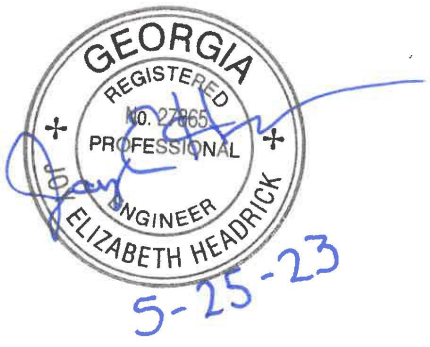
CLOSURE PLAN

PLANT KRAFT
INACTIVE CCR LANDFILL
GRUMMAN ROAD ASH LANDFILL
CHATHAM COUNTY, GEORGIA

FOR

Georgia Power

May 2023



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1. GENERAL

The Plant Kraft Grumman Road Ash Landfill Industrial Solid Waste Landfill is on 33.2 acres and is composed of four parcels (cells); Parcels A, B1, B2, and B3. Parcel A was closed and is permitted under the Solid Waste Handling Permit # 025-034D(L)(I). Parcels B1, B2 and B3, have all been closed and are permitted under the Solid Waste Handling Permit # 025-061D(L)(I), issued December 1986. These permits have been amended by several minor modifications since the first issuance.

The certification of the final closure of the Grumman Road Ash Landfill, Parcels A and B1 can be found in the report named Cells A & B1 Certification for Closure by Earth Science and Environmental Engineering Technical Services Southern Company Generation dated January 2007.

The certification of the final closure of the Grumman Road Ash Landfill, Parcels B2 and B3 can be found in the report named Construction Certification Report Grumman Road Ash Landfill Parcels B2 & B3 Closure Final Cover Construction by Brantley Engineering, LLC, Dated November 30, 2017.

Parcel A was previously closed but CCR material was encountered in subsurface investigations outside the closed portion of Parcel A, as well as within the buffer zone of Parcels A and B1. The CCR within the buffer zone, approximately 7,046 cubic yards, was excavated and relocated to parcel A', the area adjacent to the closed portion of parcel A. The removal areas are referenced as 5-7, Phase 2, and are described in the Certification of CCR Removal Report Grumman Road Ash Landfill Areas 1-7 (Phase 1&2) by Brantley Engineering, LLC, Dated November 8, 2019. In conjunction with the CCR removal activities, the final capping activities were detailed in the Closure Construction Certification Report Grumman Road Ash Landfill Parcel A' (Prime) Closure Final Cover Construction by Brantley Engineering, LLC, Dated November 8, 2019 and submitted to EPD November 25, 2019.

CCR was also found outside of Parcels B2 and B3. The removal of this material began during the closure activities associated with these parcels. All excavated materials from these areas, approximately 21,511 cubic yards, were removed and hauled off to an approved Subtitle D Landfill with an approved CCR Management Plan. The removal areas are referenced as 1-4, Phase 1, and are described in the Certification of CCR Removal Report Grumman Road Ash Landfill Areas 1-7 (Phase 1&2) by Brantley Engineering, LLC, Dated November 8, 2019 and submitted to EPD November 25, 2019.

Georgia Power plans to remove CCR currently supporting power distribution structures just south of Parcel B2 as shown on the Permit Drawing 3 of 10. Once removed, the CCR will be hauled off site and disposed of in an appropriately permitted landfill. Upon completion of CCR removal and restoration of the area, a CCR Removal Certification Report prepared in accordance with the updated CQA Plan will be provided to EPD for review and approval. The previously submitted Construction Certification Report Grumman Road Ash Landfill Parcels B2 & B3 Closure Final Cover Construction, dated November 30, 2017, Closure Construction Certification Report Grumman Road Ash Landfill Parcel A' (Prime) Closure Final Cover Construction, dated November 8, 2019 and Certification of CCR Removal Report Grumman Road Ash Landfill Areas 1-7 (Phase 1&2) dated November 8, 2019 will be revised and resubmitted to EPD for review and approval.

2. NOTIFICATION

Georgia Power notified EPD of its intent to close the Grumman Road Ash Landfill, Solid Waste Handling Permit 0258-061D (LI), in a letter dated November 4, 2015 (see Part B, Section 5, Notification and Records) shortly after receiving its last load of waste on October 15, 2015.

3. PROPERTY BOUNDARY AND LEGAL DESCRIPTION

A survey drawing and legal description of the permit boundary, prepared by a Registered Professional Surveyor, are included in the Closure Plan Drawings of this permit package. The final limit of CCR and final cover system are defined on the drawings for the Grumman Road Ash Landfill.

