CLOSURE PLAN

R6 CCR LANDFILL
PLANT YATES
COWETA COUNTY, GEORGIA

FOR

Georgia Power

November 2018

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TABLE OF CONTENTS

1. GENERAL

The Plant Yates inactive R6 CCR Landfill, operated under Solid Waste Handling Permit 038-011D(LI) issued by the Georgia Environmental Protection Division (EPD) on May 17, 1985. R6 is an Inactive CCR Landfill as defined in the Georgia Rules for Solid Waste Management, 391-3-4-.10(2)(a)(3) in that it no longer received CCR on or after October 19, 2015.

R6 is being closed in a manner that minimizes the need for further maintenance and the potential of post-closure releases of contaminants to groundwater. The written closure plan presented subsequently in this document and the Closure Drawings included in Section 9 of Part A of the permit application present the closure design and provide guidance on the sequence of closure. These documents are supplemented by engineering analyses and calculations contained in the Engineering Report in Part B of the permit application.

2. NOTIFICATION

Georgia Power notified EPD of its intent to close the R6 CCR Landfill, Solid Waste Handling Permit 038-011D (LI), in a letter dated November 4, 2015 shortly after receiving its last load of waste on October 18, 2015.

3. AMENDMENTS OF THE CLOSURE PLAN

Georgia Power must amend the written Closure Plan whenever:

- There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or
- Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan.

Georgia Power must amend the closure plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written closure plan. If a written closure plan is revised after closure activities have commenced for a CCR unit, Georgia Power will amend the current closure plan no later than 30 days following the triggering event.

Georgia Power will obtain a written certification from a qualified professional engineer that the amendment of the written closure plan meets the requirements of the rules.

4. BOUNDARY AND LEGAL DESCRIPTION

A survey drawing and legal description of the permit boundary, prepared by a Registered Professional Surveyor, are included on Sheet 3 of the Closure Plan Drawings in Section 9 of this permit package.

5. CLOSURE PROCEDURES

5.1 OVERVIEW

Georgia Power Company (Georgia Power) initiated closure of R6 in the 3rd quarter of 2014 and last received waste on October 18, 2015. R6 is being closed in place and the closure construction is broken into 3 phases. Phase 1 and 2 closure operations have consisted of closing 68 acres of the unit in place in accordance with the with the traditional soil final cover system. The final cover system consists of an 18" clayey soil layer and a 6" topsoil layer. The site was graded to prevent erosion by diverting stormwater run-on around R6 and by directing run-off into an interior ditch which flows to the primary stormwater drainage ditch leading to the Plant Yates Ash Pond 2 (AP-2). The remaining 14 acres of the R6 CCR Landfill final cover system will be closed in Phase 3.

The written closure plan presented subsequently in this document and the Closure Drawings included in Section 9 of Part A of the permit application present the closure design for the Phase 3 closure. These documents are supplemented by engineering analyses and calculations contained in the Engineering Report in Section 2 of Part B of the permit application.

5.2 FUGITIVE DUST CONTROL PLAN

This fugitive dust control plan identifies and describes the CCR fugitive dust control measures that Georgia Power will use to minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from roads, and material handling activities. GA EPD State CCR Rule 391-3-4-.10(2)(a) (incorporating 40 CFR § 257.53 by reference) defines "fugitive dust" as "solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than through a stack, or chimney."

This plan identifies and describes the CCR fugitive dust control measures that Georgia Power will use during closure construction to minimize airborne CCR due to construction and related activities associated with closure of Plant Yates R6 CCR Landfill. The CCR fugitive dust control measures that will be used are presented below:

- Fugitive dust originating from the closure activities will be controlled using water suppression or polymer tackifiers.
- CCR that is transported via truck for disposal is conditioned to a moisture content appropriate to reduce the potential for fugitive dust.
- Water suppression or polymer tackifiers will be used as needed to control fugitive dust on facility roads used to transport CCR and other CCR management areas.
- Speed limits will be utilized to reduce the potential for fugitive dust.
- Trucks used to transport CCR will be filled to or under capacity to reduce the potential for material spillage.

The fugitive dust control measures described above were selected based upon an evaluation of site-specific conditions for the Plant Yates R6 CCR Landfill closure, including the physical properties of CCR, site conditions, weather conditions, and operating conditions.

