Fugitive Dust Control Plan for CCR Rule

Cherokee Station

Date: October 19, 2015
Revision: 0

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Appendices

Revision Log

Revision No.	Revision Date	Revised Sections	Notes
0	October 19, 2015	NA	Original Publication

Certification of Plan

The Plan shall be prepared, signed and sealed by a professional engineer.

"I hereby certify that this plan meets the requirements of the Coal Combustion Residual Rule (40 CFR 257.80(b)(7))."

Print name: Sara Lubchenco

Signature: Sara Lubchenco

Date: 10/5/2015

License #: 0044344

1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published regulations under subtitle D of the Resource Conservation and Recovery Act (RCRA) meant to control the disposal of coal combustion residuals (CCR) generated by coal fired power plants. The rule defines a set of requirements for the management of CCR in landfills and surface impoundments. 40 CFR 257.80(a) specifies that an owner or operator of a CCR landfill, surface impoundment, or lateral expansion of a CCR unit must develop a Fugitive Dust Plan by October 19, 2015 that will effectively mitigate the transport of CCR fugitive dust from the facility. Controlling fugitive dust associated with CCR at Cherokee Station (Cherokee) is addressed through a fugitive dust control program. Cherokee is required to establish a Fugitive Dust Control Plan (Plan) and follow it at all times. This Plan has been specifically designed to outline measures that will minimize airborne dust at the plant under the CCR rule.

CCR sources are the loading and unloading of the fly ash and Flue Gas Desulfurization (FGD) silo, bottom ash from the boiler in impoundments, transport of CCR from the silo for off-site disposal, transport of the bottom ash from the impoundments for off-site disposal, and fugitive emissions from paved roads.

The Plan includes activities such as conditioning CCRs for handling, controlling vehicle speeds, watering/sweeping of roads and work areas, and following processes and procedures intended to minimize dust. Because the facility is currently required to manage and monitor fugitive dust emissions as required by the Title V permit, the Cherokee staff and CCR contractor are actively engaged in dust control on a continuous basis. This Plan is a formal statement of the activities and the methods specifically designed to minimize the creation of airborne dust, meeting all of the applicable requirements of the CCR Rule.

Based on implementation of the Title V fugitive dust plan, all of the control measures in place have proven to be effective in the prevention or control of airborne fugitive dust. Each measure has been carefully planned and executed based on site-specific operating conditions in order to achieve the intended control. The dust control measures are outlined in the sections below. Watering is the main process used to control fugitive dust from CCR storage areas and plant roads. Additional control measures are also in place for these areas and are described in the sections below.

2 Fugitive Dust Control

2.1 Overview

The primary control for fugitive dust is the wetting of CCR during unloading from storage areas (conditioning in the fly ash silo and dewatering in the bottom ash ponds). Watering is also employed on plant roads to control the generation of fugitive dust, as needed. Weather conditions are visually observed by Cherokee staff and the CCR contractor and watering needs are adjusted to meet operational criteria and site conditions. The following sections explain the process of controlling dust in these areas by the use of water and other control methods. The attached site map illustrates all of these areas of the facility.

2.2 CCR Dust Control Areas

Generally speaking, the process of keeping CCRs, plant roads, and other areas watered sufficiently is the most appropriate method of dust control since the equipment and materials used are reliable, cost effective, and easily adjusted to site conditions. The following sections specifically identify CCR generation areas, CCR handling operations, and the preferred control measures to reduce dusting.

2.2.1 Plant Roads (40 CFR 257.80(b)(1))

All of the CCR haul roads are paved roads at Cherokee. In addition, roads have a posted speed limit of 15 mph to reduce dusting. By limiting speed, the fugitive dust generation is reduced. Finally, the roads are watered and swept as needed to eliminate any residual dusting. The use of reduced speed, water application, and sweeping are appropriate methods for dust control because they have met the requirements of the Title V permit fugitive dust plan.

2.2.2 Bottom Ash Ponds (40 CFR 227.80 (b)(1) and (2))

Cherokee utilizes a slurry system to sluice ash from the boiler bottom to incised impoundments in a wet condition. The bottom ash drains freely, but has a slight water content due to the sluicing operation and is a large enough particle size that it is inherently not subject to dusting.

The bottom ash is dewatered in impoundments and direct loaded into covered trucks for transport. The bottom ash is emptied by an excavator and placed into the trucks for transport to off-site disposal. The working area surrounding the ponds is watered as necessary to minimize dusting during pond cleanout activities.

