BRICKHAVEN STRUCTURAL FILL PROJECT

Fugitive Dust Control Plan

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1.0 Introduction

The objective of this fugitive dust control plan is to identify potential dust emission sources and provide guidance to construction and field personnel on measures to control the generation of fugitive dust during construction activities associated with the Brickhaven Structural Fill Project. Dust control will be an important aspect of the site operations as well as mandatory to remain in compliance with North Carolina Administrative Code North Carolina Administrative Code 15A NCAC 02D .0540 and Federal Coal Combustion Product/Residual Regulations, hereby and further referenced as the CCR Rules.

2.0 Purpose

This dust control plan provides the definition of fugitive dust and a plan for managing fugitive dusting that may occur on working areas associated with coal combustion residuals (CCRs) management operations that may include: fly ash and bottom ash handling, unloading, and on-site transport, CCR placement and excavation, temporary CCR stockpiles, rail and truck load out areas, and supporting roadway and project support areas.

Common causes of fugitive dust:

- A natural instability of the soil
- Construction activities disturbing the land
- The wind picking up particulates and transporting them

Sources of Fugitive Dust

Fugitive dust could be generated directly from site traffic and construction activity. The following construction activities have been identified as having the potential for generating fugitive dust:

- vehicle and motorized equipment movement on paved and unpaved access roads
- vegetation removal
- clearing and grading
- topsoil removal
- cutting and filling
- trenching
- backfilling
- track-out onto roads
- bulk material unloading and hauling, use of temporary material storage piles, use of parking, staging, and storage areas

3.0 Responsibilities

3.1 Site Management

It will be the responsibility of Charah's site management team at the Brickhaven project site to maintain a fugitive dust plan that is specific to the Brickhaven project providing for the control of dusting in the areas identified and ensure that a fugitive dusting event does not occur. The Brickhaven management team will also be required to train staff and Charah employees on fugitive dusting identification and controls.

3.2 Employees and Sub-Contractors

Brickhaven employees and all on-site sub-contractors are responsible to work in a manner to minimize fugitive dusting based on their training and experience working on-site. They will also be responsible to identify any fugitive dusting that may occur and report it to the Brickhaven site management for proper controls to be put in place as needed.

4.0 Definitions

Coal Combustion Residuals - Coal Combustion Residuals (CCRs), commonly referred to as coal ash, are the materials that remain after burning coal for electricity. CCRs include:

- Fly ash;
- Bottom ash;
- Boiler slag; and
- Flue gas desulfurized gypsum (FGD Gypsum)

Dust Control - Dust control consists of applying water, cover material, or other dust palliatives to prevent or alleviate dust nuisance.

Fugitive Dust - Any material, while being produced, handled, transported or stockpiled, creating particulate matter that becomes airborne and may affect the ambient air quality of a given area.

Fugitive Dusting Event - Visible emissions from the areas noted above that exceed more than 20 percent opacity (objects partially obscured) when averaged over a six (6) minute period during any hour at any time during the daily operations. The emissions must reach the property line to be considered a formal fugitive dusting event.

Soil Cement - Any material that may be applied that will provide a cohesive bond between particulate matter and the subgrade material(s). Typical sources for soil cement may include Gorilla Snot™ or Eco-Green™.

5.0 Procedures

Dust control is a factor that has to be considered and is a component of daily operations. On a routine basis and according to weather conditions, a water truck adds moisture to the subject and ancillary industrial operations to suppress dust. At the Brickhaven project site, three water trucks ((1) 5,000 gallon, (2) 8,000 gallon) will routinely be utilized to control dust at the site and associated haul roads specifically associated with the Brickhaven Structural Fill project operations. Water trucks of differing capacity and number may vary based on site operational conditions and needs.

As described below, cover practices are an integral component of any dust control plan. As the placed ash increases in elevation in the structural fill cells, site operations should construct berms to break prevailing winds. Berms constructed as wind breaks can be constructed with CCR fill with a temporary soil cover. According to applicable performance criteria, temporary soil cover practices may be allowed and are designed for both stormwater compliance and dust control. Accordingly, soil cover practices are intended to vary from the standard operating requirements and are specific to CCR structural fill projects.

