

 PACIFICORP <small>A BERKSHIRE HATHAWAY ENERGY COMPANY</small>		<i>Hunter Plant</i>	
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SUBJECT:	CCR Fugitive Dust Control Plan	Reviewed By:	Terry Guthrie
Approved By:	Laren Huntsman	Date:	10/05/2015
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Revision Number	Reason for Revision	Date	MOC #
1			N/A
2			N/A
3			N/A
4			N/A

1.0 PURPOSE:

Per the requirements of section § 257.80 of the Coal Combustion Residuals (CCR) rule, this *CCR Fugitive Dust Control Plan* provides measures which will be implemented to minimize CCR from becoming airborne at the Hunter Plant, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.

2.0 CCR UNITS AND FUGITIVE DUST CONTROL PLAN REQUIREMENTS:

2.1 This CCR fugitive dust control plan identifies and describes measures that will be used to minimize CCR from becoming airborne at the facility. This plan includes CCR fugitive dust control measures that are most appropriate for site conditions, along with an explanation of how the measures selected are applicable and appropriate for site conditions. As Hunter operates a CCR landfill, this CCR fugitive dust control plan includes procedures to emplace CCR as conditioned CCR.

2.2 Regulated CCR units for this facility are described below:

2.2.1 Hunter CCR Landfill

3.0 CCR FUGITIVE DUST CONTROL MEASURES:

This section describes the measures utilized for the control of CCR fugitive dust emissions for each CCR rule-affected unit, road, and other CCR management and material handling activity at the facility.

To minimize fugitive emissions originating from CCR handling, transport or emplacement, CCR is typically wetted with FGD waste water or water to prevent airborne dust emissions. This includes utilizing fly ash unloaders which mix water or FGD waste with boiler-generated fly ash to control fugitive dust emissions during the loading process into ash haul trucks.

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Rev: #0
 Revised: NA

This plan includes four fugitive dust control action levels; *Level Zero*, *Level 1*, *Level 2* and *Level 3*, with each numerical increase in action level providing a commensurate increase in fugitive dust control measures. If fugitive dust from a CCR unit or material transport or handling activity is observed, then the next most stringent action level shall be implemented.

3.1 Hunter CCR Landfill (Regulated CCR Unit)

For the Hunter CCR Landfill, the following measures have been implemented to control fugitive dust emissions from the CCR unit:

Fly ash, bottom ash and gypsum are delivered to the CCR landfill via haul truck. This CCR material is placed on the ash pile, and is compacted via wheel rolling as it is delivered. Water is applied both as a compaction aid and for fugitive dust control.

The inactive portions of the CCR landfill are compacted and covered with a veneer of bottom ash. (Bottom ash is coarser than fly ash and minimizes fugitive dust generated from wind erosion events.) The active area (cell) of the CCR landfill is more susceptible to wind erosion and is thus confined to the smallest practical area (ten acres or less).

Level Zero At the end of each operating day, completely compact the active cell (knock down all the “windrows” of ash) and/or apply water (except during freezing, rainy or snowy weather), and cover with a thin veneer of bottom ash as available. When the active cell is completed and no additional ash will be transported to the cell, compact and cover the completed cell with 6-12 inches of bottom ash. No other action is required.

Level 1 In addition to Level Zero, complete the *normal* or *typical* watering schedule: Apply water in accordance with the “Hunter Power Plant Dust Control Schedule” included in section 3.8 of this plan. **Exception:** The application of water to the ash haul roads shall be temporarily suspended in the event that persistent freezing temperatures lead to the accumulation of ice on the roadway.

Level 2 In addition to Level 1, increase the frequency of application of water to the ash haul road or other CCR dust generating activities as required to control fugitive dust emissions.

Level 3 In addition to level 2, curtail ash unloading and transport operations during high wind events until wind velocity subsides.

3.2 Hunter CCR Landfill Haul Road

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Rev: #0
Revised: NA

The following measures have been implemented to control CCR fugitive dust emissions from the Hunter CCR landfill haul road.

Vehicle speed on the ash haul road is to be limited to *a maximum speed of 35 mph*. Should Level 2 control measures fail to control fugitive dust, vehicle speeds shall be limited to a maximum speed of *25 mph*.

Level Zero Maintain a maximum speed limit of 35mph. No other action required.

Level 1 *Normal* or *typical* watering schedule: Apply water in accordance with the “Hunter Power Plant Dust Control Schedule”.

Exception: The application of water to the ash haul road shall be temporarily suspended in the event that persistent freezing temperatures lead to the accumulation of ice on the roadway.

