ADMINISTRATION
PO Box 669
Chouteau, OK 74337
918-256-5545

GRDA
Grand River Dam Authority

March 24, 2026

Hillary Young, P.E.
Chief Engineer
Land Protection Division
Department of Environmental Quality
PO Box 1677
Oklahoma City, OK 73101-1677

RE: Grand River Dam Authority
Solid Waste Permit No. 3549012
Amendment to the Fugitive Dust Control Plan

GRDA conducted an annual review of the Fugitive Dust Control Plan for the GRDA Grand River Energy Center Coal Combustion Residuals (CCR) landfill, in accordance with OAC 252:517-13-1(b)(4). This review was conducted on March 3, 2026, by members of the operations and environmental compliance groups at GRDA. Minor changes were identified, such as grammatical corrections, personnel changes, and updating references from the Code of Federal Regulations to the appropriate references in the Oklahoma Administrative Code, and an update to the amendment log.

GRDA has placed the amended plan in the facility operating record as required by OAC 252:517-19-1(g)(1), and on the publicly accessible CCR web site as required by OAC 252:517-19-3(g)(1). This submission of the amended plan is being submitted to DEQ for approval, as required by OAC 252:517-13-1(b)(8).

If you have any questions, please do not hesitate to contact me at (918) 824-7565 or, if more convenient, via e-mail at mike.bednar@grda.com.

Sincerely,

Michael L. Bednar
Manager of Environmental Compliance
Grand River Dam Authority

We deliver affordable, reliable ELECTRICITY, with a focus on EFFICIENCY and a commitment to ENVIRONMENTAL STEWARDSHIP.

We are dedicated to ECONOMIC DEVELOPMENT, providing resources and supporting economic growth.

Our EMPLOYEES are our greatest asset in meeting our mission to be an Oklahoma Agency of Excellence.

COAL COMBUSTION RESIDUAL (CCR)
FUGITIVE DUST CONTROL PLAN

for

GRAND RIVER ENERGY CENTER (GREC)
Chouteau, Oklahoma

GRAND RIVER DAM AUTHORITY
March 2026

COAL COMBUSTION RESIDUAL (CCR) FUGITIVE DUST CONTROL PLAN FOR GRAND RIVER ENERGY CENTER CHOUTEAU, OKLAHOMA

TABLE OF CONTENTS

1.0 GENERAL INFORMATION

1.1 Name of Facility: Grand River Energy Center (GREC)
Grand River Dam Authority (GRDA)

1.2 Type of Facility: Coal and Natural Gas Fueled Electric Generating Station

1.3 Location of Facility: 3 Miles East of Chouteau, Oklahoma
on State Highway 412 (See Figure 1.3.1)

1.4 Name and Address of Owner or Operator

Name Grand River Energy Center – Grand River Dam Authority
Address P.O. Box 609, 8142 Highway 412B, Chouteau, Oklahoma 74337
Telephone No. (918) 824-1074

1.5 The GREC Environmental and Operations Managers are the designated entities accountable for CCR Fugitive Dust Control Plan at the facility.

2.0 MANAGEMENT APPROVAL

I have reviewed this CCR Fugitive Dust Control Plan. I hereby direct that this Plan be implemented as described herein.

Signature: R Ladd
Name: **Robert Ladd**
Title: **Vice President Generation Operations**

3.0 CERTIFICATION (*OAC 252:517-13-1 (b)(7)*)

I certify I am familiar with the Grand River Energy Center and hereby attest this CCR Fugitive Dust Control Plan meets the requirements for control of fugitive dust coal combustion residue (CCR) and described in *OAC 252:517-13-* (b)(7).

Steven R. Jacoby, PE SE
Printed Name of Registered Professional Engineer

Signature

REGISTERED PROFESSIONAL ENGINEER
STEVEN ROYCE JACOBY
14866
OKLAHOMA


Figure 1.3.1
Location Map-Taken 2024
Active CCR
Landfill Area
In-Active CCR
Landfill Area

4.0 CCR FUGITIVE DUST CONTROL MEASURES
(OAC 252:517-13-1 (b)(1))

4.1 GENERAL DESCRIPTION OF CCR FACILITY

The Grand River Energy Center (GREC) is located three (3) miles east of Chouteau, Oklahoma on Highway 412. There are two coal fired boilers at GREC, and these are referred to as Unit 1 and Unit 2. As of July 2017, Unit 1 is no longer permitted to burn coal. Unit 2 produces Coal Combustion Residue (CCR). Most CCR from the facility is sold for beneficial purposes.

