



**2020 ANNUAL CCR FUGITIVE  
DUST CONTROL REPORT**

**JEFFREY ENERGY CENTER**

**25905 JEFFREY ROAD, ST. MARYS, KANSAS**

December 11, 2020

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## Revision History

Revision Number	Revision Date	Section Revised	Summary of Revisions

## 1.0 Background

The purpose of this Annual CCR Fugitive Dust Control Report (Report) is to describe the Coal Combustion Residuals (CCR) fugitive dust control actions taken over the past year to control CCR fugitive dust; provide a record of all citizen complaints received; and to provide a summary of corrective measures taken at the Jeffrey Energy Center (JEC). The following sections provide background information on the facility, CCR, and related regulatory requirements.

### 1.1 Facility Information

Name of Facility:	Jeffrey Energy Center (JEC)
Name of Operator:	Evergy Kansas Central, Inc (Evergy)
Operator Mailing Address:	25905 Jeffrey Road, St. Mary's, Kansas 66536
Location:	4.5 miles north of Belvue, Kansas and approximately 4.3 miles west of Highway 63.
Facility Description:	Evergy, Inc owns and operates industrial landfills and a surface impoundment at the Jeffrey Energy Center (JEC) in Pottawatomie County, Kansas. Total generating capacity of the facility is approximately 2,175 MW. Coal Combustion Residuals (CCR) associated with burning coal include bottom ash, fly ash, economizer ash, and flue gas desulfurization materials (FGD). CCRs are currently placed in on-site active combustion byproduct landfills located on JEC property. The combustion byproduct landfills are permitted under Kansas Department of Health and Environment (KDHE), Bureau of Waste Management (BWM), Permit No. 359.

## 1.2 Coal Combustion Residuals

CCR materials are produced at coal-fired power plants when coal is burned to produce electricity. CCR materials are managed by coal-fired power plant sites, including on-site storage, processing (such as dewatering), and final disposal, typically in CCR landfills.

## 1.3 Regulatory Requirements

This report has been developed for the Jeffrey Energy Center in accordance with 40 CFR 257.80 (c). The CCR rule requires preparation of an Annual CCR Fugitive Dust Control Report for facilities including CCR landfills, CCR surface impoundments, and any lateral expansion of a CCR unit. Selective definitions from the CCR rule are provided below:

**CCR (coal combustion residuals)** 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.

**CCR fugitive dust** means solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than a stack or chimney.

**CCR landfill** means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

**CCR surface impoundment** means a natural topographic depression, manmade excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

**CCR unit** means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

The CCR Rule specifically requires that owners or operators of CCR facilities develop and adopt “measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities” (40 CFR 257.80). Evergy continues to follow the practices described in the Jeffrey Energy Center CCR Fugitive Dust Control Plan as revised April 5, 2018. The CCR Rule requires owners or operators 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.” In accordance with the same section of the CCR Rule, this report has been developed and placed within the CCR operating record on December 11, 2020.

## 2.0 CCR Fugitive Dust Controls

Potential CCR fugitive dust sources at the site generally include loading, unloading, transportation in trucks or on conveyors, stockpiles, vehicle traffic, and landfill placement. These general sources are categorized for JEC for the purposes of CCR fugitive dust management as follows:

- (1) Temporary Storage Areas
- (2) CCR Impoundments
- (3) CCR Landfill Units
- (4) Haul Roads
- (5) General Housekeeping

Between December 2019 and December 2020, the Jeffrey Energy Center implemented dust control measures and actions as follows.

### 2.1 Temporary Storage Areas

Fly ash and economizer ash (a different fraction of the fly ash generated at the plant) were initially collected within enclosed structures at the plant. Fly ash was pneumatically conveyed into silos and then loaded into enclosed trucks for either off-site beneficial use or disposal in the on-site landfill. Economizer ash was initially managed and stored in a similar manner. This material was then disposed of in the on-site Fly Ash Area 1 Landfill.

The referenced fly ash and economizer ash silos are above ground silos that have controlled loading into enclosed haul trucks. Trucks enter under the silos on a concrete pad for loading. A chute is lowered on top of the truck and the CCR is then loaded into the enclosed truck. The trucks are equipped with lids that are closed mechanically or manually once loading of the fly ash is complete and the chute is removed. Fugitive dust potential is minimized by minimal exposure of CCR to the atmosphere through this temporary storage and loading process. In the event that de minimis amounts of CCRs were observed on the loading pad, the CCRs were collected and properly disposed.

FGD gypsum that was initially handled at the plant was stacked in one containerized area which has controls in place to act as barriers against wind. These areas relied on front end loaders to load haul trucks for either off-site beneficial use or on-site disposal at the FGD Scrubber Gypsum Landfill or other permitted units. Haul trucks utilized canopies to protect the CCR material to minimize dust generation.

### 2.2 CCR Impoundments

Evergy has one active CCR surface impoundment at JEC. The Bottom Ash Pond is in the closure process. The Bottom Ash Settling Area impoundment was managed by intermittent excavation of settled bottom ash and dewatering of the material within the impoundment footprint. The dewatered material was then loaded into trucks with mechanically closed canopies which minimize potential dust generation and hauled offsite for beneficial use or placed in the Bottom Ash Area Landfill(s) footprint or other permitted units. The stacked material retained a level of moisture that prevented dust generation. When Evergy identified that the stacked material

needed additional measures to limit dust generation, either water or a dust suppressant was applied.

### **2.3 CCR Landfills**

The Bottom Ash Landfill, the Fly Ash Landfill and the FGD Landfill were all utilized for the disposal of CCRs generated on-site. Fugitive dust generation was managed by following actions: CCR was placed into the CCR units from haul trucks using minimal drop heights. The CCR material was conditioned via water truck as the material was placed or, at a minimum, on the same day as placement to develop a surficial crust to prevent fugitive dust mobilization. These areas were observed by Evergy personnel and if a portion of settled material became exposed above the water elevation, water was applied to prevent mobilization. Haul trucks limited travel speeds to 10 mph on active areas. Drivers avoided driving on active areas of the landfill and drove in Evergy-directed travel paths to avoid area agitation. Water was used as the primary means of suppressing dust. Dust suppressants were utilized to minimize fugitive dust when determined appropriate. A log was maintained to record water usage. Any areas that reached final grade received appropriate cover materials in accordance with applicable state permit requirements.

### **2.4 Haul Roads**

Both paved and unpaved roads were used to transport CCRs either off-site or to the on-site landfills. Paved roads at the facility were cleaned and maintained, as needed. Hauler equipment was serviced to minimize leaking and maintain normal operations. Posted speed limits were enforced during transport to limit mobilization.

### **2.5 General Housekeeping**

In addition to the location specific measures, spilled and/or deposited CCR material within the facility was cleaned within a timely matter.

### 3.0 Citizen Complaints

Evergy has implemented a plan for logging of citizen CCR dust complaints in accordance with 40 CFR 257.80(b)(3). No complaints were received by JEC or Evergy between December 2019 and December 2020.

#### **4.0 Summary of Corrective Measures**

The Evergy Environmental Services Department performed an annual review for logged complaints and of the CCR dust control measures in place for Jeffrey Energy Center. Evergy found the measures in place were effective, and no changes or corrective measures were necessary during the period of December 2019 to December 2020.