2018 Annual
Landfill Inspection Report

for the

SCE&G
Cope Station
Class III Landfill

in

Cope, SC

County of Orangeburg

January 17, 2019

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Certification

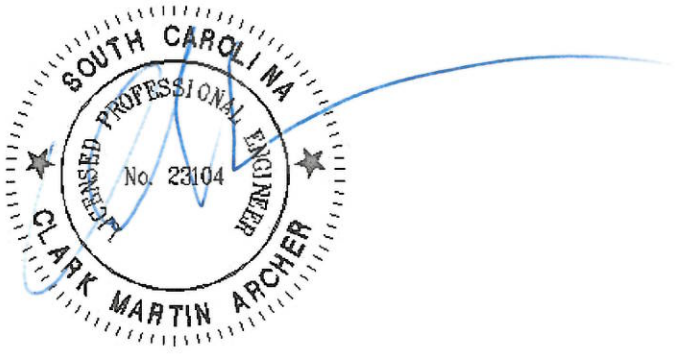
The inspection and report were completed by SCANA Services Generation Environmental Support under the oversight of Clark M. Archer; a licensed Professional Engineer in the State of South Carolina in accordance with Chapter 49 of the South Carolina Code of Regulations.

This document was prepared in compliance with all applicable requirements of:

→ 40 CFR 257 – Criteria for Classification of Solid Waste Disposal Facilities and Practices, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, and

→ Chapter 61 of the South Carolina Code of Regulation, Solid Waste Policy and Management Act of 1991, as amended.

I certify, to the best of my knowledge, all information contained in this document is correct.



Clark M. Archer, P.E.
Engineer, SCANA Services

Annual Inspection Report

The Annual Inspection Report is performed to comply with *40 CFR 257 Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments* and specifically with *§ 257.84(b) Annual inspections by a qualified professional engineer.*

§ 257.84 Inspection Requirements for CCR Landfills

(b) Annual inspections by a qualified professional engineer.

(1) Existing and new CCR landfills and any lateral expansion of a CCR landfill must be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum, include:

(i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person and results of previous annual inspections); and

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

(2) *Inspection report.* The qualified professional engineer must prepare a report following each inspection that addresses the following:

(i) Any changes in geometry of the structure since the previous annual inspection;

(ii) The approximate volume of CCR contained in the unit at the time of the inspection;

(iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

Background

The landfill is located at the Cope Generating Station in Orangeburg County. The Cope Generating Station is approximately 13 miles southwest of the City of Orangeburg, SC. Figure 1

– Site Location, shows the location of the landfill relative to the power plant. The date of the aerial imagery is March 2018. The Class III landfill is permitted by the South Carolina Department of Health and Environmental Control (SCDHEC) under Permit No. 383320-1601.

Site Inspection

The annual landfill inspection was performed on December 12, 2018 by Clark Archer, PE. The inspection included a walk-through with landfill operation personnel and SCANA Services Generation Environmental Support (GES) staff to discuss the operation of the facility and the leachate removal system and to observe the existing site conditions including the access road and entrance, the intermediate waste slopes, and the storm and contact water control measures.

Prior to the inspection, the weekly inspection reports for 2018 up to December 7th were reviewed by Mr. Archer and GES staff. Based on review of the weekly inspection reports and discussions with the operation personnel, the landfill operations are running smoothly. At the time of inspection, CCR material was actively being placed in the landfill.

Addressed Regulatory Items

Changes in Geometry

(i) Any changes in geometry of the structure since the previous annual inspection.

✓ There have been no changes in the geometry of the landfill since the previous annual inspection.

Approximate Volume of CCR Material

(ii) The approximate volume of CCR contained in the unit at the time of the inspection

✓ SCANA completed a topographic survey for the landfill in March 2018 and an airspace analysis in June 2018. At the time of the inspection, the Cope Station Class III landfill contains approximately 593,000 cubic yards of CCR.

Structural Integrity

(iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt

the operation and safety of the CCR unit.

- ✓ No appearances of structural weakness of the CCR Unit was observed. Furthermore, there was no indication of any conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR Unit

Other Changes

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

- ✓ There have been no changes identified which may have affected the stability or operation of the CCR Unit since the previous annual inspection

Summary/Conclusion

Review of the Operating Record and completion of the visual site inspection identified the need for routine maintenance in perimeter stormwater ditch. The need for this maintenance activity was a result of heavy precipitation occurring the four days leading up to the day of the inspection. Landfill operating staff were aware of the issue and are making plans to address this maintenance item.

The CCR Unit Class III Landfill at Cope Station appears to be functioning properly with no identified concerns affecting or disrupting typical operations.

