

**COAL COMBUSTION RESIDUALS (CCR)  
FUGITIVE DUST CONTROL PLAN  
SEMINOLE GENERATING STATION**



**Prepared By:**



**Corporate Regulatory Environmental**

**Effective Date: July 18, 2022**



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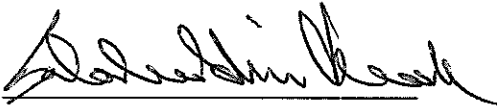
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**PROFESSIONAL ENGINEER CERTIFICATION:**

I hereby certify that this Fugitive Dust Control Plan has been prepared in accordance with 40 CFR §257.80, and when implemented as described, will meet the requirements thereof.

Certified Professional Engineer



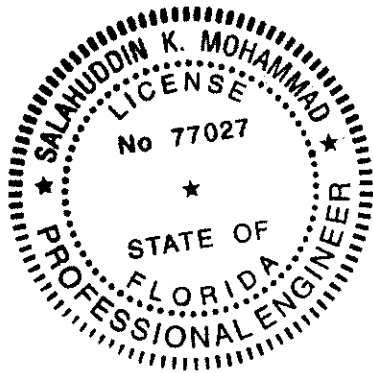
July 18, 2022

Signature

Date Signed

P.E. No. 77027

Registration Number



## 1.0 INTRODUCTION

Regulations issued by the U.S. Environmental Protection Agency (EPA) on April 17, 2015, addressing disposal of Coal Combustion Residuals (CCRs) (40 C.F.R. Part 257, Subpart D) (CCR Rule) require measures to effectively minimize Coal Combustion Residuals (CCR) from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads and other CCR management and material handling activities (§257.80(a)). As of the effective date of the CCR rule, Seminole Electric Cooperative, Inc. (Seminole) adopts the measures described within this Fugitive Dust Control Plan (Plan), in conjunction with other regulatory measures already in place at the Seminole Generating Station (SGS), toward the requirements of §257.80.

Key areas of the CCR Rule are addressed within the Plan as follows:

- Identification and description of CCR fugitive dust control measures—Section 2.1 of this Plan identifies and describes the CCR control measures determined appropriate for SGS site conditions.
- Requirements for CCR landfill—Section 2.2.7 describes the procedures to emplace CCR as conditioned CCR by increasing its moisture content.
- Procedures to log citizen complaints—Section 3.1 includes the procedure used to receive, log and promptly respond to citizen complaints.
- Periodic Assessment of the Plan – Seminole will periodically assess the effectiveness of the Plan as detailed within Section 3.2.
- Availability within Operating Record—The most recent version of the Plan, reviewed and approved by Seminole, will be maintained within the Operating Record on or before October 19, 2015.
- Amendment of the Plan—Section 1.2.4 describes the procedure for Plan amendment whenever there is a change in SGS Site conditions that would substantially affect the existing Plan.
- Professional Engineer (P.E.) Certification — P.E. certification for this initial Plan is on Page i. Any subsequent amendment of this Plan will receive P.E. review and certification.

## 1.1 ROLES AND RESPONSIBILITIES

### 1.1.1 SGS Environmental

SGS Environmental (SGS ENV) is responsible for the implementation of this Plan. Implementation activities include training of SGS employees involved with CCR, assessing retraining requirements upon Plan Amendments, recordkeeping associated with the Plan, overseeing preparation of the

annual CCR fugitive dust control report, monitoring control methods for effectiveness, and logging/responding to any received complaints or information requests.

### **1.1.2 Seminole Corporate Regulatory Environmental**

Seminole's Director of Regulatory Compliance is responsible for processing Plan Amendments, P.E. review and certification, notification requirements, maintaining internet data availability, and assisting SGS ENV in identifying training/retraining requirements.

## **1.2 PLAN ADMINISTRATION**

### **1.2.1 Plan Recordkeeping**

SGS ENV staff will ensure all records relevant to this Plan are maintained on-site and made available to Corporate Regulatory Environmental during preparation of the annual CCR fugitive dust control report. These records may include landfill logs, water truck logs, maintenance records, shipping records, citizen complaints and other data as determined necessary by the preparer of the report. Records will be stored for at least five (5) years from the time the CCR related activity occurred.