Level 2 In addition to Level 1, increase the frequency of application of water to the ash haul road.

Level 3 In addition to Level 2, reduce vehicle speed limit to 25 mph.

3.3 Hunter Gypsum Load out Area (CCR Management and Material Handling Area)

Gypsum generated at the Hunter facility is contained within a covered three walled structure. The moisture content of the gypsum is sufficient to keep this material from dusting.

Access roads or paved areas are considered minor sources of fugitive dust. The following measures have been implemented to control CCR fugitive dust emissions from the Hunter Gypsum Load Out.

Level Zero No action required.

Level 1 *Normal* or *typical* watering schedule: Apply water in accordance with the “Hunter Power Plant Dust Control Schedule”.

Exception: The application of water to roadways shall be temporarily suspended in the event that persistent freezing temperatures lead to the accumulation of ice on roadways.

Level 2 In addition to Level 1, increase the frequency of application of water to plant roads where fugitive dust is high where practicable (and when the level of control of fugitive dust from the ash haul road is *acceptable*). Otherwise, decrease the frequency of application of water to plant roads where there is a lesser potential (less traffic, lower speeds) for dusting; at the same time increase the frequency of

application of water to the plant roads where fugitive dust is high.

3.4 Hunter Fly Ash Unloaders (CCR Management and Material Handling Area)

Fly ash is mixed with FGD waste or water, and is then loaded into a haul truck. Wetting the fly ash minimizes fugitive dust during transfer (to the truck) and hauling (to the CCR landfill). (Note: Dust generated during the transfer of fly ash from the unloader to the truck shall be considered fugitive *emissions* and therefore subject to the opacity limitations established in the operating permit condition for fugitive emissions.)

Fallout from airborne fly ash and spillage from haul trucks accumulates on the paved area surrounding the fly ash unloaders. This area is to be cleaned at least once per week (or more frequently if plant operating personnel or the Ash Haul Contractor determine that fugitive dust is becoming a nuisance or evidence exists that fly ash is being tracked away from the ash unloader). Methods used to clean this area include, but are not limited to, flushing the area with water, or removing the material using a front-end loader or vacuum truck. The dates that the fly ash unloader area is cleaned shall be logged and recorded utilizing the Hunter Power Plant Fugitive Dust Control Log forms.

Level Zero Remove accumulated material from the area at least once per week. No other action required.

Level 1 *Normal or typical* watering schedule: Apply water in accordance with the “Hunter Power Plant Dust Control Schedule”.

Exception: The application of water to roadways shall be temporarily suspended in the event that persistent freezing temperatures lead to the accumulation of ice on roadways.

Level 2 In addition to Level 1, increase the frequency of application of water to area around the fly ash unloaders and gypsum load out area, if practicable. Increase cleaning to once per day.

Level 3 Increase cleaning to immediately after loading trucks

3.5 Bottom Ash Load out Area (CCR Management and Material Handling Area)

Bottom Ash generated at the Hunter facility is mixed with water and contained within a covered three walled structure. The moisture content of the bottom ash is sufficient to keep this material from dusting.

Access roads or paved areas are considered minor sources of fugitive dust. The following measures have been implemented to control CCR fugitive dust emissions from the Hunter Bottom Ash Load Out.

Level Zero No action required.

Level 1 Normal or typical watering schedule: Apply water in accordance with the “Hunter Power Plant Dust Control Schedule”.

Exception: The application of water to roadways shall be temporarily suspended in the event that persistent freezing temperatures lead to the accumulation of ice on roadways.

Level 2 In addition to Level 1, increase the frequency of application of water to plant roads where fugitive dust is high where practicable (and when the level of control of fugitive dust from the ash haul road is *acceptable*). Otherwise, decrease the frequency of application of water to plant roads where there is a lesser potential (less traffic, lower speeds) for dusting; at the same time increase the frequency of application of water to the plant roads where fugitive dust is high. Clean area after loading.

3.6 CCR Decanting Basins 1 & 2 (CCR Management and Material Handling Area)

Basins will be operated so that the moisture content will prevent dusting.

Level Zero No action required.

Level 1 *If fugitive dust is present apply wet material to the dry material or apply water.*

Level 2 In addition to Level 1, increase the frequency of application of water where fugitive dust is high.

3.7 Drying Pad (CCR Management and Material Handling Area)

Pad will be operated so that the moisture content will prevent dusting.

Level Zero No action required.

Level 1 *If fugitive dust is present apply wet material to the dry material or apply water.*

Level 2 In addition to Level 1, increase the frequency of application of water where fugitive dust is high.

