Annual Fugitive Dust Report for Neal North Energy Center

MidAmerican Energy Company

Coal Combustion Residual Rule Compliance

November 20, 2017

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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
NNEC	Neal North 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.

MidAmerican Energy Company (MEC) owns and operates the Neal North Energy Center (NNEC), which is located near Sergeant Bluff, Iowa. Neal North has two retired units, a 164 megawatt (MW) unit (Unit 1), and a 349 MW unit (Unit 2). An active, 550 MW unit (Unit 3), remains in service. Units 1 and 2 were retired in April 2016. Coal combustion residuals produced at NNEC include fly ash, bottom ash/economizer ash, and waste ash, which are currently either utilized for beneficial reuse or disposed of in an onsite impoundment or the onsite monofill. 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. Boral Limited conducts CCR disposal operations and maintenance activities within the site monofill and impoundment.

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 NNEC.

2.0 REPORT OBJECTIVES

As required by the CCR Rule, 40 CFR 257.80(a) and (b), a CCR Fugitive Dust Control Plan was written by Burns & McDonnell, dated September 25, 2015 and was also updated in 2016; it is available on the MEC public CCR website. The plan outlines 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 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 was completed November 22, 2016. Subsequent reports will be completed 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 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 handled wet and sluiced to the onsite, CCR Impoundment 3B. Since the CCR is sluiced in a wet condition via pipeline to the impoundment, there are no potential fugitive dust source in the handling of bottom/economizer ash both at the source of the CCR or at the discharge point in the impoundment. MEC is currently evaluating converting the system to dry handling; should dry handling be implemented at NNEC, there will be an amendment to the CCR Fugitive Dust Control Plan to address dust controls for drying handling.

3.2 Fly Ash Handling

Unit 3 fly ash is pneumatically transported from the precipitators and temporarily stored in fly ash silos. From here, a majority of the fly ash is transported offsite for beneficial reuse. Fly ash that remains onsite is unloaded dry from the silos, into trucks, and transported to the onsite monofill. 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. The dry fly ash is transported to the monofill in enclosed trucks. At the monofill, the CCR is conditioned by water trucks. Hauling and disposal activities are halted when wind conditions are extreme when operationally feasible.

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 paved and unpaved haul roads 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.

3.6 Impoundment

Bottom/economizer ash is sluiced to CCR Impoundment 3B. 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 are used to wet dry CCR that may pose an issue during especially high wind events.

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 date of the last Annual Fugitive Dust Report and when this report was written in November 2017, 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
1	11/20/2017	Annual Edit	Justin Terrell