



# Annual Fugitive Dust Report for the Hugo Plant



## Wester Farmers Electric Cooperative

Coal Combustion Residual Rule Compliance

December 16, 2016



# **Annual Fugitive Dust Report for the Hugo Plant**

**Prepared for**

**Wester Farmers Electric Cooperative  
Coal Combustion Residual Rule Compliance  
Hugo, Oklahoma**

**December 16, 2016**

**Prepared by**

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

---

## TABLE OF CONTENTS

|  | <u>Page No.</u> |
|--|-----------------|
| <b>1.0 INTRODUCTION .....</b>                                    | <b>1-1</b>      |
| <b>2.0 REPORT OBJECTIVES .....</b>                               | <b>2-1</b>      |
| <b>3.0 FUGITIVE DUST CONTROL ACTIVITIES .....</b>                | <b>3-1</b>      |
| 3.1 Bottom Ash Handling .....                                    | 3-1             |
| 3.2 Fly Ash Handling.....  | 3-1             |
| 3.3 Economizer Ash Handling.....                                 | 3-1             |
| 3.4 Haul Road .....  | 3-2             |
| 3.5 CCR Landfill.....  | 3-2             |
| 3.6 CCR Impoundment .....  | 3-2             |
| <b>4.0 CITIZEN COMPLAINT AND CORRECTIVE ACTION SUMMARY .....</b> | <b>4-1</b>      |
| <b>5.0 RECORD OF REVISIONS AND UPDATES.....</b>                  | <b>5-1</b>      |

## LIST OF ABBREVIATIONS

| <b><u>Abbreviation</u></b> | <b><u>Term/Phrase/Name</u></b>         |
|----------------------------|--|
| CCR                        | Coal Combustion Residual               |
| CCR Rule                   | Federal Coal Combustion Residuals Rule |
| CFR                        | Code of Federal Regulations            |
| EPA                        | Environmental Protection Agency        |
| ESP                        | electrostatic precipitator             |
| MW                         | megawatt                               |
| RCRA                       | Resource Conservation and Recovery Act |
| U.S.C.                     | United States Code                     |
| WFEC                       | Western Farmers Electric Cooperative   |

---

## 1.0 INTRODUCTION

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 coal combustion residual (CCR) materials generated at coal-fired units. The rule is being administered as part of the Resource Conservation and Recovery Act (RCRA, 42 United States Code [U.S.C.] §6901 et seq.), using the Subtitle D approach.

Western Farmers Electric Cooperative (WFEC) owns and operates the Hugo Plant (Plant), which is located near Hugo, Oklahoma. The Plant is a single, coal-fired unit rated at 450 MW. Coal combustion residuals produced at the Plant include bottom ash, fly ash, and economizer ash which are currently either utilized for beneficial reuse and/or managed in an onsite impoundment or an onsite landfill. In addition to the controls outlined in this report, WFEC adheres to controls and Best Management Practices that are required and outlined in site permits and plans.

The Plant is subject to the CCR Rule and as such is subject to compliance with 40 (Code of Federal Regulations) CFR 257.80(c) and the state counterpart rule at OAC 257:517-13-1(c), which discusses the requirements for the annual CCR fugitive dust control report. This report is the Annual Fugitive Dust Control Report for the Plant and is intended to comply with both the CCR Rule and its state counterpart.

## 2.0 REPORT OBJECTIVES

As required by the CCR Rule, 40 CFR 257.80(a) and (b), the “CCR Fugitive Dust Control Plan” was written by Burns & McDonnell in October 2015 and is available on the WFEC public CCR website. The 2015 plan outlined fugitive dust sources and WFEC’s operational activities, which will be summarized in this section.

The CCR Rule, 40 CFR 257.80(c) requires an annual CCR fugitive dust control report to be compiled as a supplement to the original 2015 plan. To meet the CCR Rule objectives, the Annual Fugitive Dust Control Report must contain the following:

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

### **3.0 FUGITIVE DUST CONTROL ACTIVITIES**

The 2015 “CCR Fugitive Dust Control Plan” discussed in Section 2.0, outlined fugitive dust sources and WFEC’s operational activities, which will be summarized in this section. WFEC continues to operate, maintain, and control fugitive dust in the manner that is summarized.