4. CLOSURE PROCEDURES

A. FUGITIVE DUST CONTROL PLAN

This fugitive dust control plan identifies and describes the CCR fugitive dust control measures that Georgia Power used 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."

Fugitive dust originating from the closure activities was controlled using water suppression or polymer tackifiers.

The fugitive dust control measures identified and described in this plan were adopted and implemented based upon an evaluation of site-specific conditions and are determined to be applicable and appropriate for the Grumman Road Ash Landfill closure. Evaluation included assessing the effectiveness of the fugitive dust control measures for the facility, taking into consideration various factors such as site conditions, weather conditions, and operating conditions.

CCR that was transported via truck was conditioned to a moisture content appropriate to reduce the potential for fugitive dust.

Water suppression or polymer tackifiers were used as needed to control fugitive dust on facility roads used to transport CCR and other CCR management areas. Speed limits were utilized to reduce the potential for fugitive dust. Trucks used to transport CCR were filled to or under capacity to reduce the potential for material spillage.

Georgia Power and construction personnel assessed the effectiveness of the control measures by performing visual observations of the areas and implementing appropriate corrective actions for fugitive dust, as necessary. Logs were used to record the utilization of water-spray equipment.

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

B. STORMWATER AND CONTACT WATER MANAGEMENT

During closure activities, run-on stormwater and run-off contact water (e.g. stormwater that has come into contact with CCR) was controlled with best management practices such as channels, diversion berms, and pumps and managed in accordance with the NPDES Construction Storm Water and Industrial Storm Water permit(s) if applicable. Georgia Power prepared a phased erosion and sediment control plan that was followed for closure construction activities, as needed.

The existing perimeter ditch around Parcel A was reconstructed from a 3-foot wide by 3-foot deep ditch into a 6-foot wide by 2-foot deep ditch to provide increased flow capacity for the stormwater flowing from the newly capped Parcel A' (Prime) area. Stormwater, or non-contact water runoff, was routed around the excavation and was conveyed to the existing surface water management system (ditches, channels and drop inlets). Berms and rain tarps were utilized between the final restoration areas (e.g., areas with CCR and 6" foundation soil excavated and/or with restoration grades completed) and active excavation areas to reduce potential for generating contact water. A new drainage ditch was constructed along the west side of the landfill boundary adjacent to Parcels B2 and B3. This ditch was to alleviate ponding waster in the vicinity of GWC-12. This ditch drains to the existing Gulfstream Road perimeter ditch system.

5. EROSION AND SEDIMENTATION CONTROL

During closure, all ditches, diversion berms, culverts, rip-rap, and other drainage structures serving disturbed areas, but not already built, were constructed and placed. All run-off from the disposal facility area was directed to the sediment basins with the exception of stormwater collected along the west side of the landfill boundary adjacent to Parcels B2 and B3, which was routed by a newly constructed ditch that led off site to the existing Gulfstream Road perimeter ditch. All disposal areas are confined within perimeter berms which divert all potential run-on around and away from the disposal site.

During closure activities, all necessary erosion control measures were kept cleaned out, repaired and/or replaced as necessary.

6. REMOVAL OF CCR

Existing structural fill CCR is to be removed from beneath the power distribution structures located on Sheet 3 of the Permit Drawings. The CCR will be excavated until native soils are encountered indicating that the CCR has been removed. In addition, a six-inch layer of soil will be removed below the verified CCR/soil interface. The CCR excavation and removal criteria are described in the Visual Verification of CCR Removal Procedure in the Construction Quality Assurance Plan. Upon completion of the work, a certification document validating the removal of visual CCR will be provided to EPD.

7. FINAL COVER

The final cover system for Parcels A and B1 consists of:

- Compacted ash subgrade
- Geosynthetic Clay Liner (GCL)

- Double-sided drainage geocomposite
- Minimum 18-inch protective soil cover layer
- Minimum 6-inch topsoil layer

The final cover system for Parcels A' (Prime) consists of:

- Compacted ash subgrade
- Geosynthetic Clay Liner (GCL)
- Minimum 18-inch protective soil cover layer
- Minimum 6-inch topsoil layer

The final cover system for Parcels B2 and B3 consists of:

- Compacted ash subgrade
- 60-mil thick textured HDPE geomembrane
- Double-sided drainage geocomposite
- Minimum 18-inch protective soil cover layer
- Minimum 6-inch topsoil layer

During closure, all CCR at the Grumman Road Ash Landfill was placed and covered in accordance with the approved Closure Plans.

