



CCR Fugitive Dust Control Plan



Omaha Public Power District
North Omaha Station

Omaha, Nebraska
October 16, 2015

OPPD North Omaha Station CCR Landfill Fugitive Dust Control Plan

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OPPD North Omaha Station CCR Landfill Fugitive Dust Control Plan

Revision Log

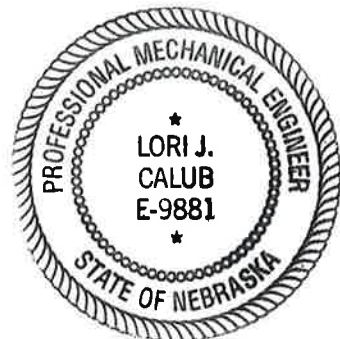
This CCR Fugitive Dust Control Plan may be revised from time to time when control measures or procedures are changed. Because revisions to this document can be made on a periodic basis, document control is necessary. The most recent version of this CCR Fugitive Dust Control Plan is required to be posted on the CCR website. The revision log below must be updated every time when this plan is amended.

Revision No.	Revision Date	Revised Sections	Originator	Notes
0	October 16, 2015	NA	HDR	Per CCR Rule

Professional Engineer Certification

"I hereby certify that this CCR Fugitive Dust Control Plan for the Omaha Public Power District North Omaha Station meets the requirements of the Coal Combustion Residual Rule 40 CFR 257.80(b). I am a duly licensed Professional Engineer under the laws of the State of Nebraska."

Print Name: Lori J. Calub
 Signature: Lori J. Calub
 Date: 10-16-2015
 License #: E-9881



My license renewal date is December 31, 2017.

1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residuals (CCR) under subtitle D of the Resource Conservation and Recovery Act (RCRA). The CCR rule defines a set of requirements for the disposal and handling of CCR in landfills and surface impoundments. One of the operating criteria for air, 40 CFR §257.80(b), specifies that an owner or operator of a CCR landfill, surface impoundment, or lateral expansion of a CCR unit must develop a CCR fugitive dust control plan by October 19, 2015.

1.1 Purpose

The CCR rule requires CCR landfills to develop a CCR fugitive dust control plan and adopt 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(a)). The plan must include:

- Identification of the CCR handling areas and control measures taken to minimize CCR fugitive dust at the facility
- Explanation of how dust control measures selected are applicable and appropriate for site conditions
- Emplacement of CCR in the landfill as conditioned CCR
- Procedures to log citizen complaints involving CCR fugitive dust events at the facility
- Description of procedures to periodically assess effectiveness of control plan

The initial plan must be completed and placed in the facility operating record by October 19, 2015. A plan must be certified by a qualified professional engineer that the initial CCR fugitive dust control plan meets requirements. This plan must be posted to the Omaha Public Power District's (OPPD) CCR website for the North Omaha Station. Within 30 days of placement in the operating record, a notification will be sent to the Director of Nebraska Department of Environmental Quality (NDEQ) of the availability of this CCR Fugitive Dust Control Plan.

The key definitions from the CCR Rule, 40 CFR §257.3, relative to the CCR fugitive dust requirements are:

“Coal combustion residuals (CCR)” 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.

“Facility” means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, disposing, or otherwise conducting solid waste management of CCR. A facility may consist of several treatment, storage, or disposal operation units (e.g., one or more landfills, surface impoundments, or combinations of them).

“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.

“Qualified person” means a person or persons trained to recognize specific appearances of structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit by visual observation and, if applicable, to monitor instrumentation.

1.2 Facility Background

OPPD has a fossil fuel-fired generating plant at the North Omaha Station (Station) in Omaha, Nebraska. The Station is located east of Pershing Drive and Craig Street, approximately 3.5 miles northwest of Eppley Airfield, along the west shore of the Missouri River at river mile 625.2. The Station property is approximately 120 acres located in NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Section 27 and portion of NE $\frac{1}{4}$ and SE $\frac{1}{4}$ of Section 28, Township 16 North, Range 13 East of the 6th Principal Meridian, Douglas County, Nebraska.

