary to prevent fugitive dust from becoming airborne. Wetting CCR with water serves to condition the CCR material to a moisture content that will prevent wind dispersal.
Dust Suppressant Chemical	Chemical dust suppressants are sprayed on unpaved haul roads within the Monofill as necessary for fugitive dust control.

Control/Activity	Description
Daily Cover	If other dust controls are not adequate in mitigating fugitive dust, the site will consider the use of daily cover to be applied to CCR within the Monofill.
Operations Halt	During abnormally high winds, a mobile pressurized water system is used for dust suppression, and CCR placement within the Monofill is halted until conditions improve if operationally feasible.

3.6 CCR Impoundment

Identification: CCR is sluiced to active Pond 3B Impoundment. Dust control measures are described in Table 3-6.

Table 3-6: CCR Impoundment Control Measures

Control/Activity	Description
Water Sluicing	Material is sluiced in a wet condition and placed in the impoundment. Generally there are no fugitive dust issues near the impoundment. Should fugitive dust become a concern as CCR dries on the perimeter of the pond, water trucks will be used to further wet any dry CCR that may pose an issue during especially high wind events.

4.0 PROCEDURES FOR LOGGING CITIZEN COMPLAINTS

A specific requirement of the CCR Fugitive Dust Control Plan requires owners and operators of all CCR units to develop and implement formal procedures to log citizen complaints involving CCR fugitive dust events. These complaints must, then, be included as part of the annual CCR Fugitive Dust Control Report. This report must be placed in the operating record and on the owner or operator's publicly accessible internet site.

MEC shall log citizen complaints as received on the log form in Appendix A. Citizens, groups, or agencies who wish to log a complaint may do so by calling the main plant phone number at (712) 277-6361 and asking to speak with the site Environmental Coordinator in charge of fugitive dust issues. During the evening, weekends and holidays, the caller can request to log a complaint with the shift supervisor, or request that the Environmental Coordinator return their call within 24 hours. Complaints can also be submitted in writing to the plant address at 1151 260th St., Sergeant Bluff, Iowa 51054, Attn: Environmental Coordinator.

5.0 PERIODIC ASSESSMENT OF THE PLAN

MEC may amend the written CCR Fugitive Dust Control Plan at any time. However, MEC must amend the written plan whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit. The plan and any subsequent amendments must be certified by a qualified professional engineer. As with other requirements of this rule, in order to ensure that the provisions of the fugitive dust criteria are maintained throughout the operating life of the CCR unit, MEC is required to prepare an annual CCR Fugitive Dust Control Report, describing any additional actions taken to control CCR fugitive dust beyond what is described in the plan, a record of all citizen complaints, and a summary of any corrective measures taken.

MEC commits to assessment of this plan, at a minimum, on an annual basis, during preparation of the annual CCR Fugitive Dust Control Report to identify deficiencies or additional Best Management Practices.

6.0 ANNUAL REPORT

MEC is required to prepare an annual CCR Fugitive Dust Control Report that includes:

- A description of the actions taken by the owner or operator to control CCR fugitive dust,
- A record of all citizen complaints, and
- A summary of any corrective measures taken.

The initial annual report must be completed no later than 14 months after placing the initial CCR Fugitive Dust Control Plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. The annual CCR Fugitive Dust Control Report is complete when the plan has been placed in the facility's operating record.

APPENDIX A - CITIZEN COMPLAINT LOG

George Neal Station North – CCR Fugitive Dust Complaint Log

Date	Plaintiff Location, Group, or Affiliation	Nature of Complaint	Action Taken to Mitigate Fugitive Emissions

George Neal Station North – CCR Fugitive Dust Complaint Log

Date	Plaintiff Location, Group, or Affiliation	Nature of Complaint	Action Taken to Mitigate Fugitive Emissions



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Burns & McDonnell World Headquarters
9400 Ward Parkway
Kansas City, MO 64114
O 816-333-9400
F 816-333-3690
www.burnsmcd.com