CCR FUGITIVE DUST CONTROL PLAN

Lawrence Energy Center

1250 N 1800 Road, Lawrence, KS 66049

April 16, 2021

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Revision History

Revision Number	Revision Date	Section Revised	Summary of Revisions
0	10/15/2015	N/A	Initial Issuance
1	4/17/2017	1, 2	Revisions to include CCR impound. & operational alterations
2	4/4/2018	1, 2	Revisions to include all permitted CCR management areas
3	2/17/2021	All	Updated format, company name, control measures & added new contact information.

1.0 Background

The purpose of this CCR Fugitive Dust Control Plan (Plan) is to identify and describe the Coal Combustion Residuals (CCR) fugitive dust control measures used to effectively minimize the potential for CCR to become airborne 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 one or more operational coal fired electric generating units located in Lawrence, Kansas adjacent to the Kansas River. 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. The CCR landfill is permitted under Kansas Department of Health and Environment (KDHE), Bureau of Waste Management (BWM), Permit No. 0847.

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. CCRs generated at the facility include fly ash, bottom ash, and flue gas desulfurization (FGD) materials. General characteristics of these CCR materials are described below.

- **Fly Ash** – Fly ash is captured from exhaust (flue) gases by emissions control equipment such as baghouses. Fly ash is characterized by clay-sized and silt-sized fine grain materials, consisting of silica, calcium, alumina, iron and trace heavy metals. Due to the small particle size and consistency, fly ash can often be mobilized by windy conditions when it is dry. Typically, the facility burns coal which generates fly ash with self-cementing properties in the presence of water. For this reason, a crust generally forms on its surfaces, reducing the potential for dust issues from fly ash storage areas.
- **FGD Materials** – FGD materials such as gypsum are produced by FGD emissions control systems, which are designed and operated to remove sulfur dioxide(SO2) from exhaust (flue) gases. FGD materials are generally produced as a wet sludge, which is then dewatered and managed as a dry material. Under certain conditions, FGD materials can form a crust on surfaces, reducing potential for dust issues from FGD storage areas.
- **Bottom Ash** – Bottom ash is characterized by sand-sized and gravel-sized materials, which settle by gravity to the bottom of a coal-fired furnace. Due to the heavier, larger-grained material, it is less prone to being mobilized under windy conditions when dry.
- **Economizer Ash -** This material is a type of fly ash but is generated and handled separately from fly ash. For the purposes of dust management, this material has characteristics similar to bottom ash.

1.3 Regulatory Requirements

This plan has been developed for the Lawrence Energy Center in accordance with 40 CFR 257.80(b). The CCR Rule requires preparation of a CCR Fugitive Dust Control Plan for facilities including CCR Landfills, CCR Surface Impoundments, and any lateral expansion of a CCR unit. Selected 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.
- **Qualified professional engineer** means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located.

The CCR Rule requires owners or operators of these CCR facilities to adopt and document "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). Owners/Operators of existing, active CCR units were required to prepare a CCR Fugitive Dust Control Plan "no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015" (40 CFR 257.80 (b)(5)). Owners of inactive CCR surface impoundments must prepare a CCR Fugitive Dust Control Plan no later than April 18, 2017 (40 CFR 257.100 (e)(4)(i)). This plan has been developed to meet these requirements and is in addition to any other Occupational Safety and Health Act (OHSA) standards applicable to this facility.

2.0 CCR Fugitive Dust Source & Control Measures

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) Facility Roads
(5) General Housekeeping

The Lawrence Energy Center has implemented these dust control measures, which are applicable and appropriate for site conditions in accordance with 40 CFR 257.80(b)(1).

2.1 CCR Temporary Storage Areas

The following CCR dust control measures are typically implemented at CCR temporary storage areas including stack-out areas, silos and load-out areas:

- Fly ash and economizer ash are initially collected in enclosed structures at the plant.
- Fly ash is pneumatically conveyed into silos and then loaded into enclosed trucks for disposal in the on-site landfill. Economizer ash is initially managed and stored in a similar manner.
- 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 the temporary storage and loading process.
- In the event that de minimis amounts of CCR is observed on the loading pad, the CCRs are collected and properly disposed.
- Economizer ash from Unit 4 is contained in above-ground bins that are enclosed on all sides. For periodic material removal, the bin is opened and removed by a front-end loader. The material is then loaded and transported to the landfill for disposal.
- Economizer ash from Unit 5 is contained in an above-ground bin. This bin contains a chute that discharges directly into enclosed collection trucks, preventing dust formation.
- Scrubber sludge and bottom ash generated on-site is transported into concrete tanks. Once the material has settled, the ash/sludge is excavated, dewatered, and loaded into trucks. During loading and hauling, the sludge and bottom ash retains a sufficient level of moisture as pore water which minimizes dust generation.

2.2 CCR Impoundments

Evergy 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.

Dust is not likely to be generated during the dredging/excavation process. However, until closure is completed, the following CCR dust control measures are typically implemented at the CCR Impoundments.