As CCRs are characterized by soil properties, soil amendments will be utilized to create suitable layers for temporary and intermediate cover. On a routine basis, a water truck will add moisture to the CCRs and haul road surfaces for compaction and dust control. Intermediate cover requirements vary according to the time period in which specific areas will be inactive. Soil cement or other alternative soil amendments will be applied to intermediate slope areas as necessary to minimize surface erosion. As a standard practice and according to demonstrated performance life of cover alternatives, at least 6 inches of native soil will be incorporated in the intermediate cover application for fill areas that remain inactive for a period greater than 12 months or as directed by the Engineer of Record.

Temporary soil cover may also be applied to perimeter slopes and interim cap surfaces as needed to create “clean” stormwater draining from the fill area as well as mitigate dusting from these surfaces. The soil provides the needed separation from the CCRs whereby eliminating the creation of leachate and can be discharged to the perimeter erosion control devices as allowed by the construction NPDES permit.

6.0 Citizen Complaint Procedures

It is the goal of fugitive dust control operations to address fugitive dust before a citizen complaint can be made. Any citizen complaints about dust will be logged and reported in the annual CCR Fugitive Dust Control Report in accordance with CCR Rule §257.80 (b) (3), §257.80 (c), and North Carolina Administrative Code 15A NCAC 02D .0540. Information such as the date of the complaint, weather conditions during the time the citizen is complaining about, location of the citizen during the time the citizen is complaining about, along with any other pertinent information will be logged.

7.0 Amending Dust Control Plan

In accordance with CCR Rule §257.80 (b) (6) and North Carolina 15A NCAC 02D .0540 (h) , the owner or operator will amend the written dust control plan whenever there is a change in conditions that would substantially affect the written plan in effect or as directed by the Director due to an identified deficiency in this fugitive dust control plan.

8.0 Annual Dust Control Report

In accordance with CCR Rule §257.80 (c), The owner or operator of a CCR unit will prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The initial annual report will be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. For purposes of this paragraph, the owner or operator has completed the annual CCR fugitive dust control report when the plan has been placed in the facility's operating record as required by CCR Rule §257.105(g)(2).

9.0 Recordkeeping, Notification, and Internet Requirements

In accordance with CCR Rule §257.80 (d), the owner or operator of the CCR unit will comply with the recordkeeping requirements specified in CCR Rule §257.105(g), the notification requirements specified in CCR Rule §257.106(g), and the internet requirements specified in CCR Rule §257.107(g).

10.0 Related Policies & Forms

Reference the following documents for further definitions, forms and project requirements:

- CHARAH Dust Control Inspection Form

11.0 Certification

In accordance with CCR Rule §257.80 (b) (7), the owner or operator will obtain a certification from a qualified professional engineer that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of CCR Rule §257.80:

"I, Franklin S. Craig (Professional Engineer) certifies that this dust control document meets the requirements of CCR Rule §257.80. In addition, acceptance and implementation of this dust control document is acknowledged by the following for CHARAH:

_____

(Brickhaven Project Director)

Appendix A: Dust Control Monitoring Log

DUST CONTROL MONITORING WORKSHEET

Month: _____ Year: _____

Site Name: _____

DATE		Actively working? [1]	Weather [2, 7, 8]	Method(s) Used to Control Dust [3]				*Is dust present? [4]		*Is erosion present? [5]		Preventative or Corrective Action Taken	Initials
		Yes/No	Temperature range, rainfall data, wind speeds, dry/damp,etc.	Currently Percipitating (Y/N)	Water Truck Active (Y/N)	Alternative Cover Material in Place	Other	Yes	No	Yes	No	Examples: Added more water, applied additional alternative cover material, contacted Plant DR, etc.*	
1	AM												
	PM												
2	AM												
	PM												
3	AM												
	PM												
4	AM												
	PM												
5	AM												
	PM												
6	AM												
	PM												
7	AM												
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8	AM												
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14	AM												
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15	AM												
	PM												
16	AM												
	PM												
17	AM												
	PM												
18	AM												
	PM												

