Fugitive Dust Control Plan

Revision D
Louisa Generating Station

MidAmerican Energy Company

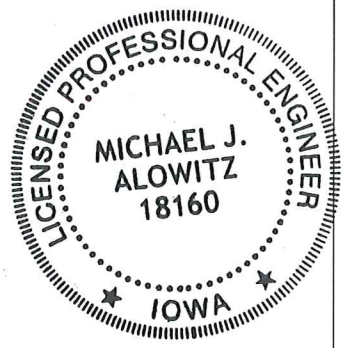
April 01, 2025

The Power of Commitment

Certification

CCR Fugitive Dust Control Plan
Revision D, Louisa Generating Station
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, P.E. — Date: 4/1/2025

License Number: 18160

My license renewal date is: December 31, 2026

Pages or sheets covered by this seal: Entire Document

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1. Introduction

The Fugitive Dust Control Plan was developed for MidAmerican Energy Company (MidAmerican) Louisa Generating Station (LGS) Coal Combustion Residuals (CCR) Monofill and Expansion Monofill, hereafter referred to collectively as the Monofill, in accordance with the Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (40 Code of Federal Regulations (CFR) Part 257, Subpart D, the CCR Rule) and the Iowa Administrative Code (IAC) 567 Chapter 103.1 (3)b and (4)b. This Plan addresses actions to minimize fugitive dust generation, mitigation measures, and documentation requirements.

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 the LGS located in Muscatine, 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 and describes the CCR fugitive dust control measures to minimize CCR from becoming airborne at the facility.
– Describes procedures to emplace CCR as conditioned CCR. Conditioned CCR means wetting CCR with water or an appropriate chemical dust suppressant that will prevent wind dispersal.
– Describes the procedures the owner or operator will follow to periodically assess the effectiveness of the plan.
– Identifies fugitive dust control recordkeeping requirements.
– Identifies fugitive dust control notification requirements.

3. Fugitive Dust Sources and Controls

MidAmerican owns and operates LGS, located 7 miles south of Muscatine, Iowa. The plant operates a 745-megawatt (MW) generating unit. CCR produced at LGS includes fly ash, bottom ash/economizer ash, and scrubber (waste) ash. Fly ash is currently utilized for beneficial reuse, all other ash is disposed in the on-site Monofill. At various points in the handling of CCR, there is the potential for fugitive dust generation and emissions.

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.
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 storage bunker is covered and enclosed on three sides to minimize potential fugitive dust emissions. A front-end loader is used to load the bottom/economizer ash into haul trucks. Due to the coarse, sand-like consistency of the bottom/economizer ash, it is not necessary to condition the ash prior to loading into haul trucks.

The bottom/economizer ash is transported from the storage bunker to the Monofill and unloaded. 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 minimize 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.
Personnel monitoring	Personnel unloading the trucks at the Monofill are responsible for observing the conditions of the ash and adding water during unloading, if necessary.

3.2 Fly Ash Handling

Fly ash is pneumatically transported from the precipitator and stored temporarily in a fly ash silo. 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. The fly ash is generally transported offsite for beneficial reuse.

Fly ash that does not meet reuse specifications for beneficial reuse is transported to the monofill in enclosed trucks and is conditioned by water trucks. After the conditioned ash has solidified, it is ground into a product called c-stone that can be beneficially reused. 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 is conditioned with water trucks during placement. Hauling and disposal activities are halted when wind conditions are extreme when operationally feasible.
Grinding Material	Water trucks are used during the grinding of c-stone to minimize the potential for fugitive dust emissions.

3.3 Scrubber (Waste) Ash Handling

Scrubber (waste) ash is transported to and stored in a storage silo that is equipped with a bin vent filter. The waste ash is conditioned to at least 20% moisture content via an in-silo pugmill. From the silo scrubber, ash is loaded onto trucks via loading chute with belt skirting. The skirting helps to minimize dust emissions during truck loading. The waste ash is transported from the silo to the monofil and unloaded. 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 during truck loading. When the material is placed at the monofill it has already been conditioned.
Personnel Monitoring	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

A paved haul road connects the plant to the monofill site. Haul trucks use the paved haul road to transport CCR materials. Dust control measures are described in Table 3.5.

Table 3.5 Haul Roads Control Measures

Control/Activity	Description
Haul Roads	Plant haul road is paved and there is an enforcement of a strict speed limit on all vehicles accessing the haul roads; this minimizes fugitive dust generation during transport.
Street Cleaning	The plant uses a street sweeper routinely, when hauling material to the monofill, to clean paved haul road of CCR material.
Enclosed/Covered Trucks	All haul trucks are enclosed or covered to minimize fugitive dust. Haul truck drivers are responsible for notifying the Plant Manager when the haul road requires watering/cleaning.

3.5 Monofill

CCR materials are transported 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. A chemical dust suppressant may be used, as needed, to reduce dust generation. Leachate may be used as the wetting agent within the lined portion of the monofill.
Operations Halt	During abnormally high winds, CCR placement within the landfill is halted until conditions improve if operationally feasible.

3.6 CCR Impoundment

LGS includes a CCR impoundment closed in 2020. Closure construction 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. LGS 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 (563) 262-2867 and asking to speak with the site Environmental Coordinator. During the evening, weekends and holidays, the caller can request to log a compliant with the shift supervisor, or

request for the Environmental Coordinator to return their call within 24 hours. Complaints can also be submitted in writing to the plant address at 8602 172nd Street, Muscatine, Iowa 52761, Attn: Environmental Coordinator.

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 WSEC CCR Fugitive Dust Control Plan.

Table 7.1 CCR Fugitive Dust Control Plan Revision History.

Revision Number	Date	Revisions Made	By Whom
A	3/16/2020	Removed discussion of the use of the unlined existing monofill for CCR disposal. Figures 1 and 2 have been updated to reflect current site conditions and haul route.	George Fletcher, P.E.
B	10/12/2021	Revised Figure 2 showing West CCR Monofill is closed.	George Fletcher, P.E.
C	4/1/2025	Revised to update periodic assessment requirements	GHD

Appendices

Appendix A

Citizen Compliant Log

Louisa Generating Station – CCR Fugitive Dust Complaint Log

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