CLOSURE PLAN

PLANT SCHERER
COAL COMBUSTION RESIDUALS
(CCR) LANDFILL

MONROE COUNTY, GEORGIA

FOR

Georgia Power

NOVEMBER 2022

GEORGIA REGISTERED NO. 27185 PROFESSIONAL ENGINEER R. BRANT LANE 11/9/22

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Approved

Solid Waste Management Program

Approved By: Keith Stevens Digitally signed by Keith Stevens Date: 2023.03.17 10:15:44 -04'00'

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1. GENERAL

The four (4) disposal cells at the Plant Scherer CCR Landfill will be closed by leaving coal-combustion residuals (CCR) in place and installing a final cover system meeting the requirements of Solid Waste Rule 391-3-.4-.10(7). The Plant Scherer CCR Landfill has a disposal capacity of approximately 7,854,723 cubic yards, and Cells 1, 2, 3 and the PAC/Ash Cell cover a total combined area of approximately 96 acres that will require final cover. Georgia Power will close this CCR landfill in a manner that minimizes the need for further maintenance and minimizes the potential of post-closure release of contaminants to the ground or surface waters.

The closure of the Plant Scherer CCR Landfill will commence when Georgia Power ceases placing waste in the cells and begins implementation of this closure plan.

2. WRITTEN CLOSURE PLAN [391-3-4-.10(7)(b)]

Georgia Power prepared an initial site-specific written closure plan to comply with 40 CFR §257.102. The plan includes a written certification from a qualified professional engineer registered in Georgia that the written closure plan meets the requirements of 40 CFR §257.102 certification of Closure. The initial certified written closure plan for the existing cells at the Plant Scherer CCR Landfill was prepared and uploaded to the Georgia Power website under Environmental Compliance prior to October 17, 2016. This closure plan is being prepared as required by Georgia Solid Waste Rule 391-3-4-.10(7)(b) and will replace the initial written closure plan, once it is approved by the Georgia Environmental Protection Division (EPD).

Once this closure plan is approved by EPD and placed in the facility's operating record, Georgia Power may amend the permitted closure plan if needed, as follows:

- at least sixty (60) days prior to a planned change in the operation of the landfill that substantially affects the written closure plan in effect;
- no later than sixty (60) days after unanticipated events necessitate a revision of the written closure plan, before or after closure activities have commenced; or
- if revised after closure activities have commenced, no later than thirty (30) days.

A qualified professional engineer must certify that the amended written closure plan meets the requirements of 391-3-4-.10(7)(b). The amended closure plan will be placed in the facility's operating record, once it has been approved by the Georgia Environmental Protection Division (EPD) in accordance with 391-3-4-.10(7)(b).

3. CERTIFICATION OF CLOSURE [391-3-4-.10(7)(e)]

Within thirty (30) days of completion of all closure activities, Georgia Power will submit a notification of closure to EPD that includes certification from a qualified professional engineer registered in Georgia verifying that closure has been completed in accordance with this closure plan. The submittal to EPD will also include a closure report prepared by a qualified professional engineer registered in Georgia. The closure report will include documentation that the materials used to close the landfill meet the requirements specified in the permit drawings and CQA Plan and an as-built drawing of the grades at the time of closure.

Concurrent with the submission of the closure report to EPD, Georgia Power will submit confirmation that a notation on the property deed 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 Georgia Rules of Solid Waste Management Chapter 391-3-4.10.

4. DIRECTIONAL INFORMATIONAL SIGNS

Signs will be posted at the entrance gate notifying users of the CCR landfill of its closure and a telephone number will be included for contact in case of emergency.

5. REMOVAL OF CCR

If Georgia Power chooses to remove CCR, Georgia Power will request and receive written approval from EPD prior to conducting any such activity.

6. FINAL COVER SYSTEM

Upon closure, all CCR received at the disposal facility will be graded, compacted and capped with the final cover system as described on the permit drawings.

Final cover soil will be secured from on-site excavation of cell areas, stockpiles or off-site borrow source areas as necessary. Any off-site borrow areas used to provide soil for the final cover system will meet applicable requirements of EPD's Surface Mining Rules.

