

Coal Combustion Residual
Fugitive Dust Control Plan

Portland General Electric, Boardman Power Plant

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Certification from Qualified Professional Engineer (§257.80(b)(7))

I, Mr. Mathew Quigley, a Professional Engineer (P.E.) in the State of Oregon, certify that the following Coal Combustion Residual Fugitive Dust Control Plan for the Boardman Power Plant meets the requirements of the 40 CFR §257.80;

Printed Name of P.E.: Mathew Quigley

Signature of P.E.: *Mathew Quigley*

Registration Number: 84376PE

Date: *10/16/2015*

Seal and Signature of Professional Engineer:



1.0 PURPOSE

This Coal Combustion Residual (CCR) Fugitive Dust Control Plan (Dust Control Plan) fulfills the requirements of 40 CFR §257.80 for owners or operators of a CCR unit to prepare a Dust Control Plan. It identifies and describes the CCR fugitive dust control measures Portland General Electric Company (PGE) will use to minimize CCR from becoming airborne at the Boardman Power Plant (the Facility) including fugitive dust originating from the CCR landfill, roads, CCR transportation vehicles, and other CCR management and material handling activities.

2.0 DEFINITIONS

1. Bottom Ash – is ash composed of heavier materials which drop to the bottom of the boiler; approximately fifteen percent of the ash generated at the Facility is bottom ash.
2. Coal Combustion Residual (CCR) – means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from the burning of coal for the purpose of generating electricity by electric utilities and independent power producers.
3. 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.
4. Dust Generating Activity – an activity capable of generating CCR fugitive dust, including but not limited to, the following activities:
 - a. Material handling
 - b. Storage and/or transporting operations
 - c. Use of staging areas, parking areas, material storage areas, or access routes to and from a site.
 - d. Using unpaved haul/access roads to, from, and within a site.
 - e. Reclaiming ash from the CCR landfill
5. Dust Suppressant – water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any dust palliative that is not prohibited for ground surface application by the EPA or any applicable regulation as a treatment for reducing fugitive dust emissions.
6. Economizer Ash – is ash collected from the back of the boiler; approximately five percent of the ash generated at the Facility is economizer ash.
7. Fly Ash – is lighter ash and pollution control sorbents (direct sorbent injection, carbon and calcium halide) collected in the electrostatic precipitator; approximately eighty percent of the ash collected at the Facility is fly ash.

3.0 RESPONSIBILITIES

The following persons have responsibilities associated with the Facility Dust Control Plan:

1. The Plant Manager and Plant Engineering have the primary responsibility for ensuring the implementation of the Facility Dust Control Plan.
2. The Environmental Scientist has the primary responsibility for preparation, maintenance and placement of the Facility Dust Control Plan into the facility's operating record as required by §257.105(g)(1) and any subsequent revisions to the Dust Control Plan.
3. The Shift Supervisors are responsible for ensuring their personnel adhere to the requirements of the Facility Dust Control Plan.

4.0 RECORD KEEPING, NOTIFICATION, AND INTERNET SITE REQUIREMENTS

1. Copies of the most recent Facility Dust Control Plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of 40 CFR §257.105.
2. Notification must be made to the State Director within 30 days of the Facility Dust Control Plan being placed in the operating record.
3. Copies of the most recent Facility Dust Control Plan must be available on PGE's CCR Web site.

5.0 COMPLAINT PROCEDURES

The Facility Dust Control Plan must include procedures to log citizen complaints received by PGE involving CCR fugitive dust events at the Facility.

Citizens may lodge CCR dust complaints by calling (541) 481-1256. The Facility will maintain a log of each citizen complaint received regarding CCR dust. Documentation will include date of contact, time of observed dust complaint, location of receptor, status of plant operation, and status of landfill operation. A plant representative will investigate the condition and provide a response to the complainant. The complaint log is included as Appendix A.

6.0 PERIODIC CCR DUST CONTROL PLAN ASSESSMENT & ANNUAL REPORT

An assessment of the Facility Dust Control Plan will occur annually, or more frequently if necessary. The assessment will occur by reviewing citizen complaint logs and conducting a visual inspection of the CCR handling, transportation, and disposal processes to verify CCR related dust is minimized. If necessary, amendments to the plan may occur; reasons for an amendment could include:

1. Receipt of a citizen complaint which, after investigation, is determined to be caused by a CCR activity
2. Observations of loading, unloading or reclamation activities indicate that current control measures are not effective. Observations may be physical (observation of CCR deposition) or visual.
3. Other reasons as determined necessary by PGE staff.

As required by 40 CFR §257.80(c) PGE will prepare an annual CCR fugitive dust control report. The annual report will include a Description of actions taken to control CCR fugitive dust, and a Record of all citizen complaints and summary of corrective measures taken.

The initial report will be completed within 14 months of the initial Facility Dust Control Plan being placed in the Facility operating record. Subsequent reports will be completed within one year of completing the previous year's report.