The on-site CCR landfill, known as the North Omaha Ash Landfill (NDEQ Permit No. NE0054739, Facility ID 59763), is located on the north-northwest portion of the Station property in the east $\frac{1}{2}$ of Section 28, Township 16 North, Range 13 East in Douglas County, Nebraska. The active CCR landfill area permitted with State of Nebraska is approximately 18 acres.

2 CCR Fugitive Dust Control Measures

The Station has several on-site structures and areas that are associated with CCR handling. The following sections specifically identify CCR generation areas, CCR handling operations, CCR transfer and emplacement, and the preferred control measures to reduce CCR fugitive dust. A facility site map in Appendix A illustrates these areas of CCR handling.

2.1 Generation, Storage and Loadout of CCR

The CCR generated at the Station is bottom ash and fly ash material.

2.1.1 Bottom Ash Dewatering Bins

The bottom ash removal system collects and conveys bottom ash, furnace slag, and mill rejects generated in the firing of coal fuel. The water-filled ash pit at the base of the boilers receives the bottom ash and slag from the furnaces. It is then crushed and transported via water slurry to the onsite above grade dewatering bins where the transport water is decanted off. Once the water (free liquid) is decanted, the moist bottom ash is loaded into a dump truck and either sold for off-site beneficial use or placed in the existing CCR landfill. Because the bottom ash is not subject to dusting, the material is considered conditioned when it is landfilled and does not

require additional control measures as the product is transferred from the bins and emplaced in the CCR landfill.

2.1.2 Fly Ash Silos and Storage Building

Fly ash is removed from the precipitators and transported through an enclosed pneumatic conveyor system to the fly ash silos located adjacent to the bottom ash dewatering bins. The fly ash is conditioned with water as it is loaded into open-top trailer(s) from the silos to control fugitive dust prior to emplacement in the CCR landfill. The moisture conditioning does not result in free liquids. The fly ash silos are also equipped with a filter vent discharge for dust control.

Dry fly ash (no moisture added) is loaded from the fly ash silo into closed dry bulk or pneumatic tankers from the OPPD fly ash storage silo. The fly ash silo is equipped with a gravity unloader for loading enclosed trucks for sale of the material used for beneficial use. The dry fly ash is transported in the enclosed trucks to off-site markets or to the on-site ash storage building. The ash storage building provides temporary, enclosed storage of fly ash prior to loading into enclosed dry bulk trailers for subsequent beneficial use.

2.2 Transportation of CCR

CCR fugitive dust can occur during transfer from the generation and temporary storage of CCR to the landfill. CCRs are transported in trucks on haul roads on-site from the plant storage silos and bins to the active area of the CCR landfill. Fugitive dust may occur from CCR contained in open-top haul trucks or from miscellaneous CCR on the haul roads. Temporary haul roads within the limits of the CCR landfill are constructed of CCRs placed and compacted as the disposal area develops. Control of CCR fugitive dust during transportation will be accomplished by one or more of the following techniques:

- Moisture conditioning of CCR
 - Fly ash can be moisture-conditioned during loading into trucks for transfer to the landfill
 - Bottom ash is sufficiently moist from the dewatering bins to not require any further moisture added
- Hauling fly ash in covered or enclosed trucks
- Watering of haul roads, when needed
- Treatment of haul roads using polymer emulsion or modified asphalt emulsion dust suppression product, when needed

Water for fugitive dust control is obtained from on-site city water sources. Storm water from the temporary settling basin or process water ponds may also be used for dust control on the access roads and material handling areas.

2.3 Disposal of CCR (Existing CCR Landfill)

The existing CCR landfill is located north of the generating units on the Station property. CCR generated from the Station is offloaded from trucks and emplaced in the North Omaha Ash

Landfill in a moisture-conditioned state which controls CCR fugitive dust during unloading and compaction. The CCR fugitive dust control measures utilized at the CCR landfill include:

- Receipt of moisture-conditioned fly ash and de-watered bottom ash
- Watering of all areas of active equipment movement, when required
- Good compaction of CCRs in the active work areas
- Placement of final cover system and vegetation after closure of areas that have reached final grades

Control of watering at the CCR landfill is given to the CCR contractor. Based on current conditions and past experience, the CCR contractor utilizes a water truck for CCR fugitive dust control such that dust does not become airborne in quantities and concentrations to remain visible in the ambient air beyond the Station boundary. Excavated CCR may also be sprayed with water to control dust, as necessary.