Georgia Power and construction personnel will assess the effectiveness of the control measures by performing visual observations of the areas and implementing appropriate corrective actions

for fugitive dust, as necessary. Logs will be used to record the utilization of water-spray equipment.

Any complaint received from a citizen regarding a CCR fugitive dust event at the facility will be documented and investigated. Appropriate steps will be taken, including any corrective action, if needed.

5.3 STORMWATER AND CONTACT WATER MANAGEMENT

Stormwater, or non-contact water runoff is routed around the excavation and is conveyed (e.g. via pumps) to existing surface water management system (ditches, channels and drop inlets) until the R6 closure is complete. The final cover system will be graded to promote drainage to the final surface water management system in accordance with NPDES Construction Storm Water or Industrial Storm Water permit(s). Additionally, stormwater run-off will be directed to the primary stormwater drainage ditch leading AP-2. Following completion of the closure by removal activities at AP-2, AP-2 east will be utilized for plant operations, serve as the Plant's new service water pond and will continue to be managed in accordance with NPDES GA0001473.

6. FINAL COVER SYSTEM

Upon closure, all CCR received at the R6 CCR Landfill will be placed and covered in accordance with the plans. The final cover will consist of a minimum 18-inch infiltration barrier layer of clayey soil placed and compacted in accordance with the design specifications and a 6-inch minimum surface layer of top soil capable of supporting vegetation growth. A list of testing methods, frequency of testing, and material specifications is provided in the Construction Quality Assurance Plan included in this permit application.

The final cover will be compacted so as to preclude any excessive infiltration of surface water and to provide a hydraulic conductivity of 1×10^{-5} cm/sec or less. The material to be used for the final cover will be from the qualified borrow area. In order to reduce the potential for desiccation of the infiltration barrier layer, the 6-inch topsoil layer will be placed immediately after the barrier layer has been placed and compacted. The final cover and site will be graded so as to prevent erosion by diverting run-on around the landfill and by directing run-off into the Plant Yates NPDES Permit GA0001473. The final slopes will not be steeper than 3 horizontal to 1 vertical. The minimum slope will be 3%.

The final cover system will meet the following standards:

a. Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;

b. Preclude the probability of future impoundment of water, sediment, or slurry;

c. Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;

d. Minimize the need for further maintenance of the CCR unit; and

e. Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

7. CERTIFICATION OF CLOSURE

Upon completion of closure activities, a professional engineer registered in Georgia will prepare and Georgia Power will submit a closure construction report to the Director. The closure construction report will be completed on forms provided by the Division. Additionally, the closure report will include an as-built plan of the grades at the time of closure.

Within 30 days of completion of closure, Georgia Power will prepare a notification which will include certification from a qualified professional engineer registered in Georgia verifying that closure has been completed in accordance with this closure plan. Georgia Power has completed the notification when it has been placed in the facility's operating record.

8. DEED NOTIFICATION

Concurrent with the submission of the closure construction report to the Director, Georgia Power will submit confirmation to the Director that a notation on the property deed, inclusive of the R6 permit boundary, has been recorded. This recording will notify any potential purchaser of the property in perpetuity that the land has been used as a CCR landfill and that its use is restricted under the post-closure care requirements of the GA EPD CCR Rule. The deed will include the dates that the R6 CCR Landfill operations commenced and terminated, an accurate legal description of R6 CCR Landfill location, and a description of the type of CCR that have been deposited in the R6 CCR Landfill. Within 30 days of completing this deed notification, Georgia Power will place this documentation in the operating record for the Plant.

9. ESTIMATE OF CCR QUANTITY

The estimated volumes of CCR placed in R6 are presented in Table 1 below.

Table 1. Estimated CCR Quantity

	Quantity of CCR (cubic yards)
R6 CCR Landfill	7,00,000

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10. VEGETATION PLAN

During temporary lapses in construction activity, temporary stabilization measures are installed on exposed areas and in accordance with the Disturbed Area Stabilization (With Mulching Only) or Disturbed Area Stabilization (With Temporary Seeding) details in the closure drawings.