- If a portion of the settled material becomes exposed above the water surface elevation, water or a dust suppressant, as appropriate, is applied.
- CCR being excavated/relocated/regraded may be conditioned using water spray, sprinklers, or fogging systems. Alternatively, appropriate chemical dust suppression agents may be applied, as needed
- Appropriate moisture on exposed CCRs susceptible to fugitive dust generation are applied, as needed.

2.3 CCR Landfills

The LEC 847 landfill is utilized for the disposal of CCRs generated on-site. The following CCR dust control measures are typically implemented at the CCR Landfill.

- CCR is placed into the CCR landfill from haul trucks using minimal drop heights.
- The CCR material is conditioned via water truck as the material is placed or, at a minimum, on the same day as placement to develop a surficial crust to prevent fugitive dust mobilization.
- Haul trucks limit travel speeds to 10 mph on active areas.
- Fly Ash placement is restricted when wind speeds exceed 15 miles per hour.
- Drivers avoid driving on active areas of the landfill and drive in Evergy-directed travel paths to avoid area agitation.
- Abrupt starts and stops within the working face are avoid by drivers transporting through these areas.
- Water is used as the primary means of suppressing dust. Dust suppressants are utilized to minimize fugitive dust when determined appropriate. A log is maintained to record water usage.
- CCR being excavated/relocated/regraded may be conditioned using water spray, sprinklers, or fogging systems. Alternatively, appropriate chemical dust suppression agents may be applied, as needed
- Any areas that reached final grade will receive appropriate cover materials in accordance with applicable state permit requirements.

2.4 Facility Roads

The following dust control measures are typically implemented on roads in active use for CCR management activities at the facility. Both paved and unpaved roads are used to transport CCRs either off-site or to the

on-site landfills.

- Paved roads at the facility are cleaned and maintained, as needed.
- Hauler equipment is serviced to minimize leaking and maintain normal operations.
- Posted speed limits are enforced during transport to limit mobilization.

2.5 General Housekeeping

In addition to the location specific measures, spilled and/or deposited CCR material is collected and cleaned in a timely manner upon identification.

3.0 Citizen Complaint Log

A specific requirement of the CCR Fugitive Dust Control regulations (40 CFR 257.80(b)(3)) requires owners and operators of all CCR units to develop and implement formal procedures within the Plan for logging citizen complaints involving CCR fugitive dust events.

Complaints received by LEC or Evergy will be recorded by/forwarded to the designated point(s) of contact for logging and recordkeeping. LEC will maintain records of concerns about CCR fugitive dust from the facility in accordance with 40 CFR 257.80(b)(3)using the CCR Fugitive Dust Complaint Record provided in Appendix A.

Contact Information: Environmental Services Department

Address: Evergy
818 South Kansas Avenue
Topeka, Kansas 66601

Alternate:
PO Box 418679
Kansas City, MO 64141-9679

E-mail Address: EvergyCCR@evergy.com

Phone Number: 888-471-5275
Alternate:
(800) 383-1183

4.0 CCR Fugitive Dust Control Plan Assessment and Amendment

Evergy assesses the effectiveness of CCR Fugitive Dust Control Plans, annually, in accordance with 40 CFR 257.80(b). If practical and more effective prevention and control technology has been field-proven at the time of the review and will significantly improve dust controls, this CCR Fugitive Dust Control Plan will be amended to reflect the changes. Amended plans are certified by a qualified Professional Engineer as required by 40 CFR 257.80(b)(7). All plan changes are documented using the Revision History which prefaces this Plan.

Based on the assessment, Evergy may choose to amend this Plan if measures are deemed ineffective or if changes have been made to the areas being managed, the dust control measures, and/or other operating practices are required to continue compliance with the regulatory standards. Amendments to the current Plan will be completed in accordance with §257.80(b)(6) of the Final CCR Rule.

The state of Kansas will be notified in accordance with 40 CFR 257.106(g) when this Plan has been amended and placed in the facility operating record and on the Evergy CCR internet site.

5.0 ENGINEERING CERTIFICATION

Pursuant to 40 CFR 257.80 and by means of this certification, I attest that:

(i) I am familiar with the requirements of the CCR Rule (40 CFR 257);

(ii) I, or my agent, have visited and examined the Lawrence Energy Center;

(iii) the CCR Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the CCR Rule;

(iv) the CCR Fugitive Dust Control Plan meets the requirements of 40 CFR 257.80(b); and

Walter J. Martin, P.E.
Printed Name of Qualified Professional Engineer

Appendix A

CCR FUGITIVE DUST COMPLAINT RECORD

Site Name	_____
	_____
Time & Date of Correspondence	_____
Name of Citizen	_____
Phone Number	_____
Mailing address	_____
Email Address	_____
Topic of Correspondence	_____
	_____
	_____
Describe Observed Event (include date/time; wind & conditions, other info)	_____
	_____
	_____
	_____
Required Corrective Actions or Follow-Up, If Applicable	_____
	_____