The Final Cover System will meet the following standards in accordance with Rule 391-3-4-.10(7)(b):

1. 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;
2. Preclude the probability of future impoundment of water, sediment, or slurry;
3. Include measures that provide for veneer slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;
4. Minimize the need for further maintenance of the CCR landfill; and

5. Complete the closure in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

Description of Final Cover System:

1. The CCR subgrade for the final cover system in each disposal cell will be graded and compacted to create a stable surface for the final cover system.
2. The final cover system will include an 18-inch thick low-permeability ($k \leq 1 \times 10^{-5}$ cm/sec) soil layer, overlying the prepared subgrade of CCR material;
3. The low permeability soil layer will be overlain with a minimum 40 mil textured LLDPE geomembrane and a geosynthetic drainage material (GDM or geocomposite).
4. The GDM overlying the LLDPE geomembrane, will be covered with a minimum 18-inch protective cover soil layer and a minimum 6- inch topsoil layer capable of sustaining vegetative growth.

Final Cover System Configuration:

1. Maximum slopes of 3H:1V;
2. Minimum slopes of 3%; and
3. 20-ft wide drainage benches every 20 vertical feet.

The final cover system described above meets the requirements of Rule 391-3-4-.10(7)(b).

7. CLOSURE SCHEDULE

Closure activities must commence within no later than thirty (30) days after the date on which the landfill receives the known final receipt of waste or removes the known final volume of CCR from the CCR landfill for the purpose of beneficial re-use of CCR. Additionally, Georgia Power must commence closure of the CCR landfill if the landfill has not received waste or if CCR is not being removed for beneficial re-use for a period not to exceed two (2) years from the last receipt of CCR in the landfill. If needed, Georgia Power may provide written documentation notifying EPD that the landfill will continue to accept CCR or will start removing CCRs for the purpose of beneficial re-use and request a two- (2) year extension to initiate closure of the landfill.

Once the decision has been made by Georgia Power to close the CCR landfill, the following schedule will be followed over a six (6) month period:

1. Submit notice of intent to close the landfill (or cell) to EPD after receipt of the final load of CCR and the date of final receipt.
2. Commence closure activities within thirty (30) days of final receipt of CCR.
3. Prepare accurate legal description of final CCR management boundary.
4. Prepare final topographic as-built survey.
5. Obtain written permission from EPD to remove CCR, if required.
6. Construct all erosion and sediment control systems serving disturbed areas, but not previously built.

7. Install final cover system.
8. Initiate vegetative plan.
9. Remove all accumulated sediments from ponds, ditches and other drainage structures.
10. Within thirty (30) days of completion of closure activities, prepare and submit the Closure Report to EPD. The report will be prepared by a professional engineer registered in Georgia.
11. On all deeds of real property that has been used for landfilling, include notice of landfill operations, the date the landfill operation commenced and terminated, an accurate legal description of the actual location of the CCR landfill, and a description of the type of CCRs that have been deposited in the landfill.
12. Concurrent with the Closure Report, submit to EPD confirmation that the information required above has been noticed on the property deed.
13. Place the required notifications and records on the Georgia Power website under Environmental Compliance
14. Georgia Power will complete all closure activities of the CCR landfill in accordance with this Closure Plan within six (6) months. If additional time to complete closure is required, GPC will provide a written request to EPD detailing the need for additional time and the revised completion date.

8. VEGETATIVE PLAN

All disturbed areas will be grassed and maintained in accordance with the following schedules. Final surfaces will be seeded and mulched within thirty (30) days of finished grading activity, with a temporary and permanent seed mixture. The fertilizer requirements are suggested. The operator may submit soil samples to the County Extension Agent or private laboratory for analysis and determination of proper soil conditioners including lime. This analysis will become part of the facility's operating record. Planting dates, fertilizer rates, and seeding rates will meet the requirements in the Manual for Erosion and Sediment Control in Georgia.

