CCR Fugitive Dust Control Plan

Western Farmers Electric Cooperative

Hugo Plant
Project No. 87554

Revision A
October 2015

CCR Fugitive Dust Control Plan

prepared for

Western Farmers Electric Cooperative
Hugo Plant
Hugo, Oklahoma

Project No. 87554

Revision A
October 2015

prepared by

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Kansas City, Missouri

INDEX AND CERTIFICATION

Western Farmers Electric Cooperative
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Certification

I hereby certify, as a Professional Engineer in the State of Oklahoma, that the information in this document was assembled under my direct personal charge and that this Plan meets the requirements of 40 C.F.R. § 257.80. This Plan is not intended or represented to be suitable for reuse by the Western Farmers Electric Cooperative or others without specific verification or adaptation by the Engineer.

BMcD Engineer, P.E. (state & license)

Date: Insert Date

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
CCR	Coal Combustion Residuals
EPA	Environmental Protection Agency
MW	Megawatts
WFEC	Western Farmers Electric Cooperative

1.0 INTRODUCTION

On April 17, 2015, the United States Environmental Protection Agency (EPA) published the final Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (CCR Rule) relating to the disposal of coal combustion residuals (CCR) materials generated at electric utilities coal-fired units. 80 Fed. Reg. 21302 (April 17, 2015). The CCR Rule was promulgated pursuant to the Resource Conservation and Recovery Act (RCRA, 42 U.S.C. §6901 et seq.), using the Subtitle D approach and is found at 40 C.F.R. § 257.1 *et seq*.

One of the Western Farmers Electric Cooperative (WFEC) facilities is subject to the CCR Rule. As such, WFEC has developed this CCR Fugitive Dust Control Plan for handling and disposing of CCR per 40 C.F.R. 257.80 (Plan). This Plan provides the means and methods for minimizing CCR from becoming airborne at WFEC's Hugo Power Plant located near Fort Towson, Oklahoma (Facility).

This Plan is in addition to, not in place of, any other applicable permits, environmental standards, or work safety practices.

2.0 PLAN OBJECTIVES

This Plan identifies control measures and practices to minimize CCR from becoming airborne as required by the CCR Rule. To meet the CCR Rule's requirements, this Plan:

- Identifies potential CCR fugitive dust emission sources at the Facility.
- Identifies and describes the control measures and practices to control and minimize CCR fugitive emissions that are most appropriate for site conditions at the Facility.
- Identifies CCR fugitive dust control recordkeeping requirements.
- Identifies CCR fugitive dust control notification requirements.
- Describes procedures that WFEC will follow to periodically assess the effectiveness of the Plan.

3.0 FUGITIVE DUST SOURCES AND CONTROLS

The Facility is a single, coal-fired unit rated at 450 MW. CCR produced at the Facility includes fly ash, bottom ash, and economizer ash. Fly ash and economizer ash generated by the Facility are beneficially reused or managed in an on-site CCR landfill. Bottom ash is available for beneficial reuse and managed in two on-site CCR impoundments. In addition to the control measures outlined in this Plan, WFEC adheres to controls and Best Management Practices that are required and outlined in other applicable site permits and plans. Table 3-1 lists the CCR fugitive emission sources identified at the Facility, briefly describing operations at each source.

Table 3-1: CCR Fugitive Dust Sources

Source Name	Description
Bottom Ash Handling	Sluiced to CCR impoundments for management
Fly Ash Handling	Handled dry and pneumatically transported to silo for unloading. Fly ash is either trucked offsite for beneficial reuse or managed in the on-site CCR landfill. Fly ash is conditioned within the landfill during handling.
Economizer Ash Handling	Handled dry and transported on haul roads by truck to on-site CCR landfill. Economizer ash is either trucked offsite for beneficial reuse or managed in the on-site CCR landfill. Economizer ash is conditioned within the landfill during handling.
Haul Road	Transport road within the Facility to the on-site landfill or CCR impoundment.
CCR Landfill	Material handling.
CCR Impoundments	Material handling.

