April 16, 2019
File No. 27218357.00

Mr. Brian Trower
Assistant Director – Electric Services
Ames Municipal Electric System
502 Carroll Avenue
Ames, Iowa 50010

Subject: Coal Combustion Residuals (CCR) Fugitive Dust Control Plan Revision

Dear Mr. Trower:

SCS Engineers has prepared a revised CCR Fugitive Dust Control Plan for the City of Ames Steam Electric Plant in accordance with the requirements set forth in §257.80(b)(6) of the CCR Rule (40 CFR 257.50-107). This revision mainly removes references made in the original Fugitive Dust Control Plan to a CCR Landfill within the surface impoundment.

If you have any questions regarding this document, please contact the undersigned.

Sincerely,

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Coal Combustion Residuals (CCR) Fugitive Dust Control Plan

Revised April 2019

City of Ames Steam Electric Plant

Ames Municipal Electric System
502 Carroll Avenue
Ames, Iowa 50010

SCS ENGINEERS

Report No. 27218357.00 | April 2019

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1 PE CERTIFICATION

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Christine L Collier

Digitally signed by Christine Collier
Date: 2019.04.16 12:49:24 -05'00'

(signature) (date)

Printed or typed name: Christine L. Collier, P.E.

License number 17963

My license renewal date is December 31, 2019.

Pages or sheets covered by this seal:

Entire Document

2 INTRODUCTION

On April 17, 2015, the Environmental Protection Agency issued the final version of the federal Coal Combustion Residuals (CCR) Rule to regulate the disposal of CCR materials generated from the combustion of coal at electric utilities and independent power producers. The initial federal CCR Rule allowed for inactive CCR surface impoundments that had completely closed by April 17, 2018 to have no other requirements applied to that unit (i.e., the "early closure" provisions). However, on June 14, 2016 the United States Court of Appeals for the D.C. Circuit ordered the vacatur of these "early closure" provisions in Code of Federal Regulations (CFR) 40 Part §257.100. The effect of the vacatur is that all inactive CCR surface impoundments must now comply with all of the requirements applicable to existing CCR surface impoundments. Inactive power plant ash impoundments containing CCR are regulated under 40 CFR Part §257.100.

The City of Ames (COA) Ames Municipal Electric System operates a Steam Electric Plant (SEP) located at 200 E 5th Street in Ames, Iowa. The COA SEP is subject to the CCR Rule and in accordance with the rule must maintain a CCR Fugitive Dust Control Plan as specified in Section §257.80(b)(1) through (7) of the rule. This document provides an update to the original CCR Fugitive Dust Control Plan (Plan) developed by Wenck Associates in October 2015.

This Plan describes the measures used to minimize fugitive CCR dust from facilities with CCR surface impoundments[1], the procedure for logging citizen complaints involving CCR fugitive dust events, and the procedure for periodic review of this plan. This plan has been developed in accordance with 40 CFR 257.80(b).

3 BRIEF DESCRIPTION OF IMPOUNDMENT

The COA SEP is located at 200 East 5th Street, in Ames, Iowa. Since 1982 the COA SEP has placed their CCR materials in a single CCR surface impoundment located approximately 3,000 feet northeast of the generating station in Section 1, Township 83 North, Range 24 West, as shown in Figure 1. The approximately 9.6 acre Inactive CCR Surface Impoundment (Impoundment) is located adjacent to and to the east of the COA Water Treatment Plant's Lime Pond. The Impoundment (shown in Figure 2) is approximately 900 feet in length in the east-west direction and a maximum of 675 feet in length in the north-south direction. Based on the 2017 aerial image obtained from the COA and the parcel information found on the COA Beacon™ geographic information system (GIS) site, the area to the north and immediate northeast of the Impoundment is privately-owned crop land, to the northeast beyond the privately owned

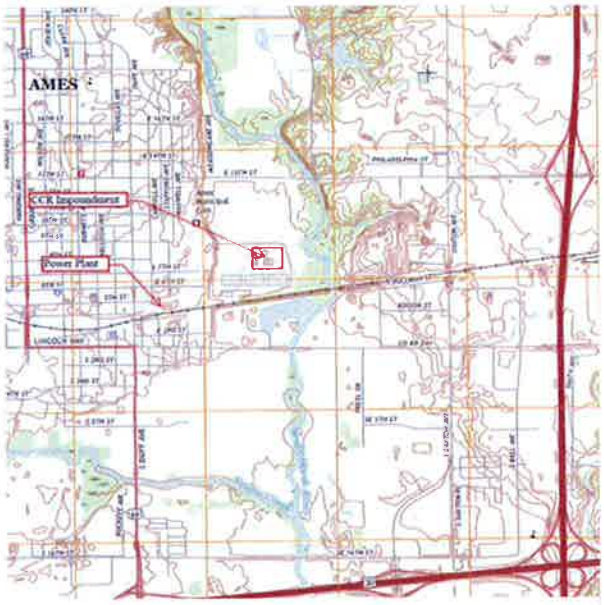

Figure 1: USGS Topo Map - 2012

[1] "CCR" and "CCR surface impoundment" are defined at 40 CFR 257.53.

crop land is the COA South River Valley Park, to the east (ranging from 450 to 950 feet) is the South Skunk River, to the south is COA property and the railroad embankment for the Union Pacific Railroad, and to the west is the lime pond.