NOTES:

VEGETATION SCHEDULE

BROADCAST SPECIES	RATES	PLANTING DATES J	F	M	A	M	J	J	A	S	O	N	D	COMMENTS
Wilmington Bahia alone	60 lbs. / ac	....	....	..	—	—	....	....	....	....	....	....	....	Low growing.
Wilmington Bahia w/ other perennials	30 lbs. / ac			—	—				..	—	..			Mix with sericea lespedeza. Low growing.
Tall Fescue alone	50 lbs. / ac			—	—				..	—	..			
Tall Fescue w/ other perennials	30 lbs. / ac								..	—	..			Mix with sericea lespedeza.
Reed Canary alone	50 lbs. / ac								..	—	..			
Reed Canary w/ other perennials	30 lbs. / ac	....	....	..	—	—	....	....	....	....	....	....	....	
Ambro Virgata or Appalow Lespedeza scarified	60 lbs. / ac			..	—	—	..							Mix with bahai or tall fescue. Do not mix with sericea lespedeza.
Ambro Virgata or Appalow Lespedeza unscarified	60 lbs. / ac	—	—	....	....	....	....	....	....	—			—	Mix with bahai or tall fescue. Do not mix with sericea lespedeza.

(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.

Fertilizer Requirements

Type of Species	Year	Analysis or Equivalent N-P-K	Rate	N Top Dressing Rate
Cool Season Grasses	First	6-12-12	1500 lbs./ac.	10-100 lbs.ac.(1)(2)
	Second	6-12-12	1000 lbs./ac.	-
	Maintenance	10-10-10	400 lbs./ac.	30
Cool Season Grasses and Legumes	First	6-12-12	1500 lbs./ac.	0-50 lbs./ac/(1)
	Second	0-10-10	1000 lbs./ac.	-
	Maintenance	0-10-10	400 lbs./ac.	-
Ground Covers	First	10-10-10	1300 lbs./ac.(3)	-
	Second	10-10-10	1300 lbs./ac.(3)	-
	Maintenance	10-10-10	1100 lbs./ac.	-
Pine Seedlings	First	20-10-5	One 21-gram pellet/seeding placed in closed hole	-
Shrub Lespedeza	First	0-10-10	700 lbs./ac.	-
	Maintenance	0-10-10	700 lbs./ac.(4)	-

Type of Species	Year	Analysis or Equivalent N-P-K	Rate	N Top Dressing Rate
Temporary Cover Crops Seeded Alone	First	10-10-10	500 lbs./ac.	30 lbs./ac.(5)
Warm Season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac 400 lbs./ac.	50-100 lbs./ac.(2)(6) 50-100 lbs./ac.(2) 30 lbs./ac.
Warm Season Grasses and Legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac 400 lbs./ac.	50 lbs./ac.(6) - -

NOTES:
Apply in spring following seeding.
Apply in split applications when high rates are used.
Apply in 3 split applications.
Apply when plants are pruned.
Apply to grass species only.
Apply when plants grow to height of 2"-4".

9. DISPOSAL FACILITY EQUIPMENT NEEDED

Georgia Power will make adequate equipment available to ensure that closure requirements are executed correctly and efficiently. Should said equipment not be available, back up equipment may be obtained from rental companies.

10. EROSION AND SEDIMENTATION CONTROL

At closure, all ditches, diversion berms, channels, culverts, silt fences and other drainage structures not already built, will be constructed and placed. All stormwater run-off from the disposal facility shall be directed to the sediment pond. All disposal areas are confined within perimeter berms which divert all potential run-on away from the disposal facility.

During closure activities, all necessary erosion control measures will be kept cleaned out, repaired and/or replaced as necessary. Erosion control measures will be maintained at all times. If full implementation of the erosion control measures does not provide for effective erosion control, additional measures will be implemented to control or treat the sediment source.

11. COST OF CLOSURE AND FINANCIAL ASSURANCE

The closure cost estimate is provided in Table 1 at the end of this document. In compliance with applicable securities laws and regulations, GPC will provide the unredacted cost estimate for closure to GA EPD under separate cover. The closure cost estimate includes all items necessary for a third-party to complete the project in accordance with the Closure Plan as set forth herein. The closure cost estimate is based on the largest area requiring final cover (i.e., 96 acres (2 dimensional)) and is generated in current dollars. The cost estimate will be adjusted annually for

inflation. GPC will provide a demonstration of financial assurance upon approval of the closure and post-closure care cost estimates by GA EPD.

12. RECORDKEEPING/NOTIFICATION/INTERNET REQUIREMENTS

The requirements of this Closure Plan comply with the recordkeeping requirements, closure notification requirements and closure internet posting requirements in of Rule 391-3-4-.10(8). A summary of the specific recordkeeping, notification and internet posting requirements for closure are listed below:

Recordkeeping Requirements [391-3-4-.10(8)]

Georgia Power will maintain these documents in the facility's operating record as soon as the required document/information is available or applicable and approved by EPD:

(a) The written closure plan, and any amendment of the plan, as required by 40 CFR §257.102(b). Georgia Power may elect to maintain only the most recent closure plan approved by EPD in the facility's operating record.