OPPD personnel observe the North Omaha Station CCR transfer area and CCR landfill for visible emissions of CCR fugitive dust on a daily basis as required by Omaha Municipal Code, Section 41-2. Personnel will log if there are visible emissions, and if there are visible emissions the person will contact the CCR contractor to apply water to the CCR landfill.

During very windy conditions, the North Omaha Ash Landfill will be further watered to control fugitive dust when necessary and placement of CCR may be temporarily suspended. Trees along the road (west side of property) and along the river (east side of property) provide some shelter to the site, which helps reduce the effect of wind on the CCR landfill.

3 CCR Rule Reporting and Recordkeeping Procedures

The CCR rule requires specific records and reporting for CCR fugitive dust control at facilities with CCR units. The following sections describe the procedures, reports and recordkeeping for CCR fugitive dust.

3.1 Citizen Complaints

OPPD's procedures to receive and log citizen complaints involving CCR fugitive dust events at the facility include the following:

- Citizens can complete an on-line form for complaints on CCR fugitive dust. The OPPD website (www.oppd.com) contains a link to the CCR Rule Compliance Data and Information website. A link to the on-line form is made available on the CCR website.
- When citizens submit the form, a designated OPPD person(s) will be notified.
- Appropriate personnel will investigate the complaint.
- Any corrective actions taken will be documented.
- A record of citizen complaints and responses will be maintained in the appropriate files.

3.2 Periodic Assessments of Effectiveness of Control Plan

OPPD's procedures to periodically assess the effectiveness of this CCR Fugitive Dust Control Plan include the following:

- Review of the daily visual observations for CCR fugitive dust and any actions taken
- Review of the citizen complaints and responses
- Results from the most recent annual CCR Fugitive Dust Control Report

OPPD will complete these reviews on a periodic basis to assess the control measures to mitigate CCR fugitive dust. The periodic assessment will be summarized and documented. If there are any improvements or additional control measures implemented then these will be noted in the review documentation. This Plan will be updated if any new CCR fugitive dust control measures are implemented at the Station.

3.3 Annual CCR Fugitive Dust Control Report

The CCR rule 40 CFR 257.80(c) requires preparation of an annual CCR Fugitive Dust Control Report that includes the following:

- Description of the actions taken by the owner or operator to control CCR fugitive dust
- Record of all citizen complaints
- Summary of any corrective measures taken

The initial annual report must be completed no later than 14 months after placing the initial CCR Fugitive Dust Control Plan in the facility's operating record. Completion means that the report has been placed in the facility's operating record. Subsequent annual reports must be completed within one year after the date of completing the previous report.

3.4 Recordkeeping and Notifications

Records will include those required by the CCR rule and those performed as part of normal Station operation relative to CCR fugitive dust control. Recordkeeping for CCR fugitive dust at the Station and existing CCR landfill will include the following plan and reports (as required by 40 CFR §257.80 and §257.105):

- CCR Fugitive Dust Control Plan and any amendment, and certification
- Annual CCR Fugitive Dust Control Report

OPPD will need to notify the NDEQ Director within 30 days of placing the CCR Fugitive Dust Control Plan and annual report in the operating record and posting to the CCR website (40 CFR §257.106 and §257.107).

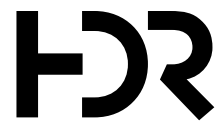
The following documentation will be maintained by OPPD in the appropriate files in support of the CCR Fugitive Dust Control Plan and annual report:

- Record of citizen complaints
- Daily visual observation results
- Periodic assessments of effectiveness of control plan
- Actions or corrective measures taken to control CCR fugitive dust



Appendix A
Facility Site Map





**OPPD
NORTH OMAHA STATION
NORTH OMAHA ASH LANDFILL**

CCR FUGITIVE DUST CONTROL PLAN

DATE

OCTOBER 2015

FIGURE

1