At the completion of closure activities all exposed areas will be grassed and maintained in accordance with the following schedules. Final surfaces will be seeded and mulched within 30-days of final cover placement. Permanent covers which are slow to establish will receive temporary seeding. The fertilizer requirements are suggested. Planting dates, fertilizer rates, and seeding rates will meet the requirements in the Manual for Erosion and Sediment Control in Georgia.

BROADCAST													
SPECIES	**RATES**	**PLANTING DATES**											
		J	F	M	A	M	J	J	A	S	O	N	D
Sericea Lespedeza (unscarified	75 lbs/ac	x	x	p	p	p	p	p	p	x	x	x	X
Wilmington Bahia	30 lbs/ac	p	p	x	x	x	p	p	p	p	p	p	p
Common Bermuda Unhulled	6 lbs/ac	x	x								x	x	x

Lespedeza, Bahia, and Bermuda may be mixed with tall fescue.
X – Optimum dates, p – permissible, but marginal dates

NOTES:
1. All seeding rates are pure live seed rates.
2. All seeding will be mulched with clean dry hay at the rate of 2.5 tons per acre. Mulch will be anchored by pressing the mulch into the soil immediately after the mulch is spread using a packer disk or disk harrow or equivalent piece of equipment.
3. Temporary seeding should also complement permanent seeding to produce a suitable cover while the permanent grasses germinate.
4. Disturbed slopes greater than 3%, including soil stockpiles, are to be mulched immediately.
5. D.O.T. or County Extension seed type, seed rates, fertilizer requirements, etc. may also be used in lieu of the table above.

FERTILIZATION (Cool Season Grasses)			
Year	**N-P-K**	**Rate**	**N Top Dressing Rate**
First	6-12-12	1500 lbs/ac	50-100 lbs/ac
Second	6-12-12	1000 lbs/ac	-
Maintenance	10-10-10	400 lbs/ac	30 lbs/ac

(1) Apply in spring following seeding.
(2) Apply in split applications when high rates are used.
(3) Apply in 3 split applications.
(4) Apply when plants are pruned.
(5) Apply to grass species only.
(6) Apply when plants grow to height of 2"-4".

11. EROSION AND SEDIMENTATION CONTROL

The disposal areas are confined within a perimeter drainage ditch which diverts all potential run-on around the disposal site and to Ash Pond 2, which will be utilized for plant operations in accordance with NPDES Permit GA0001473. All necessary erosion control measures will be maintained, repaired and/or replaced as necessary throughout the closure period. Additional measures will be taken as required or as directed by the Engineer to minimize erosion of soil.

12. ON-GOING PLANT OPERATIONS AND MAINTENANCE

Plant operations and maintenance will occur within the permit boundary but outside the limits of the final cover system (e.g. outside the waste boundary). Activities not directly affecting the final cover system, such as those needed to construct, maintain, replace or repair systems for electric power generation or its delivery (such as subsurface piping, electrical appurtenances, transmission structures, etc.) may be conducted at the Permittee's discretion.

However, should utility operations be required such that the final cover system is required to be disturbed, EPD will be provided with a report documenting the repair of the final cover system. The repair documentation will include as-builts, CQA information and certification from a professional engineer licensed to practice in Georgia.

13. COST OF CLOSURE AND FINANCIAL ASSURANCE

In compliance with applicable securities laws and regulations, Georgia Power will provide specific cost estimates for closure and post-closure care during the permit application review process as estimates are developed and finalized. It is anticipated these estimates will be available to EPD in the first half of 2019. Georgia Power will provide a demonstration of financial assurance upon approval of closure and post-closure care cost estimates by EPD.

14. CLOSURE SCHEDULE

Closure activities are currently ongoing. A list of milestones is provided below that either has been or will be met over the remaining closure period:

- Install and maintain erosion and sediment control systems serving disturbed areas;
- Provide dust control for earthwork and ash handling operations. Maintain for project duration and until the area reaches final stabilization.
- Installation of clean water ditch along the eastern boundary of R6 and the AMA area;
- Install final cover system;
- Conduct site re-vegetation and restoration;
- Prepare final topographic as-built survey;
- Prepare accurate legal description of final CCR limit of waste boundary;
- Provide the closure report to the Director; and
- Submit to the Director confirmation that the notation on the property deed has been recorded.