2.2.3 Fly Ash and FGD Silo (40 CFR 227.80 (b)(1) and (2))

The loading and unloading of fly ash and FGD materials takes place in a partially enclosed building to minimize the generation of fugitive dust. In addition to the building enclosure, the silo is vented to a dedicated baghouse that collects the majority of any dust created during the loading or unloading process. The use of a partial enclosure and silo venting to the baghouse is an effective way to mitigate CCR from becoming airborne during the loading and unloading process. The baghouse is inspected on a set schedule and a preventative maintenance schedule is followed to ensure the baghouse is operating correctly.

The fly ash and FGD materials are stored in a silo. The silo is equipped with a pug mill to condition the ash prior to loading into covered trucks for transport off site. The mill adds water and conditions the ash on the outlet side of the silo prior to being placed in the transport trucks. Sufficient water is used to stabilize the ash, but not result in free liquids. The pug mills are inspected on a set schedule and a preventative maintenance schedule is followed to ensure the pug mills are operating correctly.

The site may also perform dry unloading into fully enclosed pneumatic trucks using the same enclosure and venting controls listed above. The equipment used for dry unloading is inspected on a set schedule and a preventative maintenance schedule is followed to ensure it is operating correctly.

2.2.4 Ash Hauling (40 CFR 227.80 (b)(1) and (2))

CCR dusting can occur from the paved roads as trucks haul CCR from generation points until leaving the site.

Cherokee employs the services of a CCR contractor for transporting the ash from the plant to off-site disposal. The contractor owns a water truck equipped with side and rear spray nozzles and a hand line

for dust control on plant roads and other areas, as described in this Plan. The contractor also has a road sweeping vehicle for wet sweeping of paved areas.

As previously discussed, the bottom ash is not subject to dusting and no further dust suppression technologies are considered for the transport of the bottom ash. Similarly, the transport of the conditioned CCR (Fly Ash and FGD material) also does not require additional dust suppression technologies as the CCR maintains a water content that prevents dusting as the material is moved.

The process of keeping CCRs, plant roads, and other areas watered sufficiently is the most appropriate method of dust control since the equipment and materials used are reliable, cost effective, and easily adjusted to changing site conditions.

2.2.5 CCR Landfill (40 CFR 227.80 (b)(1) and (2))

No CCR landfill is located at this site.

2.3 Watering Procedure

Watering for fugitive dust control is conducted throughout the year. It is governed primarily by the current and anticipated meteorological and site conditions. The control of the watering program is given to the CCR contractor who estimates the dust generation potential based on current observed conditions and their past experience. Watering is accomplished by using a water truck equipped with a watering bar and hand line.

2.4 Recordkeeping

The Cherokee CCR contractor can identify the time spent by its staff on watering and sweeping. Also, maintenance records are kept on the water and sweeper truck to assure proper operation. Record keeping for watering and sweeping activities is maintained by the contractor in an operating log. Maintenance records on the CCR storage and handling systems are also maintained at the facility.

3 CCR Areas Inspection (40 CFR 257.80(b)(4))

In order to assure that all measures outlined in this Plan are in place, being followed and working effectively, they will be assessed in the weekly inspection that is done as part of the Title V permit compliance program. The weekly inspection will include verification that all fugitive dust control measures, as outlined in the plan, are being followed effectively. Documentation of weekly inspections will be through the company's environmental management software system. If there is anything to address, a maintenance work order will be initiated and tracked through the company's work management system. In addition, plant personnel are trained in opacity visual observations that are used to determine compliance with the facility Title V air permit and therefore, the effectiveness of point source controls under this Plan.

