CCR FUGITIVE DUST CONTROL PLAN

Iatan Generating Station

20250 Hwy. 45 North
Weston, Missouri

April 18, 2017
Rev. 1

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IATAN GENERATING STATION

CCR FUGITIVE DUST CONTROL PLAN

REVISION HISTORY

Revision Number	Revision Date	Revision Type[1]	Section Revised	Summary of Revisions
0	10/19/2015	Original	N/A	
1	4/18/2017	S	1, 2	Added North and South Ash Impoundment CCR Unit

Note 1: S Substantial (P.E. certification required)
N non-substantial
P periodic (include if substantial/non-substantial revision)

SECTION 1

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 becoming airborne at the Iatan Generating Station (Iatan). The following sections provide background information on the facility, CCR, and related regulatory requirements.

1.1 Facility Information

Name of Facility:	Iatan Generating Station
Name of Operator:	Kansas City Power & Light Company (KCP&L)
Operator Mailing Address:	20250 Hwy. 45, Weston, MO 64098
Location:	Approximately five miles northwest of Weston, Missouri.
Facility Description	The Iatan Generating Station has two coal-fired units that produce fly ash, bottom ash and gypsum. Both units are operated in a similar manner for the purposes of CCR dust control. CCRs not beneficially used are disposed in the CCR Landfill. Fly ash is collected and pneumatically conveyed to silos where it is off-loaded for beneficial use or transported via truck to the landfill. Bottom ash is handled though a submerged flight conveyor to paved stack-out areas where it is loaded into trucks and transported to a paved storage area. From the storage area the bottom ash is either shipped off-site for beneficial use or transported to the landfill for disposal. Gypsum is conveyed via conveyor and radial stacker to a concrete-contained stack-out area where it is either shipped off-site for beneficial use or transported to the landfill for disposal. Two

interconnected, inactive, incised earthen surface impoundments are located in the northwest area of the facility, and are being closed by removal of CCR material.

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 (SO_2) 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.

1.3 Regulatory Requirements

This Plan has been developed for the Iatan Generating Station 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). The owner or operator of an existing, active CCR unit 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)).

SECTION 2

CCR FUGITIVE DUST SOURCE AND 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 Iatan for the purposes of CCR fugitive dust management as follows:

(1) CCR short-term storage and management areas;
(2) CCR landfill and the North and South Ash Impoundment units; and
(3) Facility roads.

The Iatan Generating Station 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 Short-Term Storage and Management Areas

The following CCR dust control measures are typically implemented for CCR short-term storage and management areas including stack-out areas, silos and load-out areas.

- Gypsum is pre-conditioned and the gypsum conveyor is covered.
- CCR dust from fly ash is minimized by use of an enclosed pneumatic transport system and silos for staging. Storage silos are equipped with bin vent filters.
- Fly ash designated for landfilling is conditioned prior to loading into trucks and/or at the landfill. Unloading chutes and pug mill mixing chambers are equipped with vacuum return lines back to the silos.
- CCR excavated from the ash impoundment closure is loaded and transported in a moisture-conditioned state.
- During loading and unloading activities, drop height is reduced as practical to reduce the potential for mobilization of CCR dust.
- During high wind conditions, loading and management operations may be modified, reduced or halted.
- Bottom ash is managed wet prior to storage.
- A street sweeper is used to clean spilled CCR to prevent dusting.
- Water spray is applied as necessary to CCR prior to and/or during staging.

2.2 CCR Landfill

CCR is conditioned before being placed into the landfill. Water will be added as needed to the CCR materials to reduce wind dispersal and improve compaction during CCR placement in landfill units.

The following additional dust control measures may also be implemented at the landfill.

- Water spray is applied to the exposed CCR, including on the working face, as needed.
- Temporary cover is applied to areas that have not been covered for an extended period of time.
- During high wind conditions, unloading operations at the working face may be reduced or halted.

After final elevations are achieved, the final cap and cover, including vegetation, will be installed and maintained to reduce the potential for CCR becoming exposed to the atmosphere.