#### **3.1 Bottom Ash Handling**

Bottom ash is handled wet and sluiced to one of two cells in the CCR impoundment at the Plant. Since the ash is sluiced in a wet condition via pipeline to the CCR impoundment, there are no potential CCR fugitive dust emission sources in the handling of bottom ash at the Plant both at the source of the ash and at the discharge points within the cells of the CCR impoundment. Some of the ash sluiced to the CCR impoundment is ultimately hauled offsite for beneficial use. The bottom ash is excavated from the CCR impoundment 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 impoundment are discussed in Section 3.6.

#### **3.2 Fly Ash Handling**

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 landfill. Once placed in the landfill it may be excavated for sale as beneficial use. Fly ash is conditioned at the CCR landfill with water when unloading.

Occasionally, a vacuum truck is used to remove fly ash from ash hoppers on the ESP, flue gas ductwork, boiler dead air spaces, or to clean up the area around the ESP ash hoppers. The fly ash is transported within the enclosed vacuum truck via the haul road and placed in the on-site CCR landfill. Once placed in the landfill it may be excavated for beneficial use.

#### **3.3 Economizer Ash Handling**

Economizer ash is pneumatically conveyed to a silo located at the generating unit. The ash is loaded dry from the storage silo to a covered dump truck and hauled via the haul road to the on-site landfill. Economizer ash is placed in the on-site landfill and may be excavated for beneficial use. Economizer ash is conditioned at the CCR landfill with water when unloading. Occasionally, 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 within the enclosed vacuum truck via the haul road and placed in the on-site CCR landfill and may be excavated for beneficial use.

### **3.4 Haul Road**

The Facility has a haul road leading from the Plant entrance and generating unit to both the CCR landfill and CCR impoundment. 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 impoundment, or offsite for beneficial use. Water trucks are used to control fugitive emissions on the unpaved sections of the haul roads.

### **3.5 CCR Landfill**

A portion of the fly ash is hauled from the ash silos to the CCR landfill for temporary storage or disposal. Economizer ash is hauled by covered dump truck from the economizer ash silo to the CCR landfill for temporary storage or disposal. Both fly ash and economizer ash may be hauled by haul trucks or vacuum truck to the CCR landfill for temporary storage or disposal. Water trucks are used to mitigate fugitive dust emissions generated from hauling and handling of CCR materials. 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 Impoundment**

Bottom ash is sluiced to the CCR impoundment. Bottom ash that is designated for beneficial use is excavated, stockpiled, dewatered and eventually hauled offsite for beneficial use. When fugitive dust becomes a concern as ash dries on the perimeter of the impoundment, water is used to further wet the ash.



#### **4.0 CITIZEN COMPLAINT AND CORRECTIVE ACTION SUMMARY**

Per the CCR Fugitive Dust Control Plan that was written by Burns & McDonnell and dated October 2015, WFEC is responsible for logging any citizen complaints that involve CCR fugitive dust events.

Between the dates of October 2015, and when this report was written in December 2016, there had been no citizen complaints made to WFEC in regards to fugitive dust events. As such, no corrective action is necessary at this point, and none have been implemented during the timeframe covered by this report.

**5.0 RECORD OF REVISIONS AND UPDATES**

| <b>Revision Number</b> | <b>Date</b> | <b>Revisions Made</b> | <b>By Whom</b>    |
|------------------------|-------------|-----------------------|-------------------|
| 0                      | 12/14/2016  | Initial Issue         | Burns & McDonnell |
| 1                      | 12/16/2016  | Final                 | Burns & McDonnell |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |
|                        |             |                       |                   |



CREATE AMAZING.

Burns & McDonnell World Headquarters  
9400 Ward Parkway  
Kansas City, MO 64114  
O 816-333-9400  
F 816-333-3690  
[www.burnsmcd.com](http://www.burnsmcd.com)