Fugitive Dust Control Plan

Revision D
Neal North Energy Center

MidAmerican Energy Company

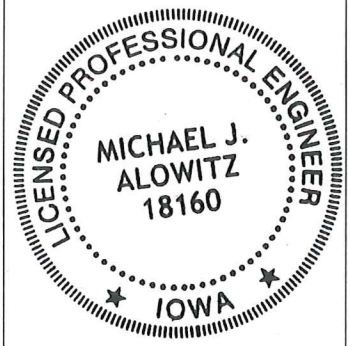
April 01, 2025

→ The Power of Commitment

Certification

CCR Fugitive Dust Control Plan
Revision D
Neal North Energy Center
MidAmerican Energy Company
Permit No. #70-SDP-06-82P

I certify this Fugitive Dust Control Plan meets the requirements of 40 CFR §257.90(e).



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Michael J. Alowitz

Michael J. Alowitz, P.E.

4/1/2025

Date

License Number: 18160

My license renewal date is: December 31, 2026

Pages or sheets covered by this seal: Entire Document

Contents

Table index

Appendices

1. Introduction

The Fugitive Dust Control Plan was developed for MidAmerican Energy Company (MidAmerican) Neal North Energy Center (Neal North) Coal Combustion Residuals (CCR) Monofill. 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. On August 5, 2016, an extension of compliance deadlines for certain inactive surface impoundments, and a response to partial vacatur, was published in the Federal Register.

MidAmerican is subject to the CCR Rule and Rule Extension, and as such has revised their original Fugitive Dust Control Plan for sites handling and disposing of CCR per 40 CFR 257.80. This report provides the revised Fugitive Dust Control Plan for Neal North 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. Plan Objectives

The Fugitive Dust Control Plan identifies MidAmerican control measures and practices to minimize and control fugitive dust as required by the CCR Rule. The plan defines the ways in which MidAmerican 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 recordkeeping requirements.
– Identifies fugitive dust control notification requirements.

3. Fugitive Dust Sources and Controls

MidAmerican owns and operates Neal North, which is located near Sergeant Bluff, Iowa. The site includes a 550-MW generating 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 the onsite monofill.

In addition to the controls outlined in this plan, MidAmerican adheres to controls and best management practices that are required and outlined in site permits and plans. MidAmerican also holds subcontractors managing CCR responsible for controlling fugitive dust.

Table 3.1 lists the CCR related fugitive dust sources identified at the facility, briefly describing operations at each potential source of fugitive dust.

Table 3.1 CCR Fugitive Dust Sources

Source Name	Description
Bottom Ash/Economizer Ash Handling	Transported via truck and disposed of at the monofill
Fly Ash Handling	Pneumatic transport to silo and trucks
Scrubber waste Ash Handling	Pneumatic transport to silo and wetted for disposal at the monofill
Haul Roads	Transport road within the plant site and to the monofill
Monofill	Truck unloading/material placement/grading

3.1 Bottom Ash/Economizer Ash Handling

Bottom ash and economizer ash are handled dry and discharged into an enclosed concrete bunker. The bunker has concrete walls, a roof, and an overhead door that is only opened for loading activities. Because loading of CCR into trucks occurs in an enclosed area, there is limited potential for fugitive dust emissions during the loading process.

The CCR material is then hauled off-site for beneficial reuse or to the Neal North Monofill. Dust control measures for loading, transport, and disposal of bottom ash and economizer ash are described in Table 3.2.

Table 3.2 Bottom Ash/Economizer Ash Handling Control Measures

Control/Activity	Description
Bottom and Economizer Ash Bunkers	Concrete enclosures and enclosed loading area minimizes potential for fugitive dust emissions since the area is blocked from wind.
Street Sweeper	The plant uses a street sweeper daily when CCR is displaced from the ash bunkers.

3.2 Fly Ash Handling

Unit 3 fly ash is pneumatically transported from the precipitators and stored temporarily in fly ash silos. Fly ash is loaded dry into trucks and transported offsite for beneficial reuse. Fly ash truck loading is completed via over-suction chute and is transported in enclosed trucks. Fly ash not used for beneficial reuse is transported to the monofill in enclosed trucks and is conditioned by water trucks. At the Monofill the CCR is conditioned by water trucks. Dust control measures are described in Table 3.3.