The final cover and site were graded to prevent erosion by diverting run-on around the landfill and by directing run-off into the onsite sediment basin except for the west side ditch along B2 and B3 that directs stormwater offsite to the existing Gulfstream Road perimeter ditch. The final slopes are not steeper than 3 horizontal to 1 vertical. The minimum slope is 3% for Parcels A, B1, B2, and B3. Parcel A' has a minimum slope of 1% to promote positive drainage and where differential settlement is unlikely.

The final cap system meets 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.

8. VEGETATIVE PLAN

At the completion of closure activities, a vegetative cover was established as soon as practical.

9. SITE EQUIPMENT NEEDED

Georgia Power made adequate equipment available to ensure that closure requirements were executed correctly and efficiently. If said equipment was not available, back up equipment was obtained from rental companies.

10. ESTIMATE OF CCR QUANTITY

The estimated volumes of CCR in the Grumman Road Ash Landfill is presented in Table 1 below.

Table 1. Estimated CCR Quantity

	Quantity of CCR (cubic yards)
In Closed Areas	854,006[1]
Closed After 2018	7,046[2]
Total	861,052

1. Design and Operations Plan Permit #025-034D(LI) & #025-061D (LI).
2. Closure Construction Certification Report Grumman Road Ash Landfill Parcel A' (Prime) Closure Final Cover Construction by Brantley Engineering, LLC, Dated November 8, 2019.

11. CERTIFICATION OF CLOSURE

The owner has submitted the following Certification Reports for Closure:

- Parcel A and B1 Closure Certification Report Submitted to EPD: 02/14/2007
- Parcel B2 and B3 Closure Certification Report Submitted to EPD: 11/30/2017
- Parcel A' Closure Certification Report Submitted to EPD: 11/25/2019
- Buffer Areas Certification of CCR Removal in Areas 1-7 Phases I and II Submitted to EPD: 11/25/2019

Certification Reports for Closure to be revised and resubmitted to EPD for review and approval:

- Parcel B2 and B3 Closure Certification Report
- Parcel A' Closure Certification Report
- Buffer Areas Certification of CCR Removal in Areas 1-7 Phases I and II Report

Excavation of CCR from beneath power distribution structures and backfill with soil expected to be complete 12/2023. Upon completion of CCR removal and restoration of the area, a CCR Removal Certification Report prepared in accordance with the updated CQA Plan will be provided to EPD for review and approval.

12. AMENDMENTS OF THE CLOSURE PLAN

The owner or operator 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.

The owner or operator 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, the owner or operator must amend the current closure plan no later than 30 days following the triggering event.

The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the amendment of the written closure plan meets the requirements of Amendment of a written Closure Plan.

13. COST OF CLOSURE AND FINANCIAL ASSURANCE

All closure activities have been completed except for the CCR removal from beneath the power distribution structures depicted on Sheet 3 of the Permit Drawings.

In compliance with applicable securities laws and regulations, the cost estimate for CCR removal from beneath the power distribution structures will be provided to GA EPD under separate cover. The costs include all items necessary for a third party to complete the project in 2023 dollars in accordance with the Closure Plan included herein.

Grumman Road Landfill CCR Removal Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Cost
CCR Excavation				
Construction Management, Construction Support				
Mobilization/Site Preparation and Demobilization				
CCR - Excavate, Transport off-site, Backfill & Restoration [1]				
CCR Excavate, Transport off-site, Backfill & Vegetation				
Contractor's Overhead & Profit				
Quoted Overhead & Profit				
			Subtotal	
			Contingency	
			Total Closure Cost Estimate	

Notes:

1. Includes fill material from off-site sources, evaluation for chemical and geotechnical properties, procurement, transportation, placement and vegetation per CQA Plan.

14. CLOSURE SCHEDULE

Closure activities with initiation and completion dates are listed below as well as in the Closure Certification Reports on file with EPD.

- Areas A & B1 closure commenced 5/26/2004 and completed 7/30/2004
- Areas B2 & B3 closure commenced 3/13/2017 and completed 10/31/2017
- Area A' (prime) closure commenced 2/4/2019 and completed 10/16/2019
- Excavation of Area 1-4 commenced 3/13/2017 and completed 10/31/2017
- Excavation of Area 5-7 commenced 2/4/2019 and completed 10/16/2019
- Excavation of CCR from beneath power distribution structures and backfill with soil expected to be complete 12/2023.

15. RECORDKEEPING/NOTIFICATION/INTERNET REQUIREMENTS

Georgia Power shall comply with all recordkeeping and notification requirements of 391-3-4-.10(8).

16. LEGAL DESCRIPTION

The legal description below was taken from a drawing titled "Boundary Information"

a. Property Line:

Said parcel contains 1,447,150 sq.ft. or 33.2 acres, more or less.

b. CCR Management Boundary:

Sheet 2 of the Grumman Road Ash Landfill Permit Drawings.