Month: _____ Year: _____

Site Name: _____

DATE		Actively working? [1]	Weather [2, 7, 8]	Method(s) Used to Control Dust [3]				*Is dust present? [4]		*Is erosion present? [5]		Preventative or Corrective Action Taken	Initials
		Yes/No	Temperature range, rainfall data, wind speeds, dry/damp,etc.	Currently Percipitating (Y/N)	Water Truck Active (Y/N)	Alternative Cover Material in Place	Other	Yes	No	Yes	No	Examples: Added more water, applied additional alternative cover material, contacted Plant DR, etc.*	
19	AM												
	PM												
20	AM												
	PM												
21	AM												
	PM												
22	AM												
	PM												
23	AM												
	PM												
24	AM												
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27	AM												
	PM												
28	AM												
	PM												
29	AM												
	PM												
30	AM												
	PM												
31	AM												
	PM												

Notes:

1. Actively working indicates several factors at the site.
   YES: indicates the waste cell is receiving ash for disposal or material and/or equipment is operational on the day of inspection
   NO: indicates the waste cell is not operational, no maintenance work or equipment movement is occurring on the day of inspection.
2. Weather data should be secured from the weather station that is operating at the job trailer. Take readings from the display panel just before the inspection is conducted and make a note of it for the time and date the inspection is being performed.
   If the weather station is inoperable at the time of inspection, observed conditions should be entered with a note that the weather station was inoperable.
3. Indicate actual method actively being utilized for dust control and frequency if applicable. (ie: EcoUltimate in place, EcoUltimate applied in am, water truck running, rainfall sufficient for moisture, etc)
4. Is dust present?
   YES: indicates that dust is visible at time of inspection. If yes is indicated, there should be preventative/corrective action noted.
   NO: indicates that dust is not visible at the time of inspection.
5. Is erosion present?:
   YES: indicates erosion (or new erosion) is present at the time of inspection. If yes is indicated, there should be preventative/corrective action noted.(existing erosion should be noted as corrective action until complete)
   NO: indicates that no erosion is present at the time of inspection.
6. Each date has two lines for input data. The morning inspection is to be placed in the top row for that date and the afternoon inspection results should be placed in the second.
7. Make sure all data placed in the inspection report above, lines up with any other daily reports you may be completing for your operations, such as erosion and sediment control inspection forms, waste acceptance forms, daily reports and/or logs, etc.
8. Reference the erosion and sediment control inspection forms for rainfall event totals.

Appendix B: Citizen Complaint Log and Record Forms

Citizen Complaint Log

Facility Name: _____

Record No.	Date	Type of Complaint

CITIZEN COMPLAINT RECORD

Record No. _____

Date _____ Time: _____ Rec'd by: _____

Name _____ Phone No. _____

Address _____

_____

Nature of Complaint _____

_____

_____

Weather Conditions at Time of Complaint _____

Location or Source of Issue Causing Complaint _____

_____

Action Taken (if any) _____

_____

CITIZEN COMPLAINT RECORD

Record No. _____

Date _____ Time: _____ Rec'd by: _____

Name _____ Phone No. _____

Address _____

_____

Nature of Complaint _____

_____

_____

Weather Conditions at Time of Complaint _____

Location or Source of Issue Causing Complaint _____

_____

Action Taken (if any) _____

_____

CITIZEN COMPLAINT RECORD

Record No. _____

Date _____ Time: _____ Rec'd by: _____

Name _____ Phone No. _____

Address _____

_____

Nature of Complaint _____

_____

_____

Weather Conditions at Time of Complaint _____

Location or Source of Issue Causing Complaint _____

_____

Action Taken (if any) _____

_____

CITIZEN COMPLAINT RECORD

Record No. _____

Date _____ Time: _____ Rec'd by: _____

Name _____ Phone No. _____

Address _____

_____

Nature of Complaint _____

_____

_____

Weather Conditions at Time of Complaint _____

Location or Source of Issue Causing Complaint _____

_____

Action Taken (if any) _____

_____