The primary CCR produced is called flyash, and flyash from each boiler is collected and then transported to the ash storage silos (illustrated in Figure 4.1) using pneumatic piping.

The secondary CCR produced is called bottom ash, and bottom ash is initially collected at the bottom of each boiler. Bottom ash has a granular and gravel texture and is dampened with water during collection. Fugitive dust is therefore inherently minimized.

Flyash CCR from the Unit 2 boiler is collected after a sulfur dioxide scrubber, and is also sold for beneficial purposes, but not concrete because of the scrubber process. Flyash that is not sold for beneficial purposes is transported to an on-site permitted landfill, illustrated in Figure 1.3.1. Flyash from Unit 2 that needs to be transported to the landfill is conveyed downward from the storage silos to Pin & Paddle Mixers (illustrated in Figure 4.2), which mix water with the flyash CCR to produce Conditioned CCR for fugitive dust control. This Conditioned CCR is loaded into trucks inside a contained loading zone beneath the storage silos. The trucks then transport the Conditioned CCR to the permitted on-site landfill.

Enclosed trucks transporting CCR off-site follow page 3 of 3 of Procedure No. 004-011 for Fugitive Dust Control, which is attached to this Plan in Section 10. Off-site enclosed trucks are rinsed with water as necessary at the Truck Wash Station illustrated in Figure 4.6.

4.2 MEASURES IN PLACE AT GREC

The Grand River Dam Authority GREC facility utilizes the following CCR Fugitive Dust Control measures:

- **Locating CCR inside an enclosure or partial enclosure**
  An appropriate partial enclosure is located underneath the ash storage silos, as illustrated in Figure 4.1. Pin and Paddle Mixers for mixing in water and thus producing Conditioned CCR are located above the partial enclosure as illustrated in Figures 4.2, 4.3, and 4.4.

- **Operating a water spray or fogging system**

An appropriate water spray system is located at the entrance to the partial enclosure beneath the ash silos, as illustrated in Figure 4.5. A water truck is used to produce wide-pattern water sprays for Fugitive Dust Control on roads and landfill operations, as illustrated in Figure 4.7.

- **Reducing fall distances at material drop points**
  Appropriate loading chutes are utilized for loading trucks as illustrated in Figures 4.8 and 4.9. Dry CCR for off-site sale is loaded in covered trucks using a telescoping chute, equipped with vacuum system and baghouse. An extended loading chute with a flexible panel is used for loading conditioned Ash from Pin & Paddle Mixers.

- **Using wind barriers, compaction, or vegetative covers**
  The CCR landfill has sloped sides that have a vegetative cover on the south and west sides, and is appropriate for the prevailing wind direction, as illustrated in Figure 4.10.

- **Establishing and enforcing reduced vehicle speed limits**
  The site speed limit is limited to 15 mph as illustrated in Figure 4.11.

- **Paving and sweeping roads**
  Site roads are generally paved, and periodically washed with a water truck, as illustrated in Figure 4.7.

- **Covered trucks transporting CCR**
  Trucks are used for transporting Conditioned CCR to the ash landfill, and water is applied in the Pin & Paddle Mixers to reduce fugitive dust, as illustrated in Figures 4.2, 4.3, and 4.4.

- **Reducing or halting operations during high wind events**
  Operation personnel are instructed to curtail ash landfill operations during extreme high wind events.

- **Applying daily cover**
  A water truck is used to minimize fugitive dust, as illustrated in Figure 4.7, and application of a daily cover is not needed for the circumstances.

- **Applying cover according to closure and post closure plan**
  The completed landfill is covered with layers of clay and topsoil per the landfill requirements, as illustrated in Figure 4.10.

