

FUGITIVE DUST CONTROL PLAN

CITY UTILITIES OF SPRINGFIELD, MISSOURI

PREPARATION DATE: 4/13/2017

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PLAN CERTIFICATION

Gerad Fox, Missouri Professional Engineer, License Number 2013019048, hereby certifies that the CCR fugitive dust control plan set forth herein meets the requirements of 40 CFR Section 257.80.

Name: Gerad Fox

Signature: 

Date: 4/13/2017

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1. PURPOSE

- A.** City Utilities of Springfield (CUS) operates Coal Combustion Residuals (CCR) units at both the James River Power Station (JRPS) and the John Twitty Energy Center (JTEC) located within the City limits of Springfield in Greene County, Missouri.
- B.** Both JRPS and JTEC received Title V Part 70 Operating Permits from the Missouri Department of Natural Resources (MDNR) Air Pollution Control Program (APCP). Fugitive emissions (dust) are required to meet Core Permit Requirement under 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*.
- C.** Per regulatory requirements, CUS has prepared this document to serve as our CCR Fugitive Dust Control Plan (FDCP).
- D.** The FDCP is written to provide appropriate dust control measures to meet the requirements of the Coal Combustion Residuals regulation as prescribed under 40 CFR Part 257.80(b).
- E.** Every effort will be made to implement the procedures within the FDCP to meet the existing regulatory requirements of this rule.
- F.** The FDCP is a living document and will be modified as necessary to meet regulatory requirements and implement appropriate available control technologies. All plan modifications will be reviewed and certified by a qualified professional engineer as necessary, and posted on the CUS website.
- G.** As per 40 CFR Part 257.80(c), an annual report shall be posted by the effective date listed per the regulation and every thirteen (13) months following the previous report.

2. FUGITIVE DUST CONTROL MEASURES AND CONDITIONED CCR EMPLACEMENT PROCEDURES

A. Culture of Compliance

- i. As required, responsible personnel will be informed of the regulations that apply to each facility and will be directed to make every effort to implement the requirements of this plan.
- ii. Appropriate personnel will be directed to stop maintenance activities when excessive dust is being formed and take necessary steps to effectively minimize CCR from becoming airborne.

B. Minimizing On-Site CCR

- i. CCR production will be considered when making coal purchase agreements. All coal suppliers must adhere to ash content specifications set forth by CUS.
- ii. Marketing of CCR product for approved beneficial uses shall be maximized. Currently, CUS is under contract with a third-party contractor to have CCR taken from our facilities for beneficial use whenever possible. Beneficial uses of CCR must adhere the standards in the CCR regulations and CUS beneficial use approval from the MDNR Solid Waste Program (SWP).

C. On-Site CCR Management

i. Fly Ash Handling (All JTEC Units)

- a. Fly ash at both facilities is collected dry and stored in silos prior to transport.
- b. Fly ash is transferred from the silos either as conditioned CCR to trucks and transported to the facility CCR landfill or transferred dry to third party fully-enclosed pneumatic trucks for off-site beneficial uses.
- c. Fly ash transported to a CUS CCR landfill is processed through CCR conditioning equipment to produce conditioned CCR prior to being transferred to trucks.
- d. Trucks travel a series of maintained haul roads to transport the conditioned CCR to the facility's CCR landfill.
- e. Conditioned CCR is placed in the landfill by the trucks and then emplaced to its final resting position and compacted by the landfill heavy operating equipment.

ii. Bottom Ash Handling (JTEC Unit 1)

- a. At the JTEC facility the bottom ash from JTEC Unit 1 is sluiced to a sealed concrete tank. The concrete tank is made up of two cells where only one cell is in operation at any given time. Once the active cell becomes full the bottom ash is dewatered to create acceptable conditioned CCR. Once dewatered the conditioned CCR is transferred to a truck for transport. The trucks travel maintained haul roads to transport the conditioned CCR to the JTEC CCR landfill.
- b. Conditioned CCR is placed in the JTEC CCR landfill by the trucks and then emplaced to its final resting position and compacted by the landfill heavy operating equipment
- c. The bottom ash removed from the JTEC Unit 1 concrete tank is considered conditioned CCR as it is allowed to drain of any free liquids but still maintains a moisture content that prevents wind dispersal.

iii. Bottom Ash Handling (JTEC Unit 2)

- a. At the JTEC facility the bottom ash from JTEC Unit 2 is processed by CCR conditioning equipment and transferred to a truck as conditioned CCR. The trucks travel maintained haul roads to transport the conditioned CCR to the JTEC CCR landfill.
- b. Conditioned CCR is placed in the JTEC CCR landfill by the trucks and then emplaced to its final resting position and compacted by the landfill heavy operating equipment.
- c. The bottom ash removed from the JTEC Unit 2 CCR conditioning equipment is considered conditioned CCR as it is allowed to drain of any free liquids but still maintains a moisture content that prevents wind dispersal.