15. INSPECTIONS

In accordance with 391-3-4-.10(4), which incorporates the requirements of an existing landfill 391-3-4-.10(3)(ii), Georgia Power will inspect the R6 landfill during the remaining closure activities at intervals not exceeding seven (7) days. The 7-day inspections are made by a Qualified Person and include observation and documentation of any appearance of actual or potential structural weakness and other conditions

which are disrupting or have the potential to disrupt the closure activities or the safety of the landfill. Georgia Power records the results of these inspections on a form that is filed in the facility's operating record. If a potential deficiency or release is identified during an inspection, Georgia Power will remedy the deficiency or release as soon as feasible. Georgia Power will prepare documentation detailing the corrective measures taken and place it in the facility's operating record.

A Professional Engineer registered in Georgia will inspect R6 on an annual basis during the closure activities. The inspection includes observation and documentation of any appearance of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the closure activities or the safety of the landfill. The results of this report will be placed in the facility's operating record.

16. RECORDKEEPING/NOTIFICATION

Georgia Power will continue to comply with all applicable recordkeeping requirements and maintains the facility's operating record at all times.

17. LEGAL DESCRIPTION

The legal description below was taken from a drawing titled "Survey of Plant Yates – R6 Ash Disposal Area Permitted Site Boundary"

All that parcel or tract of land lying and being in land lots 43, 44, 50 and 51 of the 4th District, Coweta County, Georgia and being more particularly described as follows:

The Point of Beginning is located at the Georgia State Plane, West Zone, NAD83 coordinates of: N 1262995.61 and E 2076620.13; thence running South 67 degrees 50 minutes 45 seconds East a distance of 200.17 feet to a point; Thence running South 50 degrees 36 minutes 59 seconds East a distance of 57.16 feet to a point; Thence running along a curve to the right an arc distance of 68.28 feet (said arc having a radius of 300.00 feet and being subtended by a chord 68.14 feet in length lying to the southwest of said arc and bearing South 44 degrees 05 minutes 44 seconds East) to a point; Thence running along a curve to the left an arc distance of 259.12 feet (said arc having a radius of 275.00 feet and being subtended by a chord 249.64 feet in length lying to the northeast of said arc and bearing South 64 degrees 34 minutes 05 seconds East) to a point; Thence running North 88 degrees 26 minutes 20 seconds East a distance of 173.59 feet to a point; Thence running along a curve to the right an arc distance of 138.30 feet (said arc having a radius of 225.00 feet and being subtended by a chord 136.14 feet in length lying to the southwest of said arc and bearing South 73 degrees 57 minutes 06 seconds East) to a point; Thence running South 56 degrees 20 minutes 32 seconds East a distance of 326.31 feet to a point; Thence running along a curve to the right an arc distance of 101.30 feet (said arc having a radius of 250.00 feet and being subtended by a chord 100.60 feet in length lying to the southwest of said arc and bearing South 44 degrees 44 minutes 04 seconds East) to a point; Thence running South 33 degrees 07 minutes 37 seconds East a distance of 147.77 feet to a point; Thence running South 20 degrees 57 minutes 17 seconds East a distance of 708.06 feet to a point; Thence running along a curve to the right an arc distance of 231.27 feet (said arc having a radius of 375.00 feet and being subtended by a chord 227.62 feet in length lying to the west of said arc and bearing South 03 degrees 17 minutes 13 seconds East) to a point; Thence running South 14 degrees 22 minutes 52 seconds West a distance of 316.95 feet to a point; Thence running South 58 degrees 28 minutes 29 seconds West a distance of 138.08 feet to a point; Thence running South 37 degrees 34 minutes 43 seconds West a distance of

970.70 feet to a point; Thence running South 70 degrees 56 minutes 24 seconds West a distance of 665.27 feet to a point; Thence running North 58 degrees 11 minutes 31 seconds West a distance of 554.02 feet to a point; Thence running North 06 degrees 22 minutes 56 seconds East a distance of 1168.97 feet to a point; Thence running North 15 degrees 55 minutes 04 seconds West a distance of 757.56 feet to a point; Thence running North 32 degrees 05 minutes 26 seconds East a distance of 883.93 feet to a point and The Point of Beginning;Said tract contains 91.74 acres (3,996,367 square feet).