SGS ENV will maintain the latest version of this Plan and the most recent annual CCR fugitive dust control report within the SGS Operating Record as required by §257.105(g).

### **1.2.2 Plan Notification**

Seminole's Director of Regulatory Compliance will ensure the State Director is notified of the availability of this Plan, including any subsequent amendments, and of the availability of the annual CCR dust control report as required by §257.106(g).

### **1.2.3 Internet Site Availability**

Seminole's Director of Regulatory Compliance will ensure the most recent version of the Plan and the latest annual CCR dust control report is posted on the Seminole *CCR Web Site* as required by §257.107(g).

### **1.2.4 Plan Amendment**

Seminole will amend this Plan whenever there is a change in conditions at SGS that would substantially affect the existing Plan in effect, such as the construction or operation of a new CCR unit, or upon determination of the availability of more appropriate fugitive dust control methods. A Florida licensed professional engineer familiar with SGS and the requirements of §257.80 will review and certify any Plan Amendment.

## **2.0 CONTROL MEASURES AND AREAS**

The purpose of this Plan is to identify, describe and implement fugitive dust control measures that are most appropriate for the type of CCR generated at SGS and site conditions.

CCR managed at SGS include the following: fly ash, bottom ash, and synthetic gypsum (on- and off-spec). Bottom ash and on-spec fly ash is typically sold for beneficial use to the manufacturer of concrete block, and on-spec gypsum is beneficially used in the manufacture of wallboard by Continental Building Products, located adjacent to SGS. Most of the CCR generated at SGS is transported or conveyed off-site as a raw material for beneficial use. Non-beneficially used CCR material is disposed of in an on-site landfill.

Some of the potential SGS site-specific conditions include high wind conditions, industrial activities such as equipment movement, process malfunctions and CCR transfer to temporary storage areas or the CCR landfill.

This section describes the methods of CCR fugitive dust control determined appropriate to the CCR managed at the SGS plant site.

### **2.1 CONTROL MEASURES**

#### **2.1.1 Wet Suppression/Polymer Addition**

Wet suppression involves the application of water by means of water truck, water hoses or in-process water injection to increase the CCR moisture content and lower dust potential. The frequency of application will vary based on site-specific conditions, except for fixed process applications.

Polymer addition involves the use of products designed to bind particles, improve surface durability, and reduce dusting. Products are used according to the manufacturer's recommendation and product label requirements. This method is utilized mostly on roadways at SGS.

#### **2.1.2 Containment/Enclosure**

Containment is the use of enclosed structures to prevent dusting. These structures may be used for the storage or transport of CCR. Additionally, Containment refers to the covering of CCR material during transport by truck, usually by a tarp.

#### **2.1.3 Housekeeping**

Housekeeping is a broad term used to define the regular cleanup and preventative activities that minimize CCR from becoming airborne. For purposes of this Plan, housekeeping includes, but is

not limited to, use of hardened roads, maintenance of CCR transfer points and low speed limits for vehicles at SGS.

#### **2.1.4 Maintenance**

Maintenance is the use of preventative measures to keep equipment handling CCR material in good working condition. Additionally, maintenance refers to the priority with which malfunctions in equipment at SGS that could lead to accidental releases of CCR are repaired.

### **2.2 AREAS OF CONTROL**

#### **2.2.1 Bottom Ash Conveyance**

Bottom ash collects in the bottom of the boiler. From there, it is transferred to the bottom ash hopper via a series of enclosed conveyors under negative pressure to prevent dust from escaping. In the event of an accidental release of CCR material, the malfunctioning equipment is immediately shutdown. Repairs of this equipment are given an “emergency job (E-job)” designation which, pursuant to existing plant management practices, gives it immediate priority for repair. Because bottom ash conveyance is through a totally enclosed system it will not usually require dust control methods.

#### **2.2.2 Bottom Ash Loading**

Bottom ash in the hopper is wetted prior to being conveyed into trucks. The wetting prevents dusting through wet suppression and represents the most practical and effective method of dust suppression.