3.1 Bottom Ash Handling

Identification: Bottom ash is handled wet and sluiced to one of two CCR impoundments at the Facility. Since the ash is sluiced in a wet condition via pipeline to the CCR impoundments, there are no potential CCR fugitive dust emissions sources in the handling of bottom ash at the Facility both at the source of the ash and at the discharge points within the CCR impoundments. Some of the ash sluiced to the CCR impoundments is ultimately hauled offsite for beneficial use. Some of the bottom ash is excavated from the CCR impoundments where it is stockpiled, and allowed to dewater. Bottom ash from the dewatered stockpile is designated for beneficial use and marketed by an ash marketer. Due to the inherent moisture

content of the dewatered bottom ash, fugitive dust from material handling is negligible; however, dust control measures at the CCR impoundments are discussed in Section 3.6.

3.2 Fly Ash Handling

Identification: Fly ash is pneumatically transported from the electrostatic precipitator (ESP) and stored temporarily in silos during normal operations. Most fly ash is unloaded directly from the silo and sold for beneficial use. The remaining portion of the fly ash is loaded to tanker trucks by an ash marketer and placed in the on-site CCR landfill where it is managed or later excavated for sale as beneficial use. Fly ash is conditioned at the CCR landfill with water when unloading. Sometimes, a vacuum truck is used to remove fly ash from ash hoppers at the ESP, or to clean up the area around the ash hoppers. The fly ash is transported with the enclosed vacuum truck via the haul road to the on-site CCR landfill where it is managed or later excavated for beneficial use. Dust control measures are described in Table 3-2.

Table 3-2: Fly Ash Control Measures

Control/Activity	Description/Explanation of Applicability and Appropriateness
General Silo Controls	Storage silos are equipped with bin vent filters.
Dry Unloading	The process of unloading fly ash is performed via telescoping chute that seals over the hatch of tanker truck. The loading chute has over-suction to prevent fugitive dust emissions during unloading.
Conditioning	Fly ash that is designated for management within the CCR landfill is conditioned with water during unloading at the on-site CCR landfill.

3.3 Economizer Ash Handling

Identification: Economizer ash is pneumatically conveyed to a silo located at the generating unit. The economizer ash is loaded dry from the storage silo to a covered dump truck where it is hauled by covered dump truck via the haul road to the on-site landfill. Economizer ash is either managed in the on-site landfill or later excavated for beneficial use. Economizer ash is conditioned at the CCR landfill with water when unloading. Sometimes, a vacuum truck is used to remove economizer ash from ash hoppers or to clean up the area around the ash hoppers. The economizer ash is transported with the enclosed vacuum truck via the haul road to the on-site CCR landfill where it is managed or later excavated for beneficial use. Dust control measures are described in Table 3-3.

Table 3-3: Economizer Ash Control Measures

Control/Activity	Description/Explanation of Applicability and Appropriateness
General Silo Controls	Storage silo is equipped with a vent to the boiler flue gas duct that provides a suction and removes any dust or ash from the silo during operation. Dust and ash vented from the silo is captured by the ESP and collected in the fly ash hoppers.
Dry Unloading	The dry unloading process includes a chute that lowers into a covered dump truck to minimize dust. The loading area is also enclosed on three sides to minimize dust.
Conditioning	Economizer ash is conditioned with water during unloading at the on-site CCR landfill.

3.4 Haul Road

Identification: The Facility has a haul road leading from the plant entrance and generating unit to both the CCR landfill and CCR impoundments. The majority of the haul road is paved with asphalt. Haul trucks utilize the haul road to transport CCR materials from the generating unit to the CCR landfill, CCR impoundments, or offsite for beneficial use. Dust control measures are described in Table 3-4.

Table 3-4: Haul Roads Control Measures

Control/Activity	Description/Explanation of Applicability and Appropriateness
Haul Roads	The majority of haul roads within the plant are paved with asphalt; this minimizes fugitive dust generation during transport. Haul roads also have 25 mph speed limit signs posted to lower potential for fugitive dust emissions.
Water Trucks	Water trucks are used to control potential fugitive dust emissions on the unpaved haul roads.

3.5 CCR Landfill

Identification: A portion of the fly ash is hauled from the ash silos to the CCR landfill for management. Economizer ash is hauled by covered dump truck from the economizer ash silo to the CCR landfill for management. Both fly ash and economizer ash may be hauled by haul trucks or vacuum truck to the CCR landfill for management. Dust control measures are described in Table 3-5.