3.8 Hunter Plant Dust Control Schedule

The following tables represent the normal or typical daily dust control (watering) schedule for the Hunter plant. The tables indicate a *Fall/Winter/Spring Schedule* for the period from 1 October through 30 April and a *Summer Schedule* for the period from 1 May through 30 September. Note that these schedules are approximate and that on occasion deviations from both schedules will occur, including the dates of implementation. (For example, warm, late summer-like weather conditions may require that the *Summer Schedule* extend into October.)

Fall/Winter/Spring Schedule: 1 October through 30 April

Table 1: Water Applications to CCR Landfill Area

Fugitive Dust Control Measure
Apply 3 loads (12,000 gallons) of water per day to the CCR landfill.
Apply 1 load (4,000 gallons) of water per day to the unpaved CCR landfill haul road.
Apply 1 load (4,000 gallons) of water to the paved CCR landfill haul road.

Table 2: Water Applications to Other CCR Areas

Fugitive Dust Control Measure
Apply 2 loads (8,000 gallons) of water per day to the area around the fly ash unloaders and gypsum load-out areas.
Apply 1 load (4,000 gallons) of water per day to non-CCR haul road roadways.

Summer Schedule: 1 May through 30 September

Table 3: Water Applications to CCR Landfill Area

Fugitive Dust Control Measure
Apply 12 loads (48,000 gallons) of water per day to the CCR landfill.
Apply 7 loads (28,000 gallons) of water per day to the unpaved CCR landfill haul road.
Apply 4 loads (16,000 gallons) of water to the paved CCR landfill haul road.

Table 4: Water Applications to Other CCR Areas

Fugitive Dust Control Measure
Apply 5 loads (20,000 gallons) of water per day to the area around the fly ash unloaders and gypsum load-out areas.
Apply 1 load (4,000 gallons) of water per day to non-CCR haul road roadways.

4.0 CCR CITIZEN COMPLAINTS:

The following defines the procedure for logging the receipt of citizen complaints which pertain to the Hunter CCR fugitive dust control plan.

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4.1 CCR Citizen Complaint Procedure

Upon the receipt of a citizen complaint pertaining to the Hunter CCR fugitive dust control plan, the following procedure shall be utilized to document the complaint. Utilize the *CCR Fugitive Dust Control Plan Citizen Complaint Form* appended to this CCR fugitive dust control plan to document all citizen complaints. The following information shall be recorded onto the form for all citizen complaints:

- 4.1.1 Name of citizen complainant. If the complainant is affiliated with a regulatory or non-governmental organization, include applicable affiliation information on the complaint form.
 - 4.1.1 Date of receipt of citizen complaint.
 - 4.1.1 Name, title and employee number of PacifiCorp employee documenting the citizen complaint.
 - 4.1.1 Description of citizen complaint. The description must fully describe and document the nature of the complaint, including the affected CCR unit; the date and time of the incident; weather conditions at the time of the incident including temperature and wind conditions; and any other pertinent ambient or operational conditions. The complaint form shall document the media used to report the citizen complaint, indicating if the complaint was received in-person, via a phone call, e-mail, or written letter.
 - 4.1.1 Immediately upon receipt of a citizen complaint, PacifiCorp shall inspect the affected CCR unit, road or CCR management and material handling activity and document inspection observations on the complaint form. Documentation shall include observed CCR fugitive dust conditions. If possible, PacifiCorp shall photograph the CCR unit referenced in the complaint as soon as reasonably possible and include pertinent photographs with the completed citizen complaint form.
 - 4.1.1 As applicable, identify and document corrective measures undertaken by PacifiCorp to address the citizen complaint
- 4.2 Following receipt of a CCR fugitive dust control plan citizen complaint and completion of the *CCR Fugitive Dust Control Plan Citizen Complaint Form*, the completed form shall be entered into the facility's CCR operating record.

5.0 EFFECTIVENESS ASSESSMENT:

The CCR fugitive dust control plan shall be periodically reviewed to assess the effectiveness of the plan. The following procedure shall be utilized to assess the effectiveness of the CCR fugitive dust control plan.