#### **2.2.3 Bottom Ash Transport**

Bottom ash is transported by truck from the bottom ash hopper to the Effluent Processing Facility (EPF) or coal yard for temporary storage and from the EPF/coal yard to off-site locations for beneficial use. In both cases, the ash is wetted prior to transport. While on-site, trucks move along hardened roads under 15 mph to prevent upset of the material within the truck. Trucks leaving the site utilize tarps to cover the bottom ash product. The low vehicle speeds on-site, along with the wetting of material, minimize any dusting of the material. For trucks leaving the SGS site, and traveling at higher speeds, covering the bottom ash product by tarp represents the most practical and effective method for minimizing dusting.

#### **2.2.4 Bottom Ash Storage**

Bottom ash that is temporarily stored at the EPF or coal yard, for eventual beneficial use, is subjected to wet suppression to control dusting. Bottom ash storage is temporary in nature (typically less than a week), therefore enclosure of the material would be impractical.

#### **2.2.5 Roadways**

Roadways involved in transport of CCR material are hardened and maintained to avoid ruts and other conditions that would disturb the CCR during transport.

In the past and prior to the effective date of the CCR rule, CCR material was used for stabilization of traffic areas. This practice has been discontinued. Non-hardened CCR material that was historically placed for this purpose has been covered by non-CCR material. Hardened CCR material (pozzocrete) is similar to asphalt in nature and does not represent a dusting risk.

#### **2.2.6 Fly Ash Transport**

The transport of fly ash to the EPF is controlled by an enclosed conveyance system which does not typically require dust control measures. Fly ash is captured by the electrostatic precipitator which collects the ash in an enclosed hopper. The fly ash is then transported pneumatically by pipeline to silos located in the EPF area. The entire system from production to storage in the silo is enclosed. Releases of fly ash from this system would only occur during a malfunction and would not be continuous in nature. Any malfunction of this system that could lead to an accidental release of CCR material is given an "E job" designation, which gives it first priority for repair.

#### **2.2.7 Emplacement of Fly Ash in Landfill**

Fly ash destined for disposal in the landfill is removed from the storage silo and wetted to a moisture content of 20 to 25 percent within an enclosed building. The wetted material is then conveyed to a stack-out pad for temporary storage before loading into open trucks for transport to the landfill. Potential for dusting in the conveying, storage and loading processes are controlled by the wetting of the fly ash. Water trucks are utilized to maintain surface moisture of the fly ash stockpile and the roadways and storage areas. The haul road between the stack-out pad and the landfill is watered as needed if visible dust is present. Water truck usage is directed by the Material Handling Supervisor and the watering schedule is adjusted regularly based on relevant conditions such as stack-out activity, air temperature, recent precipitation, and high-wind conditions. Additional water truck usage can be requested by plant supervisors, as needed. Water trucks are maintained to make sure they are available when needed.

After transport into the active landfill area, potential dusting of fly ash is controlled by the use of pozzocrete perimeter berms. These berms are built in lifts around the perimeter of the active

area of the landfill and the wetted fly ash is deposited inside once the berms have cured. Once a lift is complete, a cover soil with vegetation is put in place on the side slopes which prevents any potential future dusting. These methods of dust suppression are effective, standard best management practices for landfill operations and the emplacing of conditioned fly ash.

### **2.2.8 Gypsum Storage**

On-spec and Off-spec gypsum is occasionally stored in the EPF area. During these times any potential dusting is controlled using wet suppression. In the case of on-spec gypsum, a fog mist is applied to wet the product while ensuring it meets the moisture specification for use by the adjacent co-located wallboard manufacturing facility. Storage of gypsum in either case is infrequent and temporary in nature, so use of wet suppression is effective in minimizing CCR from becoming airborne at the SGS facility.

### **2.3 Beneficial Use**

A majority of CCR materials generated at SGS are managed as beneficial use. Activities associated with the collection and off-site transport of these materials are not subject to the CCR rule. These systems utilize the same control measures described above. In the event a significant dusting event were to occur, the residual material would be collected and disposed as a waste in accordance with this plan.