(b) If Georgia Power chooses to secure a two- (2) year extension to initiate closure of an idle cell at the Plant Scherer CCR landfill, Georgia Power will place in the operating record a written demonstration(s) meeting the requirements of 40 CFR §257.102(e)(2)(ii). The demonstration must include, at a minimum, the information specified below:

i. Demonstration that there is a likelihood that the cell in question will resume receiving CCR or non-CCR materials in the foreseeable future. The documentation will include confirmation that the cell has airspace available and provide an estimated timeframe as to when the cell will resume receiving CCR or non-CCR materials; or

ii. Information demonstrating that CCR can be removed for the purpose of beneficial use.

iii. A statement signed by an authorized representative of Georgia Power as follows:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

iv. As required by 40 CFR §257.105(i)(5), if Georgia Power seeks more than one-time extension, the facility's operating record will be updated with a new demonstration, prior to the end of the two- (2) year extension.

(c) The notification of intent to close a cell(s), as required by 40 CFR §257.102(g).

(d) The notification of completion of closure of a cell as required by 40 CFR §257.102(h).

(e) The notification that closure of a cell(s) has been completed as required by 40 CFR §257.102(h).

(f) A notification that a deed restriction has been added to the property records as required by §257.102(i) will be added to the Plant Scherer CCR Landfill facility's operating record after closure of the landfill cells.

Notification Requirements [*391-3-4-.10(8)]*

The requirements for notification consist of informing EPD when information has been placed in the facility's operating record and on Georgia Power website under Environmental Compliance. EPD reviews and approves the Closure Plan and is also the regulatory agency responsible for providing a closure certificate to Plant Scherer CCR Landfill, therefore, the requirements specified in 40 CFR 257.106(i) are met during the State's CCR landfill permitting process.

Publicly Accessible Internet Site Requirements [391-3-4-.10(8)]

Georgia Power will post the information required by 40 CFR §257.105 for the Plant Scherer CCR Landfill within thirty (30) days of review and approval by EPD. The information required to be posted on the Georgia Power website under Environmental Compliance will remain available at least five (5) years following the date on which Georgia Power first posts the information.

13. SURVEY CONTROL

Filling and closure activities will be confined to within the limits indicated in the permit drawings. The location and accurate legal description of the disposal boundaries will be noted on and filed with the deed at the Monroe County Courthouse. An "as-built" topographic survey will be provided to indicate the extent and final topography of the disposal area. Other topographic surveys will be conducted as specified in the CQA Plan. Site horizontal and vertical survey control will be provided by a permanent concrete monument as shown on drawing H1C11004. Standard survey practices will be used to establish vertical and horizontal controls during closure.

14. LEGAL DESCRIPTION

The legal description of the permit boundary is included in the permit drawing titled "Plant Scherer Coal Combustion By-Product Disposal Facility, Permitted Disposal Facility Boundary, Plat, and Legal Description", Drawing Number H1C11001.

15. CERTIFICATION

This closure plan meets the requirements of Rule 391-3-4-.10(7).

Table 1 - Scherer Cells 1,2,3 & PAC Ash Landfill Closure Estimate

Item Description		Quantity	Unit	Unit Cost	Cost
Program Management					
	Groundwater Sampling & Reporting, Compliance Evaluations[1]				
Landfill Closure Construction					
	Construction Management, Construction Support				
	Construction Management				
	Support Facilities				
	Engineering and CQA Construction Support				
	Mobilization/Site Preparation and Demobilization				
Landfill Cover System					
	Topsoil Layer (Supply and Install)				
	Cover Soil (Supply and Install)				
	GeoComposite Drainage Net				
	Geomembrane				
	Seeding				
	Erosion/Sediment Control BMPs				
	Maintenance[2]				
Contractor's Overhead & Profit					
	Quoted Overhead & Profit				
				Subtotal	
				Contingency	
				Total Closure Cost Estimate	

Notes:

1. Groundwater monitoring includes costs for conducting routine monitoring of App III & IV during the construction period.
2. Maintenance includes costs associated with final cover system, access roads, and sediment ponds.