

**2017 Annual
Landfill Inspection Report**

for the

**SCE&G
Wateree Station
Class III Landfill**

in

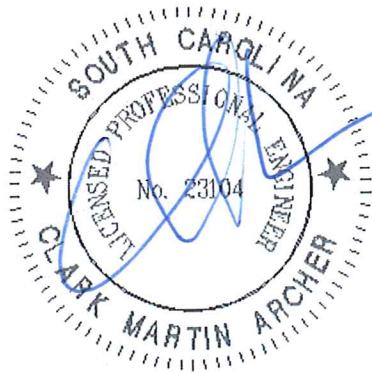
**Eastover, SC
County of Richland**

January 17, 2018



Certification

The inspection and report was completed by SCANA Services Generation Environmental Support under the oversight of Clark M. Archer; a licensed Professional Engineer in the State of South Carolina. This document has been prepared in accordance with Chapter 49 of the South Carolina Code of Regulations, and to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements of 40 CFR 257 and Chapter 61 of the South Carolina Code of Regulation, Solid Waste Policy and Management Act of 1991, as amended.



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 Wateree Generating Station in Richland County. The Wateree Generating Station is approximately 5 miles southeast the City of Eastover, SC. Figure 1 – Site Location Figure, shows the location of the landfill relative to the power plant. The date of the aerial imagery is February 2017. The Class III landfill is permitted by the South Carolina Department of Health and Environmental Quality (SC DHEQ) under Permit No. 403320-1601.

Site Inspection

The landfill site inspection was performed on December 5, 2017 by Clark Archer, PE. The inspection included a walk-through with landfill operation personnel, Wateree Station staff and SCANA Services Generation Environmental Support (GES) staff to discuss the operation of the facility and the leachate removal system, observation of 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 through November 30, 2017 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 February 2017 and an airspace analysis in June 2017. At the time of the inspection, the Wateree Station Class III landfill contains approximately 1,908,800 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

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



CCR Landfill
Annual Inspection Report

Name of CCR Landfill: WATEREE Qualified Inspector: RA
 Landfill ID Number: 403320-1601 Date: 12/5/17 Time: 10:00
 Owner: SCE&G Weather: OVERCAST 50
 Operator: SCE&G Precipitation (since last inspection): 0 in.
 Site Conditions: LAST RAIN 11/21/17 OUTAGE - LAST WEEK OF OCT

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.)
2 ENTRANCES - NORTH LOOKS GOOD, SOUTH LOOKS GOOD

5. Are there any depressions, ruts, or holes on the access ramp or road? Yes No
 If 'Yes', describe (size, location, etc.)
ACCESS ROAD NEEDS TO BE GRADED ~~SO~~ WITH CROWN @ OUTSIDE

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.)
- ADDITIONAL VEGETATION

7. Other observations on the perimeter berm (changes since last inspection, etc.):
ADDITIONAL VEGETATION ON BERM - GOOD

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.).
DITCHES, CULVERTS, DROP INLET, POND, BENCHES



CCR Landfill
Annual Inspection Report

Name of CCR Landfill: WATEREE Qualified Inspector: FA
Landfill ID Number: 403320-1601 Date: 12/5/7 Time: 10:00

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 signs of leakage? Is there any signs of movement?)

NORTH/NORTHWEST SIDE IN GOOD CONDITION
SOME MATERIAL SOUTH WEST DITCH, CLEANOUT SCHEDULED
FOR NEXT WEEK (MID DEC) ROUTINE (MONTHLY)

III. Landfill Conditions

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

DISPOSAL FROM PLANT AND ASH POND PROJECT
75/30 LOADS, GRADING SO TOP WATER → NW CORNER
FGD PILED @ NORTH SIDE, SLOWLY SPREAD AND BLENDED

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)?
LEACH #1 CLEAR LEACH #2 CLEAR
LOW FLOW

5. How is the leachate stored? Comment on the condition of the structure.
POND, POND FOREBAY CURRENTLY
BEING CLEANED/MUCKED

6. Other observations around the landfill (changes since last inspection, etc.):
SOUTH SLOPE BEING BUILT UP, MAINTENANCE SHELF FADING
ENTRANCE @ EAST CLOSED FOR NOW, ADDING MATERIAL
TO REOPEN CBP UNDERWAY



**Figure 1 – Site Location
Wateree Station Landfill**



CCR Landfill
Annual Inspection Report

Name of CCR Landfill: WATEREE Qualified Inspector: RA
Landfill ID Number: 403320-1601 Date: 12/5/17 Time: 10:00

IV. Leachate Pond Spillways

1. What types of spillways does the leachate pond have (concrete, earth, riprap, etc.)?
Principal Spillway: RIP RAP Emergency Spillway: RIP RAP
Other: MANUALLY PUMPED DOWN
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.) FOREBAY HAS FLOW THROUGH SPILLWAY BERM
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) _____



CCR Landfill
Annual Inspection Report

Name of CCR Landfill: WATERFEE Qualified Inspector: [Signature]
Landfill ID Number: 403320-1501 Date: 12/1/17 Time: 10:00

6. List other conditions observed during this inspection that may need to be addressed to maintain compliance with the Dust Control Plan?

NONE IDENTIFIED
WATER TRACKS IN USE (NOT DURING INSPECTION)

VI. Repairs, Maintenance, Action Items

1. Has any routine maintenance been conducted since the last inspection? Yes No
If 'Yes', describe. DITCH CLEANINGS, VEGETATION MOWING,
SLOPE MANAGEMENT, STONE ON ENTRANCE PERIODICALLY
STONE ON ACCESS ROAD IN SPRING 2017

2. Have any repairs been made since the last inspection? Yes No
If 'Yes', describe. CELL #9 PROTECTIVE COVER REPAIR
DUE TO EROSION

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

4. Has this inspection identified any need for repair or 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. NOT URGENT, DITCH CLEANING
(ALREADY SCHEDULED) AND ROAD GRADED ON NORTH
SIDE TO PROMOTE RUNOFF TO INSIDE DITCH.
DITCH MOWING (NORTH SIDE)

BEN
SAM (PHONE)
MIKE MOORE



CCR Landfill
Annual Inspection Report

Name of CCR Landfill: WATEREE Qualified Inspector: [Signature]
 Landfill ID Number: 403320-1601 Date: 12/5/17 Time: 10:00

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. | | | |

BOT TO TOP
 $\frac{13\frac{3}{4}}{4} = \frac{11}{4} \times$

BUCKET $11\frac{1}{4}$ TOP
 $10\frac{1}{4}$ BOT

LEACH #1
 11" DEEP D = 11.05"
 = 0.61 of
 = 9.57 gal
 = 2.749 PM

LEACH #2
 $3\frac{1}{2}$ " 52sec
 1.313 gal
 1.519 PM

100sec

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