Figure 4.1
Ash Storage Silos with Partially Enclosed Truck Loading Bay

Figure 4.2
Pin & Paddle Mixer
(Preparation of Conditioned CCR)

Figure 4.3
Control Panel for Pin & Paddle Mixer
(Preparation of Conditioned CCR)

Figure 4.4
Interior of Pin & Paddle Mixer for Fugitive Dust Control
(Preparation of Conditioned CCR)

Figure 4.5
Spray Nozzle for Water Mist Curtain for Fugitive Dust Control at Ash Storage Silo Truck Loading Bay

Figure 4.6
Truck Wash Station for Fugitive Dust Control

Figure 4.7
Typical Water Truck for Fugitive Dust Control; 7,000-gallon capacity

Figure 4.8
Typical Loading Spout in Truck Loading Bay at Ash Silos; Equipped with vacuum system and baghouse for Fugitive Dust Control

Figure 4.9
Truck Loading Spout for Pin & Paddle Mixer Discharge, extended for Fugitive Dust Control

Figure 4.10
View of Vegetative Cover on West Sloped Side of Ash Landfill

Figure 4.11
Example of posted 15 mph speed limit, with ash storage silos in background

5.0 EMPLACEMENT OF CCR AS CONDITIONED CCR
(OAC 252:517-13-1 (b)(2))

5.1 DESCRIPTION

Emplacing CCR as conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal but will not result in free liquids.

In lieu of water, a chemical dust suppression agent can be used.

5.2 METHODS UTILIZED AT GREC

During weekly inspections of the ash landfill, inspections for freestanding water on landfill ash are made and corrective measures are taken if such is observed.

Conditioned CCR is produced with Pin & Paddle Mixers as described in Section 4.0, illustrated in Figures 4.2, 4.3, and 4.4, and using truck water sprays as illustrated in Figure 4.7. Water is added in sufficient quantities to minimize fugitive dust and does not result in free standing liquids at the ash landfill.

6.0 PROCEDURES TO LOG CITIZEN COMPLAINTS
(OAC 252:517-13-1 (b)(3))

6.1 DESCRIPTION

Any citizen complaint received by GREC involving a CCR fugitive dust event will be evaluated immediately by GREC management. The Complaint Log is maintained to track complaints and record any remedy or action taken to avoid future occurrence.

6.2 CITIZEN COMPLAINT LOG PROCEDURE

- Complaints are forwarded immediately to the Vice President Generation Operations or his designee and will be evaluated as a top priority.
- The Vice President Generation Operations will enter the complaint information in the CCR Fugitive Dust Control Plan Complaint Log.
- The complaint information will be forwarded to the Assistant Manager Operations, Senior Manager O&M, and to the Manager of Environmental Compliance.
- When a complaint is resolved, the Complaint Log will be updated with remedy information or action taken to avoid future occurrences.

6.3 CITIZEN COMPLAINT LOG

COMPLAINT DETAILS:	
Received Date/Time:	Date/Time of Occurrence:
Complainant Contact Information:	
Description:	
Received By:	Assigned To:
ACTION TAKEN:	
Description:	

COMPLAINT DETAILS:	
Received Date/Time:	Date/Time of Occurrence:
Complainant Contact Information:	
Description:	
Received By:	Assigned To:
ACTION TAKEN:	
Description:	

COMPLAINT DETAILS:	
Received Date/Time:	Date/Time of Occurrence:
Complainant Contact Information:	
Description:	
Received By:	Assigned To:
ACTION TAKEN:	
Description:	

7.0 ASSESSMENT OF THE EFFECTIVENESS OF THE CONTROL PLAN *(OAC 252:517-13-1 (b)(4))*

7.1 DESCRIPTION

Appropriate GREC management staff will perform an annual assessment.

This assessment will include:

- Review of the CCR Fugitive Dust Control Plan
- Review of the weekly CCR Landfill Inspections
- Review of the most recent Annual CCR Landfill Inspection performed by a Professional Engineer
- Review of the most recent Annual Ash Production Report
- Review of the most recent Financial Assurance Cost Estimates
- Discussion of the condition of the facilities and equipment required to implement the CCR Fugitive Dust Control Plan

GRDA will amend the written plan whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit (as indicated in ***(OAC 252:517-13-1 (b)(4))***. If the change is editorial in nature only a mark-up of the change will be made without a Professional Engineer certification. If updates are made, they will be recorded in the Amendment log in Section 9.2 of this plan.