Table 3-5: Landfill Control Measures

Control/Activity	Description/Explanation of Applicability and Appropriateness
CCR Handling	Fly ash designated for disposal is hauled from the ash silo to the CCR landfill and unloaded in a manner to minimize the fall distance, via tanker truck. Economizer ash is hauled from the economizer ash silo to the CCR landfill via a covered dump truck and end dumped. CCR will be placed in the CCR landfill in a conditioned state with a moisture content that prevents wind dispersal, but will not result in free liquids. Fly ash and economizer ash collected by the vacuum truck is hauled from the generating unit to the CCR landfill and end dumped. The speed limit within the landfill is not to exceed 5 mph to minimize fugitive dust emissions. If visible emissions are observed beyond the perimeter of the landfill, vehicular activity and placement will cease until wind conditions are tolerable for such activities.
Dust Suppression	Water trucks are used to mitigate CCR fugitive dust emissions generated from hauling and handling CCR materials.
Operations Halt	If visible emissions are observed beyond the perimeter of the landfill, vehicular activity and placement will cease until wind conditions are tolerable for such activities.

3.6 CCR Impoundments

Identification: Bottom ash is sluiced to the CCR impoundments. Bottom ash that is designated for beneficial use is excavated, stockpiled, dewatered and eventually hauled offsite for beneficial use. Dust control measures for the CCR impoundments are described in Table 3-6.

Table 3-6: CCR Impoundments Control Measures

Control/Activity	Description/Explanation of Applicability and Appropriateness
Wet Sluicing	Material is sluiced in a wet condition and placed in the CCR impoundments. Generally there are no fugitive dust issues near the CCR impoundments due to the saturated condition of the ash from sluicing. Should CCR fugitive dust become a concern as ash dries on the perimeter of the impoundments, water will be used to further wet dry ash.

4.0 PROCEDURES FOR LOGGING CITIZEN COMPLAINTS

The CCR Rule requires owners and operators of all CCR units to develop and implement formal procedures to log citizen complaints involving CCR fugitive dust events. These complaints must, then, be included as part of the annual CCR Fugitive Dust Control Report. This annual report must be placed in the Facility's written operating record and on WFEC's publicly accessible CCR internet site.

WFEC shall log citizen complaints as received on the log form in Appendix A. Citizens, groups, or agencies who wish to make a CCR fugitive dust complaint may do so by going to www.wfec.com and clicking on the WFEC CCR Compliance tab, or by calling the WFEC Corporate Environmental Staff at (405) 247-3351 and asking to speak with the Environmental Coordinator. CCR fugitive dust complaints can also be submitted in writing to WFEC at: Western Farmers Electric Cooperative, Attn: Environmental Coordinator, P.O. Box 429, 701 NE 7th Street, Anadarko, OK 73005.

5.0 PERIODIC ASSESSMENT/AMENDMENT OF THE PLAN

WFEC may amend this Plan at any time in accordance with the CCR Rule. WFEC must amend the Plan whenever there is a change in conditions that would substantially affect the Plan, 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.

If a complaint is received, the Corporate Environmental Coordinator will work with the Plant Engineer and other Facility personnel to initiate an investigation of the source of the fugitive dust and evaluation of the controls in place for the particular area or process identified as the cause of the complaint. If the event is random and due to high winds or abnormal operating conditions, Facility personnel may implement a short term solution. If the issue is determined to be one that may be continuous or severe in nature, Facility personnel and the Environmental Coordinator will reevaluate controls within the Plan to determine if an amendment to the Plan needs to be made.

In addition to evaluation of the Plan following citizen complaints, WFEC will conduct an assessment of the overall Plan effectiveness on an annual basis, during preparation of the annual CCR fugitive dust control report.

6.0 ANNUAL REPORT

WFEC is required to prepare an annual CCR Fugitive Dust Control Report that includes:

- 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 first CCR Fugitive Dust Control Report must be completed no later than 14 months after placing the CCR Fugitive Dust Control Plan in the Facility's written operating record. The deadline for completing a subsequent annual report is one year after the date of completing the previous annual report. The annual CCR Fugitive Dust Control Report is complete when such Report has been placed in the Facility's written operating record.

APPENDIX A - CITIZEN COMPLAINT LOG

COMPLAINT FORM FOR CCR DUST PLAN

Date:

Person filing the complaint:

Address of person filing the complaint:

Telephone number:

Email:

Complaint:

Corrective Action

WFEC personnel recording the complaint:

CCR MONTHLY COMPLAINT LOG

Date	Person Filing Complaint	Person Taking the Complaint

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