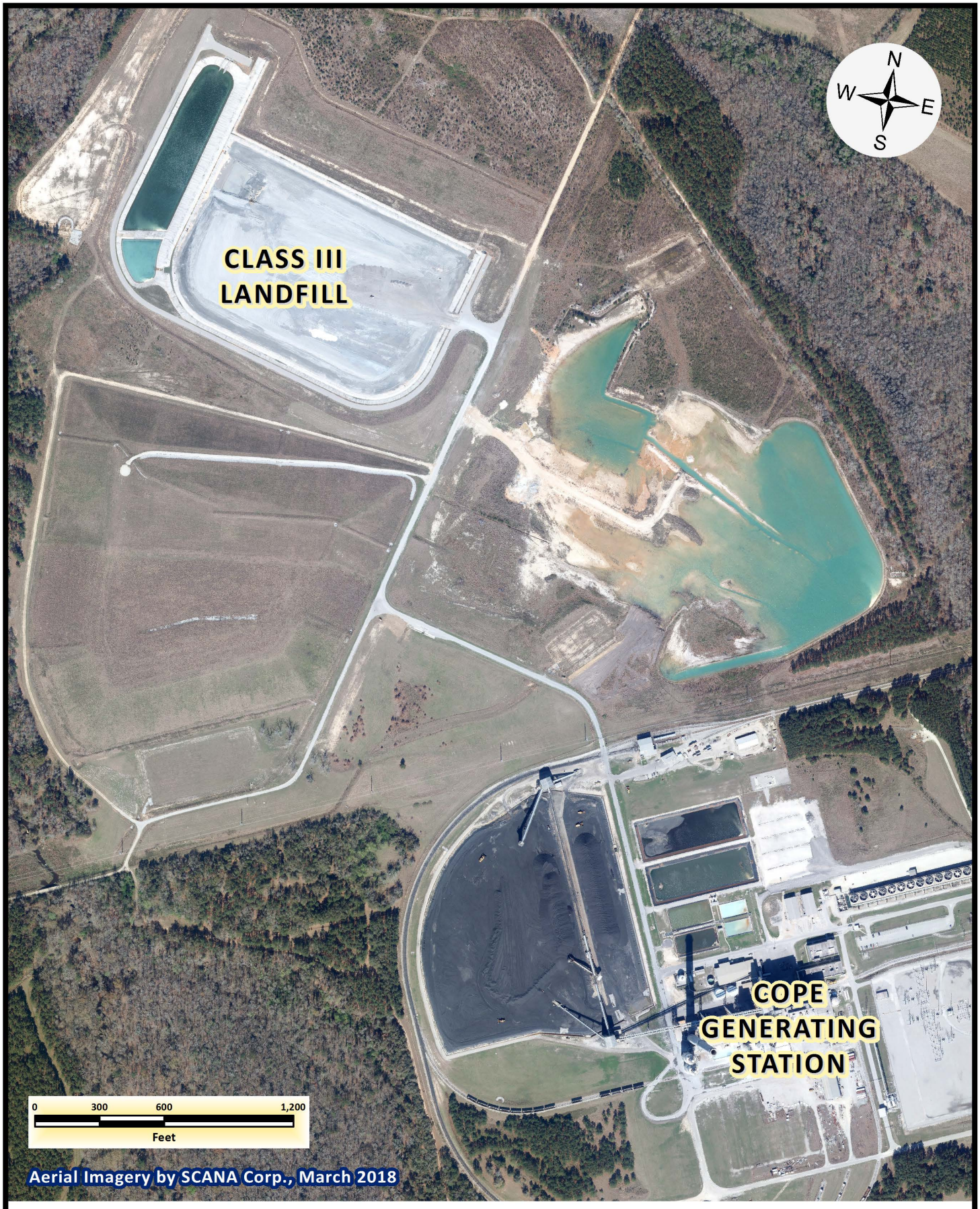


Figure 1 – Site Location
Cope Station Landfill

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CCR Landfill
Annual Inspection Report

Name of CCR Landfill: COPE
Landfill ID Number: LF 3 - 00038
Owner: SCE & G
Operator: SCE & G
Site Conditions: OPERATING

Qualified Inspector: R. ARCHER
Date: 12/12/18 **Time:** 9:30
Weather: CLEAR, 50°
Precipitation (since last inspection): ___ in.

I. Perimeter Berm

1. How would you describe the vegetation on the crest and side slopes? (Check all that apply)

- ✓ Recently Mowed
- ___ Overgrown (Greater than 6-in.)
- ✓ Good Cover
- ___ Sparse
- ___ Paved
- ___ Gravel

Other (describe): ___

2. Are there any areas of hydrophilic (lush, water-loving) vegetation? ___ Yes ✓ No
   If 'Yes', describe (size, location, severity, etc.) ___

3. Are there any trees or other undesired vegetation on the berm? ___ Yes ✓ No
   If 'Yes', describe (type of vegetation, size, location, etc.) ___