8.0 CCR LANDFILL WEEKLY INSPECTIONS *(40 CFR 257.84)*

Incorporated into this CCR Fugitive Dust Control Plan are weekly inspections of the on-site CCR landfill. The primary purpose of the inspection is a safety inspection to examine for any appearance of actual or potential structural weaknesses that have the potential to affect the safety of the landfill. Items to inspect for include are surface cracks both transverse or longitudinal; slides, sinkholes, or depressions; missing vegetative cover; vegetation larger than two (2) inches in diameter; accumulated liquid; and surface discoloration indicating ash discharge from the landfill. The Vice President Generation Operations will appoint a qualified person to perform this weekly inspection, who is familiar with these inspection issues, and who has the authority to initiate prompt corrective actions.

During the weekly inspection, the designated inspector will also observe for excessive fugitive dust, and proper operations to minimize fugitive dust. Corrective measures will be initiated and implemented promptly.

The weekly inspection report will be sent to the Environmental Compliance Department and retained for a period of five (5) years. Note these weekly reports will be reviewed during formal annual assessments that will be performed by a qualified Professional Engineer.

9.0 AMENDMENTS TO THE PLAN
(OAC 252:517-13-1 (b)(6))

9.1 DESCRIPTION

This plan is reviewed annually. When updates are made, they shall be logged in the Amendment Log with the date of Amendment, along with a description of the plan change.

9.2 AMENDMENT LOG

Updated information provided below:

October 2017	Minimal administrative changes – updated names/titles
January 2019	Minimal administrative changes – updated names/titles. Updated information regarding Unit 1, updated site map.
February 2019	Minimal administrative changes – updated names/titles.
December 2019	Minimal administrative changes – updated names/title
December 13, 2020	No changes
April 2022	Administrative changes updated names/titles, pictures
March 2024	Minimal administrative changes - updated dates, landfill picture. Re-stamped the plan.
March 2025	Minimal Administrative changes – updated verbiage, names/titles
March 2026	Minimal administrative changes – updated dates, verbiage, landfill picture. Re-stamped the plan.

10.0 ATTACHMENTS

Plan Attachments are as follows:

- Procedure No. 004-011, Ash Transport Trucking
- Weekly CCR Landfill Inspection Form

GRAND RIVER DAM AUTHORITY COAL FIRED GENERATING COMPLEX COAL HANDLING DEPARTMENT PROCEDURES	PROCEDURE No.: **004-011**	DATE ORIGINALLY EFFECTIVE: 4/20/09
TITLE: **ASH TRANSPORT TRUCKING**	REVISION No.: One	PAGE No.: 3 of 3

4.0 INSTRUCTIONS

4.1 All OTR inbound ash haul trucks are required to check in at truck scales and confirm empty truck weight.

4.2 All ash haul trucks (both fly ash and bottom ash) will be loaded only by GRDA personnel or unless otherwise directed by GRDA.

4.3 All drivers are responsible to assure the load is properly secured for transport within or off GRDA plantsite in a manner which is environmentally sound to prevent indiscriminate release of the product. Items of concern are, but not limited to:

Closing of tank hatches
Proper securing of tarps
Watering of tarped product (when required due to unsealed tarp design)
Rinsing any spilled ash from transport truck
Watering and securing of tailgates
Observing safe vehicle speeds

4.4 All OTR outbound transport trucks are required to check out at the truck scales and confirm loaded truck weight.

4.5 Positively no transport trucks are allowed within the ash basin area without prior GRDA authorization and only at the direction of GRDA personnel.

4.6 Proper precautions must be adhered to by all drivers to in order to prevent spilling of ash load contents. Any on site spillage must be immediately reported by transport truck driver to GRDA scale house or GRDA operations personnel.

4.7 Normal business hours of scale house operation are from 0600 to 1900 hours. All afterhours drivers will check in at main gate security. On duty security personnel will direct driver to truck scales and coordinate the weighing/loading operation with Coal Handling Department.

GRAND River ENERGY Center

Week 53 - December 30th – January 5th

Weekly CCR Landfill Inspection Form

Inspection for Structural Weakness on GREC CCR Landfill: *The inspector shall inspect for: surface cracks both transverse or longitudinal; slides, sinkholes, or depressions; missing vegetative cover; animal burrows; vegetation larger than two (2) inches in diameter; accumulated liquid; and surface discoloration indicating ash discharge from the landfill.*
Inspection Findings:
Action Taken:

Inspection for Excessive Fugitive Dust and Proper Operations to Minimize Fugitive Dust:
Inspection Findings:
Action Taken:

Inspected by: _____ Date of Inspection: _____

Signed: _____

Reviewed By: _____