2.3 CCR Surface Impoundment Unit

In the interconnected CCR surface impoundments, CCR is stored in an encapsulated matrix or in a mixture with high water content, which would not be expected to cause dusting. Dust is not likely to be generated during the dredging/excavation operations associated with the clean closure process. If unencapsulated dredged/excavated CCR becomes dry, additional dust control measures such as adding water will be applied as necessary during loading and subsequent transportation for disposal or beneficial reuse.

2.4 Facility Roads

The following dust control measures are typically implemented for roads in active use for CCR management activities at the facility.

- Reduced vehicle speed limits are enforced to reduce dust mobilization. During high wind conditions, operations and related traffic may be reduced or halted.
- Prior to transportation, if needed, CCR may be covered using tarps to reduce the potential for CCR becoming airborne during truck transport. If tarps are not

practical or dusting is observed, water may be added to CCR prior to transportation.

- During non-freezing weather, unpaved roads at the Facility are sprayed multiple times per day using water trucks.
- Paved roads at the facility will be cleaned by a sweeper/vacuum truck and, during periods of high traffic and/or dry weather, may also be sprayed by water trucks.

SECTION 3

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 Iatan or KCP&L will be recorded by/forwarded to the designated point(s) of contact for logging and recordkeeping. Iatan 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.

SECTION 4

CCR FUGITIVE DUST CONTROL PLAN ASSESSMENT AND AMENDMENT

KCP&L periodically assesses the effectiveness of this CCR Fugitive Dust Control Plan in accordance with 40 CFR 257.80(b)(4). The CCR Fugitive Dust Control Plan is reviewed at least once every five years from the date of the last review for adherence to the requirements of 40 CFR 257(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. The amended plan will be implemented within **six months** of its completion. Five-year reviews will be documented and a statement signed documenting whether the CCR Fugitive Dust Control Plan is amended, and recording the results in Appendix B. Substantial changes made to this plan will be certified by a qualified Professional Engineer as required by 40 CFR 257.80(b)(7). All Plan changes will be documented using the Revision History which prefaces this Plan.

KCP&L will also amend this CCR Fugitive Dust Control Plan in accordance with 40 CFR 257.80(b) whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit. The amended Plan will be implemented before or concurrently with the initial receipt of CCR into any new CCR unit.

The state of Missouri 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 KCP&L CCR internet site.

SECTION 5

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 Iatan Generating Station;

(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

(v) the pages certified herein include Pages i, ii, 1 through 9, Appendix A (1 page), and Appendix B (1 page); altogether a total of 13 pages in a protected Adobe™ document.

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

APPENDIX A

CCR Fugitive Dust Complaint Record

CCR FUGITIVE DUST COMPLAINT RECORD

Site name **Iatan Generating Station**

Time and date of correspondence

Name of citizen

Phone number

Mailing address / email Address

Topic of correspondence (e.g., document question, concern, or observation)

Describe observed event, if applicable (include date/time, wind and weather conditions, and any other information provided)

Required Corrective Actions or Follow-up, if applicable

Note: Attach additional sheets or correspondence, as applicable.

APPENDIX B

CCR Fugitive Dust Control Plan Review Documentation

APPENDIX B

CCR FUGITIVE DUST CONTROL PLAN REVIEW DOCUMENTATION

Site Name: Iatan Generating Station

This CCR Fugitive Dust Control Plan has been reviewed in accordance with 40 CFR 257.80(b) and Section 4 of this CCR Fugitive Dust Control Plan to assess the effectiveness of the plan to effectively minimize CCR from becoming airborne at the facility. By means of this certification, I attest that I have completed a review and evaluation of this CCR Fugitive Dust Control Plan for the Facility and as a result:

_____ Will

_____ Will Not

amend the Dust Control Plan. All Plan changes will be documented using the Revision History which prefaces this Plan. Substantial changes to the CCR Fugitive Dust Control Plan will be certified by a Qualified Professional Engineer.

_____ _____

Signature, Authorized Facility Representative Date

_____

Name (Printed)

_____

Title