4. Is there an access ramp up the side slope or a road around the perimeter berm? ✓ Yes ___ No
   If 'Yes', describe (good condition, numerous cracks, newly paved, stone uniformly distributed, etc.)
   GOOD CONDITION, PAVED

5. Are there any depressions, ruts, or holes on the access ramp or road? ___ Yes ✓ No
   If 'Yes', describe (size, location, etc.) ___

6. Are there any cracks, sloughs, bulges, or indications of slope distress? ___ Yes ✓ No
   If 'Yes', describe (length and width, location and direction of cracking, slough, or distress, etc.) ___

7. Other observations on the perimeter berm (changes since last inspection, etc.):
   NONE

II. Stormwater Conveyance Structures

1. Describe what types stormwater conveyance structures there are at the site (e.g. drop inlets, down chutes, benches, ponds, outlet structures, etc.).
   PERIMETER DITCH, RIP RAP CHECK DAM AT POND FOREBAY, RIP RAP SPILLWAY FROM FOREBAY TO MAIN POND.

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2. Describe the condition of stormwater structures mentioned above (Are they in working condition? Are there any erosion in or around the structures? Is there any sings of leakage? Is there any signs of movement?)

GOOD CONDITION, SOME DISPLACEMENT OF RIP RAP AT FOREBAY CHECK DAM, SOME ACCUMULATION OF MATERIAL AT CHECK DAM

III. Landfill Conditions

1. Describe operations in the landfill (disposal, reclamation, general operational activities):

DISPOSAL, ACTIVE GRADING

2. Are any stormwater controls obstructed? ___ Yes ✓ No
If 'Yes', describe (type of debris, reason for obstruction, etc.)

3. Are there indications of erosion on the landfill slopes? ___ Yes ✓ No
If 'Yes', describe what type and its condition (rill, gully, dimensions, etc.)

4. Is the leachate collection system functioning (describe discharge color, quantity)?

YES, MINIMAL LEACHATE

5. How is the leachate stored? Comment on the condition of the structure.

PUMPED TO POND

6. Other observations around the landfill (changes since last inspection, etc.):

NONE SPECIFIC,

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IV. Leachate Pond Spillways

1. What types of spillways does the leachate pond have (concrete, earth, riprap, etc.)?
   Principal Spillway: RIP RAP Emergency Spillway: FABRIFORM
   Other: _____

2. Has the spillway(s) been used since the last inspection? ✓ Yes ___ No
   If 'Yes', describe (date of flow, reason, depth of flow, erosion, etc.) CONTINOUS FLOW THROUGH

3. How would you describe the condition of the spillway (cracking, evidence of leaks, significant vegetation growth, etc.)?
   GOOD CONDITION

4. Is there any evidence of erosion around the spillway? ___ Yes ✓ No
   If 'Yes', describe (size or area, location, severity, etc.) _____

V. Dust Control

1. Is there evidence of dry areas on the pond surface? ___ Yes ✓ No
   If 'Yes', describe (size, location, etc. and necessary action, if any) _____

2. Is there evidence of visible fugitive dusts beyond the extent of the surface impoundment area? ___ Yes ✓ No
   If 'Yes', describe (size or area, location, severity, etc. and necessary action) _____

3. Is there evidence of visible fugitive dusts beyond the extent of access roads right-of-way? ___ Yes ✓ No
   If 'Yes', describe (size or area, location, severity, etc. and necessary action) _____

4. Are trucks and vehicles from CCR management areas being cleaned prior to leaving the Facility? ✓ Yes ___ No
   If 'No', describe why not _____

5. Is there evidence of visible fugitive dust at the downwind Facility boundaries? ___ Yes ✓ No
   If 'Yes', describe (size or area, location, severity, etc. and necessary action) _____

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6. List other conditions observed during this inspection that may need to be addressed to maintain compliance with the Dust Control Plan?
NONE IDENTIFIED

VI. Repairs, Maintenance, Action Items

1. Has any routine maintenance been conducted since the last inspection? ✓ Yes ___ No
If 'Yes', describe.

2. Have any repairs been made since the last inspection? ✓ Yes ___ No
If 'Yes', describe.
LEACHATE PUMP

3. Are there any areas of potential concern? ___ Yes ✓ No
If 'Yes', describe.

4. Has this inspection identified any need for repair of maintenance? ✓ Yes ___ No
If 'Yes', describe and state the urgency of maintenance. "Urgent" for maintenance that should be conducted as soon as possible, "Moderate" for maintenance that should be conducted within three months, and "Not Urgent" for maintenance that can be conducted in a year.
RIP RAP CHECK DAM @ FOREBAY FROM DITCH - MODERATE
LF REPILE STONE & MUCKOUT

R. CARROL

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VII. Photographs

Photographs can be taken of notable features. List of photographs:

	Location	Direction of Photo	Description
i.			
ii.			
iii.			
iv.			
v.			
vi.			
vii.			
viii.			
ix.			
x.			