D. Facility Management

i. CCR Conditioning Equipment

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- a. To the extent practicable, CCR conditioning systems will be reasonably maintained in accordance with the manufacturers' recommendations using accepted industry practices.
 - b. CUS will maintain contracts with requisite original equipment manufacturers, and will have the OEM periodically audit CCR relevant equipment to ensure optimal operations.
 - c. An appropriate spare parts inventory shall be maintained in order to respond to upset conditions in a timely manner.
- ii. Site Activities
- a. All haul roads will be maintained to minimize fugitive dust from becoming airborne when CCR is being transported to the on-site landfill. Maintenance practices may include but are not limited to;
 - (1) Paving and Sweeping Roads
 - (2) Watering and Spraying
 - (3) Reducing Vehicle Speed Limits
 - (4) Limiting Hauling Operation During High Wind Events
 - b. Housekeeping activities will be performed in the CCR loading areas as necessary to maintain cleanliness to the extent practicable that effectively minimizes CCR from becoming air borne at each facility when CCR byproduct is being transported to the on-site landfill.
- iii. CCR Vehicle Usage and Maintenance
- a. CCR transport vehicles and heavy equipment will be maintained to the extent practicable in accordance with manufacturers' recommendations using accepted industry standards.
 - b. CCR transport vehicles and heavy equipment will be washed as necessary to minimize fugitive dust creation effectively minimizing CCR from becoming air borne at each facility.
 - c. CCR transport vehicles and heavy equipment will minimize traveling off of designated areas.
- iv. CCR Landfill Operation
- a. CUS CCR landfills shall be operated in accordance with the existing landfill operating plans in place consistent with the FDCP.
 - b. CUS CCR landfills shall only accept conditioned CCR.
 - c. CCR vehicle activity areas will be watered as necessary to effectively minimize CCR from becoming air borne at each facility.
 - d. Conditioned CCR accepted by the CUS CCR landfills will be emplaced and compacted in its permanent resting place.

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- e. CCR trackout control will be implemented at the CUS CCR landfills to minimize fugitive dust from effectively becoming air borne, strategies may include, but are not limited to;
 - (1) Tire Wash Station
 - (2) Rumble Strips
 - (3) Trackout Rock Pad
- f. Inactive CCR surface areas within the CCR landfill shall be covered to minimize fugitive dust from effectively becoming air borne; strategies may include, but are not limited to;
 - (1) Seeded Grass
 - (2) Mulch
 - (3) Soil Cement
 - (4) Ground Blankets/Tarps
 - (5) Chemical Dust Suppression Agent
 - (6) Watering
- v. CUS Surface Impoundment Operation/Clean Closure
 - a. All CUS Surface Impoundments have been clean closed with the exception of the JRPS East Surface Impoundment. The JRPS East Surface Impoundment is currently in the process of being remediated and cleaned closed however still contains CCR. During this transition period any areas where CCR is present CUS will minimize fugitive dust from effectively becoming air borne. Strategies may include, but are not limited to;
 - (1) Soil Cement
 - (2) Ground Blankets/Tarps
 - (3) Chemical Dust Suppression Agent
 - (4) Watering
 - b. Upon closure of any CUS Surface Impoundment CUS has and will immediately establish permanent vegetation.

E. Special Events/Activity Curtailment

- i. In the event where the FDCP is required to be temporarily superseded for a special event the following measures shall be taken;
 - a. CUS Power Generation management will implement effective procedures to minimize fugitive dust during the special event or upset condition.
 - b. Oversight of dust mitigating procedures during the special event shall be performed by plant management or their representatives.
- ii. CCR transfer, transport and landfill activities will be suspended during high wind conditions where fugitive dust cannot be effectively minimized. These occurrences will be documented in the plant operating record.

- iii. During extreme dry periods, CUS plant management or their representatives will deploy additional control measures to ensure fugitive dust is minimized during these periods.

3. FUGITIVE DUST CONTROL MEASURE APPLICABILITY

- A. Fugitive dust control measures mentioned in this FDCP are considered applicable and appropriate as they have demonstrated the capability to control fugitive dust and are consistent with industry practices. CUS has procedures in place to periodically assess the effectiveness of fugitive dust control measures and correct ineffective control practices. As needed, additional fugitive dust control measures will be evaluated and implemented where appropriate and reflected in revisions to the FDCP.

4. FDCP PERIODIC ASSESSMENT PROCEDURES

- A. Operational inspections will be periodically performed to ensure appropriate dust control is being achieved in accordance with the rule.
- B. Plant management, equipment operators and environmental staff will be trained to monitor dust production during routine activities, including CCR transfer, transport and landfill activities. Abnormal situations or upset conditions will be reported to plant management, and Environmental Affairs and documented in the plant operation record as follows;
 - i. Date/time of event.
 - ii. Date/time event suspended.
 - iii. Description of event.
 - iv. Corrective action taken.
 - v. Date/time operations.
- C. All CUS facilities will have regularly scheduled management update meetings. Abnormal situations or upset conditions will be discussed during these meetings and the FDCP effectiveness will be considered during these discussions. If a change to the FDCP is deemed necessary it will be implemented and recorded as specified in Section 1.E. of this document.

5. CITIZEN COMPLAINT PROCEDURES

- A. All citizen complaints received concerning fugitive dust will be logged at the respective plants by administrative personnel as assigned. The initial log will contain the following information;
 - i. Date and time when complaint was received by CUS
 - ii. Name and contact information of individual or group filing complaint (In cases where the complainant wants to remain anonymous make a note as such in log)
 - iii. Description of incident which the complaint is targeted towards.

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- B. After the initial log the citizen complaint will be communicated to CUS Power Generation management and Environmental Affairs for proper record keeping and reporting.
- C. Power Generation management will initiate prompt investigation into the complaint received, documenting the incident and any required corrective actions in the plant operating record. Documentation should include;
 - i. Cause/Description of incident
 - ii. Summary, date and time of corrective actions taken
- D. Power Generation management will initiate follow up communication with the complainant as soon as practicably feasible to acknowledge the incident and inform the complainant of the corrective actions taken, if any. Date, time and communication notes will be included in the plant operating record.
- E. Complaint follow-up with the Missouri Department of Natural Resources (MDNR) will be the responsibility of Environmental Affairs.
- F. Complaints records can be submitted/received via the CU website at <https://www.cityutilities.net/customer/contact-us-msg/> or through the CU switchboard at 863-9000 (24-hour number). The complaint will be communicated to the appropriate personnel and Environmental Affairs by end of next business day, to the extent practicable.