

CCR Fugitive Dust Control Plan



Kansas City Board of Public Utilities

Nearman Creek Power Station
Project No. 88777

Revision 2
June 2021

CCR Fugitive Dust Control Plan

prepared for

**Kansas City Board of Public Utilities
Nearman Creek Power Station
Kansas City, Kansas
4240 N. 55th St.
Kansas City, Kansas 66104
Permit No. 0413**

Project No. 88777

**Revision 2
June 2021**

prepared by

**Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri**

INDEX AND CERTIFICATION

Kansas City, Kansas Board of Public Utilities CCR Fugitive Dust Control Plan Project No. 88777

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Certification

I hereby certify, as a Professional Engineer in the state of Kansas, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the Kansas City Board of Public Utilities or others without specific verification or adaptation by the Engineer.



Scott A. Martin, P.E. (Kansas P.E. #24713)
License Renewal Date: April 30, 2023

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
KCBPU	Kansas City Board of Public Utilities
KDHE	Kansas Department of Health and the Environment
MW	Megawatts
FGD	Flue Gas Desulfurization
RCRA	Resource Conservation and Recovery Act
U.S.C.	United States Code

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. The CCR Rule was promulgated under Subtitle D of the Resource Conservation and Recovery Act (RCRA, 42 U.S.C. §6901 et seq.).

The Kansas City Board of Public Utilities (KCBPU) Nearman Creek Power Station (Facility) is subject to the CCR Rule. This document presents the Fugitive Dust Control Plan (Plan) for the Facility pursuant to 40 CFR §257.80 and provides fugitive dust control measures used for minimizing CCR from becoming airborne at the Facility. This Plan serves to amend the October 2015 and December 2017 Plans to reflect changes to the Facility's bottom ash handling system and CCR surface impoundment.

This Plan identifies control measures and practices to minimize the potential for CCR to become airborne as required by the CCR Rule. This Plan:

- Identifies potential CCR fugitive dust emission sources at the Facility;
- Identifies and describes the control measures and practices to minimize CCR fugitive dust; 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; and
- Describes procedures that KCBPU will follow to periodically assess the effectiveness of the Plan.

This Plan is in addition to and does not supersede any other applicable permits, environmental standards, or work safety practices.

2.0 FUGITIVE DUST SOURCES AND CONTROL MEASURES

The Facility is a single, coal-fired unit nameplated at 268 MW. KCBPU is a wholly owned administrative agency of the Unified Government of Wyandotte County and Kansas City, Kansas. CCR produced at the Facility includes flue gas desulfurization (FGD) ash and bottom ash. FGD ash and bottom ash generated by the Facility are transported offsite for beneficial use or disposal. In addition to the control measures outlined in this Plan, KCBPU adheres to controls and Best Management Practices that are required and outlined in other applicable site permits and plans. Table 2-1 lists the potential CCR fugitive dust emission sources identified at the Facility, briefly describing operations at each source.

Table 2-1: CCR Fugitive Dust Sources

Source Name	Description
Bottom Ash Handling	Handled dry and transported pneumatically to a silo. Ash is trucked offsite for beneficial use or disposal.
FGD Ash Handling	Handled dry and transported pneumatically to silo for unloading. Ash is trucked offsite for beneficial use or disposal.
Access & Haul Road	Road used for hauling CCR offsite.

2.1 Bottom Ash Handling

The Bottom Ash Pond has been decommissioned and ash has been removed. The former wet bottom ash handling system has been replaced with a dry pneumatic system. The dry bottom ash handling system is an ash extractor with ash hopper storage and pneumatic conveyance equipment.

