

Coal Combustion Residuals

2016 Annual Fugitive Dust Control Report

Prepared for
Montana-Dakota Utilities Company
Lewis & Clark Station

December 2016



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Contents

1.0	Introduction	1
2.0	Objective	2
3.0	Fugitive Emission Sources	3
4.0	Operating Procedures and Control Measures.....	4
5.0	Monitoring and Recordkeeping.....	5

1.0 Introduction

The process of coal combustion residual (CCR) management and CCR disposal at Lewis & Clark Station (Lewis & Clark) of Montana-Dakota Utilities Co. (MDU) is subject to Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D herein referred to as the CCR Rule. CCR is defined in 40 CFR §257.53, definition as follows:

“...CCR means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers...”

MDU developed a CCR Fugitive Dust Control Plan (FDCP; Rev 0) to satisfy the requirements described in 40 CFR §257.80, Air Criteria, as they apply to CCR units, roads, and other CCR management and material handling activities at Lewis & Clark. Lewis & Clark placed the FDCP in the facility's operating record on October 15, 2015, as required by 40 CFR §257.105(g)(1).

2.0 Objective

MDU has compiled this annual report on CCR fugitive dust control for Lewis & Clark to meet the objectives of 40 CFR §257.80(c). The annual report includes the following:

- a description of the actions taken by the owner or operator to control CCR fugitive dust,
- a record of all citizen complaints,
- a summary of any corrective measures taken,
- a summary regarding compliance with Section 6 (CCR Fugitive Dust Emission Monitoring) of the FDCP (Rev 0), and
- a documentation of compliance with CCR Rule reporting requirements.

3.0 Fugitive Emission Sources

Lewis & Clark's CCR FDCP (Rev 0) identifies sources where possible emissions occur in the process of transporting CCR resulting from power generation at the facility.

Potential CCR fugitive dust sources at Lewis & Clark include loading and hauling operations for fly/bottom ash at non-CCR units, such as the fly ash silo and the bottom ash tank, or loading and hauling operations from CCR units such as flue-gas desulfurization (FGD) solids at the Scrubber Ponds; and FGD solids loading and hauling at the Temporary Storage Pad (TSP) and TSP loadout pads.

Haul Truck Loading Operations: Haul trucks transport CCR from the fly ash silo, the bottom ash basin, and the TSP to an offsite landfill in an abandoned coal mine, or containerized haul trucks are used to transport CCR off-site for beneficial reuse. The hauling schedule may vary based on CCR generation and operational needs. Potential for generation of CCR fugitive dust during haul truck loading operations exists at the following locations:

- **Haul Roads:** The haul trucks transport CCR on unpaved gravel haul roads at the facility. As all CCR spills are promptly cleaned, dusting from the haul roads is generated from the gravel surface. Truck loading occurs on the loadout pads within or adjacent to the facility, depending on the type of CCR as previously described.
- **Placement:** CCR emissions can occur when CCR is removed from the Scrubber Ponds and placed onto the TSP. Because the FGD solids exhibit high water content when excavated from the Scrubber Ponds and placed in the TSP, potential for fugitive dust emissions during this operation are minimal. The CCR is transferred to the offsite disposal location as soon as the majority of the moisture in the CCR (while stockpiled on the TSP) has evaporated.

4.0 Operating Procedures and Control Measures

In 2016, Lewis & Clark implemented the following types of CCR fugitive dust operating procedures and control measures to minimize CCR from becoming airborne:

- Water was used to stabilize CCR piles, access and haul roads, and loadout areas. Watering frequencies were adjusted according to meteorological conditions and as determined by Lewis & Clark staff.
- Operation and maintenance activities for CCR piles included watering and/or reducing drop distance between discharge/loading points and top of CCR piles.
- Hauling operations were suspended during periods of high wind conditions.
- CCR was contained in a loading system and transported in a covered truck as it leaves the ash silo for beneficial use.
- CCR spills were cleaned up by the end of the day that they occur.
- Equipment to be used for dry CCR placement and loading of trucks were selected based on availability and ability to control CCR dust.
- Loading operators implemented loading operations to prevent the haul truck from being overfilled, thereby minimizing the potential for ash spillage from haul trucks.
- Dedicated loadout pads that consist of a geomembrane (e.g., polyurethane plastic tarp) were used to contain and enable cleaning of CCR that may be spilled during the loading of haul trucks. The loadout pads are located at the haul truck loadouts and are designed to prevent precipitation that may have contacted CCR from infiltrating into the ground.

5.0 Monitoring and Recordkeeping

40 CFR §257.80(b)(4), Air Criteria, stipulates that, *“The CCR fugitive dust control plan must include a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan.”* A person other than a professional engineer may perform monitoring responsibilities.

The CCR FDCP (Rev 0) addressed the three (3) main monitoring responsibilities:

- Keep a record of the citizen complaints and corrective measures implemented to address these complaints.
- Assess the effectiveness of dust control measures at least annually.
- MDU personnel will monitor and document meteorological conditions as it applies to site CCR fugitive dust emissions.

MDU has a history of positive communication with the community. As required by 40 CFR §257.80(b)(3), Lewis & Clark personnel maintained a log for any citizen complaints regarding CCR fugitive dust events at the facility and any corrective actions taken. In 2016, Lewis & Clark did not receive any citizen complaints; therefore, no corrective actions were required or performed.

MDU employees directly involved with the control of CCR fugitive dust from the CCR units, roads, and other CCR management and material handling activities indicate the dust control measures are operating as planned and there are no recommendations for improvement at this time.

Lewis & Clark personnel monitor operations and meteorological conditions. The record of meteorological conditions as they apply to fugitive dust is maintained by MDU.