### **2.4 AREA OF CONTROL DETERMINATION**

Representatives from both Corporate Regulatory Environmental and SGS ENV conducted a joint inspection of SGS to determine where the potential for airborne CCR existed, and to select appropriate control methods. Table 1 summarizes the findings of this evaluation.

**Table 1. Summary of CCR Fugitive Dust Sources and Control Measures**

CCR	Area of Control	Description/Site Conditions	Frequency Occurrence	Severity of Occurrence	Control Measures			
					Wet Suppression	Containment/Enclosure	Housekeeping	Maintenance
Bottom ash	Conveyance from hopper to silo	Periodic small leaks	Infrequent	Low		X	X	X
Bottom ash	Bottom ash truck loading	Loading into trucks to EPF/Coal Yard	Daily	Low	X	X		
Bottom ash	Transport route to EPF by truck	Short drive from silo to EPF or Coal yard	Daily	Low	X	X	X	
Bottom ash	Storage	Temporary storage of bottom ash in EPF/Coal Yard	Daily	Low				
Bottom ash	Roads with bottom ash	Portions of the landfill perimeter road, at Coal Yard	Daily	Low-Moderate	X			
Fly ash	Precipitators	Periodic release at ash hoppers	Infrequent	Moderate-High		X		X
Fly ash	Pipeline	Periodic release at pipeline joints	Infrequent (most likely at unit startup)	Moderate-High		X		X
Fly ash	Fly ash silos	Malfunction at dust collector, other component	Infrequent	High		X		X
Fly ash	Fly ash Conveyor	Dusting potential at drop point to EPF stackout pad	Infrequent (when silos unavailable)	Moderate-High	X			
Fly ash	Temporary storage on stack-out pad	Dusting potential during truck loading and during high winds	Daily	Moderate-High	X			
Fly ash	Emplacement in Landfill	Dusting potential during transport and during high winds	Daily	Moderate-High	X			
On-spec gypsum	EPF gypsum dewatering pad	Dusting potential during high wind	Infrequent	Low-Moderate	X			

Off-spec gypsum	EPF storage pad	Off-spec occurs during startups and showdowns	Expected during unit startup	Low	X			
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### 3.0 MONITORING AND REVIEW

#### 3.1 COMPLAINT PROCEDURES

The Manager of Support Services (or designee) is responsible for tracking, processing, and ensuring corrective actions are taken (where necessary) upon receipt of citizen complaints. Any received complaint will be considered an Incident and generate an Incident Report which will include date of complaint receipt, identify of complainant, and corrective actions taken (if necessary).

#### 3.2 PERIODIC PLAN ASSESSMENT

Routine inspections of the SGS facility are conducted by SGS ENV personnel. Any incident of non-conformance with this Plan or related procedures will be documented and provided to the professional engineer responsible for reviewing and modifying the Plan to ensure its ongoing effectiveness.

The Plan will be reviewed by personnel within SGS ENV and Seminole Regulatory Environmental yearly in conjunction with preparation of the annual CCR fugitive dust control report. In addition to the onsite observations, a review of Incident Reports, citizen complaints and other pertinent documentation will be performed to ensure a thorough review of Plan effectiveness. Necessary Amendments to the Plan will be processed in accordance with Section 1.2.4. A log of Plan amendments is included in Table 2.

**Table 2. Record of Changes**

Date	Change	Replaces	PE Certification Required?	Person(s) Responsible for Change
1/30/17	Addition of Polymer Application to dust control measures	NA	Yes	JLG
1/30/17	Update of department nomenclature	Corporate EHS/SGS ENV	Yes	JLG
1/30/17	Addition of Coal Yard as bottom ash storage area	NA	Yes	JLG
1/16/19	Update of department nomenclature	Manager of EHS/Director of Corporate Env	Yes	JLG
7/13/22	Inserted Beneficial Use Section; Added areas of control information for EPF stackout pads; updated roadway section to reflect haul road modification.	NA	Yes	JLG