Dry bottom ash is pneumatically conveyed and temporarily stored in a silo at the Facility until it is trucked offsite for beneficial use or disposal. From the silo, ash is loaded into trucks with a telescopic chute, with over-suction, minimizing any fugitive dust emissions. The haul trucks are loaded inside a transfer building which can be fully enclosed from the outside environment with overhead doors. Haul trucks can be enclosed or covered prior to transporting ash. Bottom ash handling dust control measures are described in Table 2-2

Table 2-2: Bottom Ash Control Measures

Control/Activity	Description
General Silo Controls	Storage silo is equipped with a bin vent filter.
Loading	The dry loading process includes telescopic chutes that lower into haul trucks to minimize material fall distance. The loading chute has over-suction to minimize fugitive dust emissions during unloading. Transfer building is equipped with overhead doors with the ability to fully enclose haul trucks from outside wind when being loaded. Haul trucks are enclosed or covered prior to transporting ash.

2.2 FGD Ash Handling

FGD ash is pneumatically transported from the bottom of the Pulse Jet Fabric Filter (PJFF) and temporarily stored in a silo at the Facility until it is trucked offsite for beneficial use or disposal. FGD ash is either conditioned via pugmill and loaded, loaded dry with a telescopic chute, with over-suction, or mixed with Portland cement aggregate in a mixing silo and loaded with the telescopic chute, minimizing any fugitive dust emissions. The haul trucks are loaded inside a transfer building which can be fully enclosed from the outside environment with overhead doors. Haul trucks can be enclosed or covered prior to transporting ash. FGD ash handling dust control measures are described in Table 2-3.

Table 2-3: FGD Ash Control Measures

Control/Activity	Description
General Silo Controls	Storage and mixing silo are equipped with a bin vent filter.
Loading	The loading process includes ash conditioning via pugmill, dry loading with telescopic chutes that lower into haul trucks to minimize material fall distance, or mixing with Portland cement aggregate in a mixing silo and loading with the telescopic chute. The loading chute has over-suction to minimize fugitive dust emissions during unloading. Transfer building is equipped with overhead doors with the ability to fully enclose haul trucks from outside wind when being loaded. Haul trucks are enclosed or covered prior to transporting ash.

2.3 Haul Roads

The haul road from each ash transfer building to the Facility egress are paved to minimize dust emissions. Speed limit signs are posted to lower any potential for fugitive dust emissions. Dust control measures are described in Table 2-4.

Table 2-4: Access and Haul Road Control Measures

Control/Activity	Description
Access and Haul Roads	Haul roads are paved and have speed limit signs posted to lower potential for fugitive dust emissions.

3.0 PROCEDURES FOR LOGGING CITIZEN COMPLAINTS

The CCR Rule requires owners and operators of all active 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 KCBPU's publicly accessible CCR internet site.

Each time a complaint is received, the Environmental Director will work with plant personnel to initiate an investigation of the source of the CCR fugitive dust and an evaluation of the controls in place for the particular area or process identified as the cause of the problem. If the event is random and due to high winds or abnormal operating conditions, plant personnel may implement a short-term solution, which does not require an amendment of this Plan. If the issue is determined to be one that may be continuous or may reoccur in the future, plant personnel and the Environmental Director will reevaluate controls within the Plan to determine if an amendment to the Plan needs to be made.

KCBPU 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 sending an email via the "Contact Us" link posted on the KCBPU CCR Rule Compliance Data & Information website.

4.0 PERIODIC ASSESSMENT/AMENDMENT OF THE PLAN

KCBPU may amend this Plan at any time in accordance with the CCR Rule. KCBPU 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.

In addition to Plan evaluation following citizen complaints, KCBPU commits to a detailed assessment and evaluation of the effectiveness of the overall Plan on an annual basis, during preparation of the annual CCR Fugitive Dust Control Report. In addition to annual assessment, KCBPU performs inspections and monitors CCR fugitive dust through the weekly inspections and shall mitigate any potential issues noted during these inspections.

5.0 ANNUAL REPORT

KCBPU 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 initial CCR Fugitive Dust Control Report must be completed no later than 14 months after placing the initial 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 operating record.

APPENDIX A - CITIZEN COMPLAINT LOG

Nearman Creek Power Station – CCR Fugitive Dust Complaint Log

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



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Burns & McDonnell World Headquarters
9400 Ward Parkway
Kansas City, MO 64114
O 816-333-9400
F 816-333-3690
www.burnsmcd.com