5.1 Effectiveness Assessment Procedure

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At a minimum of once each calendar year, the CCR Fugitive Dust Control Plan shall be assessed to evaluate its effectiveness. The following procedure shall be utilized to document the effectiveness assessment:

5.1.1 Utilize the Hunter Plant CCR Fugitive Dust Control Plan Effectiveness Evaluation form appended to this CCR fugitive dust control plan to document the periodic effectiveness assessment of the plan. The following information shall be recorded onto the effectiveness assessment form:

5.1.1.1 Name, title and date of PacifiCorp employee performing the effectiveness assessment.

5.1.1.2 Documentation of any citizen complaints received following the previous effectiveness assessment.

5.1.1.3 A description of any CCR fugitive dust control plan deficiencies recorded or observed following the previous effectiveness assessment.

5.1.1.4 A determination if the CCR fugitive dust control plan is effective or not effective. If the plan is determined to be not effective, the form shall describe corrective actions which have been initiated to address any deficiencies. If the CCR fugitive dust control plan is amended for any reason, the amended plan shall be placed in the facility's operating record.

6.0 AMENDMENT OF CCR FUGITIVE DUST CONTROL PLAN:

The CCR fugitive dust control plan shall be amended whenever there is a change in conditions that would substantially affect the written plan in effect, such as construction and operation of a new CCR unit, or procedures and processes required to address any identified plan deficiencies.

Following the amendment of the CCR fugitive dust control plan, the amended plan shall be placed in the facility's operating record.

7.0 CCR FUGITIVE DUST CONTROL PLAN CERTIFICATION:

A qualified professional engineer shall certify that the CCR fugitive dust control plan, or any subsequent amendment of the plan, meets the requirements of 40 CFR 257.80.

8.0 CCR FUGITIVE DUST CONTROL PLAN ANNUAL REPORT:

An annual CCR fugitive dust control report that includes a description of the actions taken to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective actions taken during the previous year shall be

completed by October 31 of each year. The initial annual report must be completed no later than October 31, 2016.

The description of actions taken to control fugitive dust shall include a summary of the daily dust control logs. This summary shall include the daily gallons of water applied to ash haul road, landfill, and other CCR areas. If the annual report summary indicates that water usage was curtailed during any particular day, the summary report shall include the reason(s) for the curtailment. (Weather conditions such as rain or snow precipitation events precluded the necessity of water application for dust control; sub-freezing temperatures precluded the capability of utilizing water for dust control; equipment malfunction prevented the application of water for CCR fugitive dust control; etc.) The annual report will also provide a summary of any extraordinary events or conditions that occurred during the year that created fugitive CCR emissions, and the actions that were taken to prevent similar events from occurring in the future.

The annual CCR fugitive dust control report is deemed complete when the report has been placed in the facility's operating record.



**Hunter Plant
CCR Fugitive Dust Control Plan
Plan Certification**

The undersigned Registered Professional Engineer is familiar with the requirements of Part §257.80 of Title 40 of the Code of Federal Regulations and has examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part §257.80; that procedures have been established and that this Plan is adequate for the facility.

Name of Engineer:

Earl James Leaver

Seal:



Signature:

Earl James Leaver

Date:

10/05/15

Registration No.:

6334766

State:

Utah



***Hunter Plant
CCR Fugitive Dust Control Plan
Citizen Complaint Form***

Name of Complainant:

Affiliation of Complainant (as applicable):

Date and Time of Receipt of Citizen Complaint:

Name, Title and Employee Number of PacifiCorp Employee Documenting Citizen Complaint:

Description of Citizen Complaint

(Fully describe complaint, identify affected CCR unit, indicate date and time of incident, and indicate ambient conditions at time of incident.)

Description of Citizen Complaint

(Fully describe complaint, identify affected CCR unit, indicate date and time of incident, and indicate ambient conditions at time of incident.)

Inspection Summary

(Upon receipt of citizen complaint, affected CCR unit shall be inspected by PacifiCorp. Indicate inspection observations and as applicable, photo-document CCR unit inspection.)

Corrective Actions

(Following CCR unit inspection and evaluation, indicate corrective actions as applicable.)



***Hunter Plant
CCR Fugitive Dust Control Plan
Effectiveness Evaluation***

Name, Title and Employee Number of Evaluator:

Date of Effectiveness Evaluation:

Citizen Complaints:

(List CCR citizen complaints received following previous effectiveness evaluation and include date of citizen complaint and affected facility CCR unit, as applicable.)

CCR Fugitive Dust Control Plan Deficiencies

(List and describe any CCR fugitive dust control plan deficiencies identified following previous effectiveness evaluation.)

CCR Fugitive Dust Control Plan Effectiveness Determination:

Is the CCR fugitive dust control plan effective?

Yes

No

Corrective Actions, as Applicable

(If the CCR fugitive dust control plan is determined to not be effective, describe corrective actions which have been initiated to address any deficiencies.)