7.0 DUST CONTROL MEASURES

CCR dust is controlled at the Facility by a variety of measures which are described below; sources of CCR fugitive dust include; haul roads, the CCR landfill, ash loading and hauling activities, ash unloading, and ash reclaiming activities.

7.1 HAUL ROADS

1. Site access is controlled via gates, fencing and security; only authorized facility staff and guest have access to haul roads used for CCR disposal.
2. Primary methods for controlling fugitive dust from haul roads include paved haul routes and speed limits. Except for approximately one-tenth of one mile, all roads used for CCR related activities including loading, unloading, and transport are paved. The Facility has a posted speed limit of 15 miles per hour.
3. As necessary, a secondary method of control is the application of a suitable dust suppressant upon haul roads.

7.2 ASH LOADING AND HAULING

1. Fly ash is loaded into trucks from a fly ash hopper at the ash handling facility through a flexible hose extending from the hopper to enclosed trailers which are designed to prevent the escape of fly ash particles during transit. Trailers are closed manually a short distance from the fly ash hopper before the start of material transit to the CCR landfill.
2. Bottom ash is transported hydraulically to dewatering bins at the ash handling facility. Since the bottom ash is damp, open dump trucks can be used to transport and dispose of the ash in the CCR landfill.
3. Economizer ash is loaded into trucks through a flexible hose extending from the economizer ash bins at the ash handling facility to enclosed trailers which are designed to prevent escape of economizer ash during transit. Trailers are closed manually as short distance from the economizer ash bin before the start of material transit to the CCR landfill.

7.3 ASH UNLOADING AND RECLAIMING AND CONDITIONED CCR

1. Dry ash (fly ash and economizer ash) shall be deposited in the smallest practicable area such that it can be easily conditioned by wetting. Dry ash is typically deposited to form lines as trailers are emptied while in motion in a manner that minimizes the release of airborne material from beyond the immediate disposal area.
2. Dry ash shall not be deposited during high winds that would cause the ash to become airborne and travel beyond the immediate disposal area prior to the dry ash being conditioned by wetting or other means.
3. At the end of each day that dry ash is deposited at the landfill site, the ash shall be conditioned by spraying it with a dust suppressant to form a crust to prevent the ash from becoming airborne. If, because of high winds, ash becomes airborne and is transported beyond the

immediate disposal area, the ash shall be conditioned immediately and all other dry ash disposal activities halted until site conditions improve.

4. Ash reclamation activities shall be done such that the ash cannot travel from the immediate disposal area, such as during high wind events.

7.4 CCR LANDFILL

1. Minimize activities on the landfill during periods of high wind.
2. Minimize the area disturbance during placement of ash and reclamation of ash.
3. Apply dust suppressant to the landfill at the end of each day during which economizer or fly ash disposal occurred; apply more frequently as necessary.
4. Limit Speed to 15 miles per hour.

7.5 APPLICABILITY AND APPROPRIATENESS OF CONTROL MEASURES

The following control measures are used throughout the handling of CCR at the Facility, this section provides an explanation of how the measures selected are applicable and appropriate for site conditions.

Selected Measures	Applicable and Appropriate Explanation
Handle CCR in enclosed or partially enclosed facilities	Ash handling systems that transport ash from the point of origin within the Facility to the ash loading facility are enclosed. Any ash stored at the ash loading facility prior to disposal is stored in enclosed silos, domes or hoppers, or within open water filled reservoirs. These measures effectively contain fugitive dust.
Transfer CCR through flexible tubing to enclosed trailers	Use of flexible tubing directly inserted into enclosed trailers minimizes the amount of fugitive dust that would otherwise be created by dumping ash from heights in an uncontained manner.
Damp or enclosed transportation	Transporting material damp is a common and proven method of dust control. Transporting dry ash in enclosed trailers effectively contains fugitive dust during transit.
Site security	Maintaining control of site access prevents use of haul roads and the CCR landfill by unauthorized vehicles.
Paved roads	Paved roads minimize the potential for dust created by vehicles and can be cleaned when needed if dirt or CCR accumulates on the road.
Vehicle speed limit	Vehicle speed limits minimize the amount of dust created on the small portion of roads that are not paved.
Dust suppression/conditioning of CCR landfill and haul roads	Application of dust suppressant, such as water or other product, is a common and proven method of dust control on roads and for conditioning ash.
Minimize size of disturbed area	Minimizing the size of disturbances created by the placement or removal of ash minimizes the surface area that could contribute to wind erosion.
Cessation of activities during high wind activity	Ceasing disposal activities during high wind minimizes sources of fugitive dust.

Appendix A

Dust Control Plan Compliant Log

Citizen Complaint Log

Name/Location	Date/Time	Complaint	Time/Date CCR Dust Observed	Plant Operating (Y/N)	Landfill in use (Y/N)	PGE Staff Investigation Results	Date/Time Citizen Contacted with investigation Response