



**2020 ANNUAL CCR FUGITIVE  
DUST CONTROL REPORT**

**LAWRENCE ENERGY CENTER**

**1250 N. 1800 RD LAWRENCE, 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 Lawrence Energy Center (LEC). The following sections provide background information on the facility, CCR, and related regulatory requirements.

### 1.1 Facility Information

Name of Facility:	Lawrence Energy Center (LEC)
Name of Operator:	Evergy Kansas Central, Inc (Evergy)
Operator Mailing Address:	1250 N 1800 Road, Lawrence, KS 66049
Location:	Section 14, Township 12 South, Range 19 East in Lawrence, Douglas County, Kansas
Facility Description:	Evergy, Inc currently operates the Lawrence Energy Center (LEC), which consists of two operational coal fired electric generating units located in Lawrence, Kansas adjacent to the Kansas River. Total generating capacity of the facility is approximately 520 MW. Coal Combustion Residuals (CCR) associated with burning coal include bottom ash, fly ash, economizer ash, and flue gas desulfurization (FGD) materials. CCR are currently placed in an on-site, active combustion byproduct landfill located on LEC property. This combustion byproduct landfill is permitted under Kansas Department of Health and Environment (KDHE), Bureau of Waste Management (BWM), Permit No. 847.

## 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 Lawrence 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 Lawrence Energy Center CCR Fugitive Dust Control Plan as revised April 4, 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 LEC 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 Lawrence 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) was 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 stored in an enclosed bin on-site. This material was also disposed of in the on-site landfill.

The referenced fly 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 was 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 was observed on the loading pad, the CCRs were collected and properly disposed.

Economizer ash from Unit 4 was contained in above-ground bins that are enclosed on all sides. For periodic material removal, the bin was opened and removed by a front-end loader. The material was then loaded and transported to the landfill for disposal. For Unit 5, the bin utilized contains a chute that discharges directly into enclosed collection trucks.

Evegy also operates concrete tanks for management of scrubber sludge and bottom ash. The settled material was excavated, dewatered, and loaded into trucks. During loading and hauling, the sludge and bottom ash retained a sufficient level of moisture as pore water which minimized dust generation.

### 2.2 CCR Impoundments

Evegy has no active CCR surface impoundments at LEC. The inactive CCR surface impoundments have historically been used for the settling and processing of bottom ash, fly ash, and FGD scrubber sludge. These impoundments are currently undergoing closure by removal.

The following measures were used to minimize fugitive dust generation at the CCR concrete tanks and Area Pond 2, Area Pond 3, and Area Pond 4 until certified closed. When a portion of the settled material becomes exposed above the water surface elevation, Evergy applied water or a dust suppressant, as appropriate, and maintained appropriate moisture on exposed CCRs susceptible to fugitive dust generation.

### **2.3 CCR Landfills**

There is one active CCR landfill at LEC. The following measures were used to minimize fugitive dust generation at the CCR Landfill. CCR was placed onto the ground 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. Fly Ash was not placed during periods when winds are above 15 miles per hour. Haul trucks limited travel speeds to 10 mph on active areas. Drivers attempted to avoid 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 used to minimize fugitive dust, when determined appropriate. A log of water usage was maintained on-site.

### **2.4 Haul Roads**

Both paved and unpaved roads were used to transport CCRs either off-site or to the on-site landfill. 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 LEC 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 Lawrence Energy Center. Evergy found the measures in place were effective, and no changes or corrective measures were necessary during the period December 2019 to December 2020.