Annual Fugitive Dust Report for Neal South Energy Center

MidAmerican Energy Company

Coal Combustion Residual Rule Compliance

November 22, 2016

Annual Fugitive Dust Report for Neal South Energy Center

Prepared for

MidAmerican Energy Company
Coal Combustion Residual Rule Compliance
Salix, Iowa

November 22, 2016

Prepared by

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

INDEX AND CERTIFICATION

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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.

Kira E. Wylam

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My license renewal date is December 31, 2016

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
CCR	Coal Combustion Residual
CCR Rule	Federal Coal Combustion Residuals Rule
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
MEC	MidAmerican Energy Company
MW	megawatt
NSEC	Neal South Energy Center
RCRA	Resource Conservation and Recovery Act
U.S.C.	United States Code

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 coal combustion residual (CCR) materials generated at coal-fired units. The rule is being administered as part of the Resource Conservation and Recovery Act (RCRA, 42 United States Code [U.S.C.] §6901 et seq.), using the Subtitle D approach.

MEC owns and operates the Neal South Energy Center (NSEC), which is a single unit, 640 megawatt (MW) coal-fired power plant located near Salix, Iowa. CCRs produced at NSEC include fly ash, bottom ash/economizer ash, and waste ash, which are currently utilized for beneficial reuse, or disposed of in the onsite monofill or the monofill at the Neal North Energy Center. In addition to the controls outlined in this report, 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. conducts CCR disposal operations and maintenance activities within the site monofill.

MEC is subject to the CCR Rule and as such is subject to compliance with 40 Code of Federal Regulations (CFR) 257.80(c), which discusses the requirements for the annual CCR fugitive dust control report. This report, herein, is the Annual Fugitive Dust Control Report for NSEC.

2.0 REPORT OBJECTIVES

As required by the CCR Rule, 40 CFR 257.80(a) and (b), "CCR Fugitive Dust Control Plan" was written by Burns & McDonnell, dated September 25, 2015, and is available on the MEC public CCR website. The 2015 plan outlined fugitive dust sources and MEC's operational activities, which will be summarized in this section.

The CCR Rule, 40 CFR 257.80(c) requires an annual CCR fugitive dust control report to be compiled as a supplement to the original, 2015 plan. To meet the CCR Rule objectives, the annual fugitive dust control report must contain the following:

- 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 report has been placed in the facility's operating record.

3.0 FUGITIVE DUST CONTROL ACTIVITIES

The 2015, "CCR Fugitive Dust Control Plan" discussed in Section 2.0, outlined fugitive dust sources and MEC's operational activities, which will be summarized in this section. MEC continues to operate, maintain, and control fugitive dust in the manner that is summarized.

3.1 Bottom Ash/Economizer Ash Handling

Bottom ash and economizer ash are managed dry and removed through a local drag chain conveyor. CCR is wet as it is dumped from the drag chain conveyor into a storage pile. CCR dumps into an enclosed concrete containment area with an overhead door that is only opened for loading activities. Loading of the CCR into trucks occurs in a concrete containment area, so there is limited potential of fugitive dust emissions during the loading process. The CCR is then hauled off-site for beneficial reuse or to the NSEC or Neal North Energy Center monofill. CCR that is unloaded at the NSEC monofill is already conditioned from the conveyor unloading process; however, upon occasional issues with fugitive dust emissions while unloading at the monofill, a water truck is used to further wet the CCR as necessary. Wetting CCR with water serves to condition the CCR material to a moisture content that will prevent wind dispersal. Hauling and disposal activities are halted when wind conditions are extreme and when it is operationally feasible.

3.2 Fly Ash Handling

Fly ash is pneumatically transported from the precipitator and temporarily stored in a fly ash silo. From here, a majority of the fly ash is transported offsite for beneficial reuse. The dry unloading process, into enclosed haul trucks, 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. Fly ash that remains onsite is transported to the monofill. At the monofill the CCR is conditioned by water trucks.

3.3 Waste Ash Handling

Waste ash is conditioned to at least 20 percent moisture content via a pug mill within a silo enclosure, prior to unloading. The storage silo is equipped with belt skirting to minimize potential of fugitive dust emissions during truck loading. When the waste ash 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 Road

The plant has a paved haul road connecting the plant to the monofill site. Enclosed haul trucks utilize the paved haul road to transport CCR materials to the monofill. The plant utilizes a street sweeper on a daily basis to clean the haul road when CCR is being hauled to the monofill. Water trucks are used as necessary on any unpaved haul roads to prevent fugitive dust from becoming airborne. If water trucks are not adequate for mitigating fugitive dust, chemical dust suppressant is sprayed on any unpaved haul roads.

3.5 Monofill

CCR materials are taken to the onsite permitted monofill for disposal. 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. If other dust controls are not adequate in mitigating fugitive dust, the site considers the use of daily cover to be applied to CCR within the monofill. During abnormally high winds, a mobile pressurized water system is used for dust suppression, and CCR placement within the landfill is halted until conditions improve if operationally feasible.

4.0 CITIZEN COMPLAINT AND CORRECTIVE ACTION SUMMARY

Per the CCR Fugitive Dust Control Plan that was written by Burns & McDonnell and dated September 25, 2015, MEC is responsible for logging any citizen complaints that involve CCR fugitive dust events.

Between the dates of September 25, 2015, and when this report was written in November 2016, there had been no citizen complaints made to MEC in regards to fugitive dust events. As such, no corrective action is necessary at this point.

5.0 RECORD OF REVISIONS AND UPDATES

Revision Number	Date	Revisions Made	By Whom
0	11/22/2016	Initial Issue	Burns & McDonnell

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