Figure 2 Site Photograph (Google earth, 7/12/2017)

4 SITE OPERATIONS – POTENTIAL CCR DUST EMISSIONS SOURCES

The COA SEP has utilized the Impoundment for both fly ash and bottom ash, in addition to unburned refuse derived fuel (RDF) material. The COA SEP has also sold fly ash to another party for beneficial use while fly ash was generated. The majority of the material sluiced from the power plant to the pond (wet condition) when fly ash was sold was composed of bottom ash and unburned RDF materials. Beginning in October 2015, the COA SEP no longer utilized the Impoundment for managing bottom ash from coal and beginning in 2016 the COA SEP now co-fires the RDF material with natural gas. Material that has been introduced to the Impoundment has been in a wet condition and settled to the bottom of the Impoundment. Therefore, dust emissions from past and current sluicing operations are minimal, if at all. In order to maintain adequate capacity within the Impoundment, the COA SEP has periodically excavated the fly ash, bottom ash, and unburned RDF

mixture and either stockpiled the material as seen in Figure 2 or had the material hauled off-site. Therefore, potential CCR dust emission sources on site are from:

- Gravel roads around the perimeter of the Impoundment;
- Excavation of material from the Impoundment (low since the material is wet);
- Stockpiling of material above the waterline within the Impoundment; and
- Loading material for transport off-site.

5 MEASURES FOR CONTROLLING FUGITIVE DUST

COA SEP staff completes a visual inspection of the Impoundment at least daily, and typically three times a day with each work shift. This allows for staff to initiate action in the event of an observation of dust emissions. The following measures are appropriate options for minimizing CCR in the event that dust emissions require action:

- Establishing and enforcing a vehicle speed limit. Reduced speeds minimize fugitive dust generated from vehicle traffic.
- Utilizing an outside contractor or COA sweepers to apply water to the gravel perimeter road.
- Application of water to material stockpiles.
- Covering all open-bodied vehicles transporting CCR to minimize the generation of fugitive dust during transport of CCR.
- Minimizing fall distances when handling or transferring CCR. Best practices suggest handling CCR material with end loaders or excavators to minimize the fall distance when moving CCR material either onto stockpiles within the Impoundment above the water line or into haul vehicles. Other best management practices can also be used to minimize the generation of fugitive dust.
- Promptly collecting CCR that is observed in vehicle loading/unloading areas to minimize the potential for CCR to become airborne.
- Continued wet-sluicing of non-CCR bottom ash and unburned RDF material to the existing Impoundment. Moistened material is less likely to become airborne.

These measures are applicable to the CCR managed at this facility and appropriate for the conditions at this site because they are compatible with current operations and they effectively minimize the generation of fugitive dust.

6 PROCEDURE FOR LOGGING CITIZEN COMPLAINTS

To date there have been no citizen complaints regarding dust emissions from the active and now inactive Impoundment. In the event that a complaint is received, the call will be routed to either the COA SEP or the Assistant Director of Electric Services. The COA SEP will then investigate the merit of the complaint and take appropriate and reasonable measures as soon as practical. COA SEP will keep a record of fugitive dust complaints received and mitigation measures taken. At a minimum, the record will include the following:

- Name and contact information of the person or party making the complaint
- Date and time of complaint
- Weather conditions at the time of the complaint

- Nature of the complaint: Describe the complaint and likely source of CCR fugitive dust emissions, if from CCR
- Operations occurring on site at the time of the complaint
- Describe mitigation measures taken including:
  - Date of mitigation actions
  - Location of mitigation actions taken
  - Description of mitigation actions
  - Effectiveness of mitigation actions

Records of fugitive dust complaints and a summary of mitigation measures taken will be included in the Annual CCR Fugitive Dust Control Report, as required by §257.80(7) of the CCR rule.

7 PROCEDURE FOR PERIODIC REVIEW OF CCR FUGITIVE DUST CONTROL PLAN

The CCR Fugitive Dust Control Plan will be reviewed annually, and updated as necessary, in conjunction with preparation of the Annual CCR Fugitive Dust Control Report [§257.80(c)]. During the periodic review, COA SEP will evaluate each measure for controlling fugitive dust to ensure that it is still appropriate for minimizing CCR from becoming airborne at the facility, will verify that the procedure for logging complaints is sufficient, and will evaluate other operational changes at the facility to determine whether additional dust control measures should be added.

8 REVISIONS, RECORDKEEPING, AND REPORTING

The Fugitive Dust Control Plan is required to be updated whenever there is a change in conditions that would substantially affect the written plan in effect. This will be reviewed each year with the completion of the Annual CCR Fugitive Dust Control Report. The initial and subsequent plans must be certified by a qualified professional engineer or have a certification of approval from the Participating State Director or approval from the Environmental Protection Agency (EPA) where EPA is the permitting authority that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of §257.80(b).

The COA SEP will place this Revised Fugitive Dust Control Plan in the CCR Operating Record and on the COA SEP's CCR Rule Compliance Data and Information website. The COA SEP will notify the Iowa Department of Natural Resources (IDNR) that this report has been revised and placed in the facility's operating record and on the COA SEP CCR Rule Compliance Data and Information website.