Table 3.3 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 enclosed tanker trucks to minimize material fall distance. The loading chute has over-suction to prevent fugitive dust emissions during unloading.
Monofill Placement	Dry fly ash sent to the monofill and conditioned or sent offsite for beneficial reuse. Water trucks are also used to minimize potential of fugitive dust emissions at the monofill. Hauling and disposal activities are halted when wind conditions are extreme when operationally feasible.

3.3 Waste Ash Handling

Waste ash is conditioned via pug mill prior to unloading and disposal in the monofill. Dust control measures for loading, transport, and disposal are described in Table 3.4.

Table 3.4 Scrubber Waste Ash Handling 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 silo enclosure prior to unloading.
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

The plant has paved and unpaved haul roads connecting the plant to the monofil site. Haul trucks use the haul road to transport CCR materials from the storge silos to the monofil. Dust control measures are described in Table 3.5.

Table 3.5 Haul Roads Control Measures

Control/Activity	Description
Street Cleaning	The plant uses a street sweeper on paved roads daily when material is being hauled to the monofil.
Dust Suppressant Chemical	If water trucks are not adequate for mitigating fugitive dust, chemical dust suppressant is sprayed on unpaved haul roads.
Enclosed/Covered Trucks	All haul trucks are enclosed or covered to minimize fugitive dust.

3.5 Monofill

CCR materials from Neal North are taken to the onsite permitted monofill for disposal. Dust control measures at the monofill are described in Table 3.6.

Table 3.6 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. Leachate may be used as the wetting agent within the lined portion of the monofill.
Dust Suppressant Chemical	A chemical dust suppressant is sprayed on unpaved haul roads within the monofill as necessary for fugitive dust control.
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 monofil.
Operations Halt	During abnormally high winds, CCR placement within the landfill is halted until conditions improve if operationally feasible.

3.6 CCR Impoundments

Closure of impoundments 1, 2, 3A, and 3B was completed in 2023. Impoundments 1, 2, and 3A were closed by removal of CCR which was consolidated in former Impoundment 3B. Closure construction for Impoundment 3B included a cover system that keeps CCR isolated. There are no anticipated activities to cause fugitive CCR dust, however, cover maintenance activities may create observable soil dust.

4. 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. Neal North staff will investigate complaints to determine and verify the nature of the complaint and the factors contributing to it, including site operations at the time, location of complaint versus Monofill location, and weather conditions including wind direction. 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.

MidAmerican logs complaints as received on the log form in Appendix A. The contact information, if provided, and the nature of the complaint will be recorded. 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 Analyst. During the evening, weekends and holidays, the caller can request to log a compliant with the shift supervisor, or request for the Environmental Analyst to return their call within 24 hours.

Complaints can also be submitted in writing to the plant address at 1151 260th Street, Sergeant Bluff, Iowa 51054, Attn: Environmental Analyst.

5. Periodic Assessment of the Plan

MidAmerican may amend the written CCR Fugitive Dust Control Plan at any time. However, MidAmerican 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, MidAmerican is required to prepare an annual CCR Fugitive Dust Control Report, describing 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.

MidAmerican commits to assessment of this plan's effectiveness in accordance with 40 CFR 257.80(b), 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. If more effective technology techniques have been identified at the time of the review and will substantially improve dust control, the plan will be amended to reflect these changes. These changes will be implemented within [6 months] of the Plan's amendment. Additionally, these changes will be documented in the annual CCR Fugitive Dust Control Report in the year in which they are identified.

6. Annual Report

An Annual CCR fugitive dust control report will be prepared by MidAmerican in accordance with 40 CFR 257.80 (c). The annual CCR Fugitive Dust Control Report will include:

– 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

7. Record of Revisions and Updates

Table 7.1 provides a revision record for the Neal North CCR Fugitive Dust Control Plan.

Table 7.1 CCR Fugitive Dust Control Plan Revision History

Revision Number	Date	Revisions Made	By Whom
A	9/25/2015	Initial Issue	Burns & McDonnell
B	11/22/2016	Revised to Remove Retired Units	Burns & McDonnell
C	4/13/2017	Revised per the CCR Extension Rule to include inactive Impoundments 1, 2, and 3A	Burns & McDonnell
D	12/14/2018	Revised to incorporate dry ash handling, NSEC CCR disposal, and Inactive Impoundment 3B, and to remove closed Impoundments 1, 2, and 3A	Burns & McDonnell
D	4/1/2025	Revised to update periodic assessment requirements and reflect closure status of Impoundment 1, 2, and 3A.	GHD

Appendices

Appendix A

Citizen Complaint Log

Neal North Energy Center – CCR Fugitive Dust Complaint Log

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