4 Fugitive Dust Complaint Log (40 CFR 257.80(b)(3))

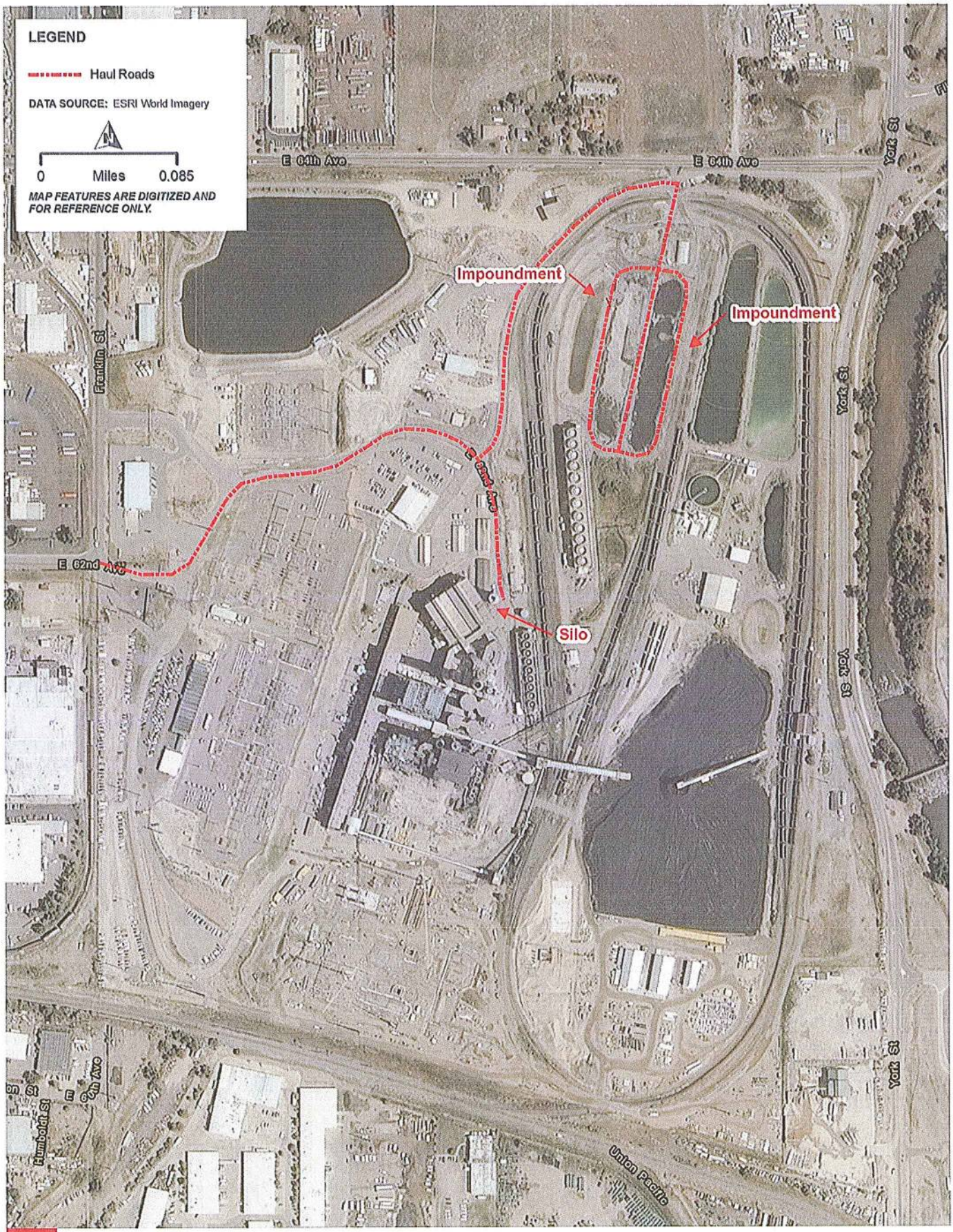
Fugitive dust complaints received from citizens via the dedicated email account (PSCoCCRInquiries@xcelenergy.com) published on our CCR Rule Compliance Data and Information

public website or to the Plant Environmental Analyst will be reviewed and investigated. Any citizen complaints of fugitive dust appearing to originate from the plant will be investigated immediately. A log will be kept to record all occurrences of confirmed fugitive dust from CCR areas. If the fugitive dust is found to have originated from the CCR areas, follow-up and corrective actions will be taken as needed. The template for this log is included as an attachment to this Plan.

5 Plan Updates (40 CFR 257.80(b)(6))

This Fugitive Dust Control Plan will be assessed annually unless a need is identified during the weekly inspection or upon analysis of a citizen complaint. As part of the assessment, all processes and procedures will be reviewed for their effectiveness and efficiency at minimizing or eliminating the generation of fugitive dust. The plan will be updated if any new dust control measures are implemented at Cherokee or new CCR unit is constructed. Lastly, the facility map will be updated with any changes to CCR management areas.

Appendix A – Facility Site Map



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Appendix B – Complaint Log

Fugitive Dust Complaint Log									
Reported			Alleged Event Information				Incident Evaluation		
Date	Time	Complainant	Date	Time	Location	Description	Type	Response	Follow Up