

# Annual Fugitive Dust Report for the Walter Scott, Jr. Energy Center



MidAmerican Energy Company

Coal Combustion Residual Rule Compliance

November 2021

# Annual Fugitive Dust Report for the Walter Scott, Jr. Energy Center

Prepared for

MidAmerican Energy Company  
Coal Combustion Residual Rule Compliance  
Council Bluffs, Iowa

November 2021

Prepared by

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## 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        |
| MEC                        | MidAmerican Energy Company             |
| MW                         | megawatt                               |
| RCRA                       | Resource Conservation and Recovery Act |
| U.S.C.                     | United States Code                     |
| WSEC                       | Walter Scott, Jr. Energy Center        |

## 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.

MidAmerican Energy Company (MEC) owns and operates the Walter Scott, Jr. Energy Center (WSEC), which includes four coal-fired units and is located in Council Bluffs, Iowa. The plant operates a 690-megawatt (MW) unit (Unit 3) and a 790-MW unit (Unit 4). Unit 1 and Unit 2 are no longer operating and are not subject to the CCR Rule requirements. Coal combustion residuals produced at WSEC include fly ash, bottom ash/economizer ash, and waste ash, which are currently either utilized for beneficial reuse or disposed of at the onsite monofill. In addition to the controls outlined in this report, MEC adheres to controls and Best Management Practices that are required and outlined in site permits and plans. MEC also holds subcontractors responsible for controlling fugitive dust. Boral Limited conducts CCR disposal operations and maintenance activities within the site monofill.

MEC is subject to the CCR Rule and as such is subject to compliance with 40 Code of Federal Regulations (CFR) 257.80(c), which discusses the requirements for the annual CCR fugitive dust control report. This report, herein, is the Annual Fugitive Dust Control Report for WSEC.

## **2.0 REPORT OBJECTIVES**

As required by the CCR Rule, 40 CFR 257.80(a) and (b), a CCR Fugitive Dust Control Plan was written by Burns & McDonnell, dated September 25, 2015, and is available on the MEC public CCR website. This plan was last updated in October 2018. The current plan outlines fugitive dust sources and MEC'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 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 report was completed within 14 months after placing the initial CCR Fugitive Dust Control Plan in the facility's operating record. Subsequent reports will be completed within one year of completing the previous report. The annual CCR Fugitive Dust Control Report is complete when the report has been placed in the facility's operating record.

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

The current CCR Fugitive Dust Control Plan outlines the fugitive dust sources and MEC's operational activities, which will also be summarized in this section. MEC continues to operate, maintain, and control fugitive dust in the manner that is summarized.

#### **3.1 Bottom Ash/Economizer Ash Handling**

Unit 3 and Unit 4 bottom ash and economizer ash are handled dry and discharged into separate concrete bunkers. The Unit 3 bottom ash and economizer ash bunker has a roof, concrete walls on three sides, a concrete floor, and an overhead door to minimize potential fugitive dust emissions. The Unit 4 economizer bunker is similar to the Unit 3 bunker. The Unit 4 bottom ash is handled within a separate bunker with a concrete floor, concrete walls on three sides, but no roof or overhead door.

Within the bunkers, bottom ash is mixed with economizer ash and/or waste ash, and then hauled to the monofill for disposal.

The street outside the Unit 3 and Unit 4 bottom ash and economizer ash bunkers is swept daily with a street sweeper to contain displaced CCR material.

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

Unit 3 fly ash is pneumatically transported from the precipitator and stored temporarily in a fly ash silo. CCR from the baghouses is pneumatically transferred to either the recycle ash silos or the waste ash silos and can be transferred between the silos. The silos are equipped with a bin vent filter and the dry unloading process includes a telescopic chute that lowers into the covered trucks to minimize the fall distance. The loading chute has over-suction to prevent fugitive dust emissions during loading. The Unit 3 fly ash is either loaded dry into covered trucks to be transported offsite for beneficial reuse or sent to the monofill.

#### **3.3 Waste Ash Handling**

Waste ash is conditioned to at least 20 percent moisture content via a pug mill within a silo enclosure, prior to unloading. The storage silo is equipped with belt skirting to minimize potential of fugitive dust emissions during truck loading. When the waste ash material is placed at the monofill, it has already been conditioned. 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 Road**

The plant has a paved haul road connecting the plant to the monofill site. Enclosed haul trucks utilize the paved haul road to transport CCR materials to the monofill. The plant utilizes a street sweeper daily to clean the haul road when CCR is being hauled to the monofill. Water trucks are used as necessary to prevent fugitive dust from becoming airborne.

### **3.5 Monofill**

CCR materials are taken to the onsite permitted monofill for disposal. 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. If other dust controls are not adequate in mitigating fugitive dust, the site considers the use of daily cover to be applied to CCR within the monofill. During abnormally high winds, CCR placement within the landfill is halted until conditions improve, if operationally feasible.

### **3.6 CCR Impoundments**

The North Impoundment and South Impoundments are inactive and in the process of being closed. At these impoundments, water trucks are used as necessary to prevent fugitive dust from becoming airborne. Additionally, vegetation or other cover may be placed to aid in prevention of airborne fugitive dust.

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

Per the original and subsequent CCR Fugitive Dust Control Plan documents, MEC is responsible for logging any citizen complaints that involve CCR fugitive dust events.

Between the dates of November 05, 2020, and when this report was written in November 2021, there had been no citizen complaints made to MEC regarding fugitive dust events. As such, no corrective action is necessary at this point.

## 5.0 RECORD OF REVISIONS AND UPDATES

| Revision Number | Date       | Revisions Made  | By Whom                                   |
|-----------------|------------|-----------------|-------------------------------------------|
| 0               | 11/18/2016 | Initial Issue   | Burns & McDonnell                         |
| 1               | 11/8/2017  | Annual Revision | Burns & McDonnell                         |
| 2               | 11/8/2018  | Annual Revision | Burns & McDonnell                         |
| 3               | 11/11/2019 | Annual Revision | Scott Burns, MEC<br>Environmental Analyst |
| 4               | 11/5/2020  | Annual Revision | Scott Burns, MEC<br>Environmental Analyst |
| 5               | 11/1/2021  | Annual Revision | Scott Burns, MEC<br>Environmental Analyst |
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