

# CLOSURE PLAN FOR ASH PONDS B, C, AND D

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PLANT BRANCH  
PUTNAM COUNTY, GEORGIA

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FOR



# Georgia Power

November 2018



11/14/2018

**Geosyntec**  
consultants

engineers | scientists | innovators

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### LIST OF ACRONYMS

ACD	Air Curtain Destructor
BMP	Best Management Practice
CFR	Code of Federal Regulations
CCR	Coal Combustion Residuals
CMP	Corrugated Metal Pipe
CQA	Construction Quality Assurance
E&SC	Erosion and Sediment Control
GA EPD	Georgia Environmental Protection Division
GPC	Georgia Power Company
GSWCC	Georgia Soil and Water Conservation Commission
HDPE	High Density Polyethylene
kV	Kilovolt
NPDES	National Pollutant Discharge Elimination System
USEPA	United States Environmental Protection Agency
WWTS	Wastewater Treatment System



## 1. GENERAL

Georgia Power Company's (GPC's) Plant Branch (Site) formerly operated as a coal-fired power plant that commenced power generation in 1965. The plant, located in Putnam County, Georgia, is currently in the process of being decommissioned. Over the course of power generation at the Site, five Coal Combustion Residuals (CCR) Surface Impoundments (Ash Ponds), identified as Ash Ponds A, B, C, D, and E, were utilized (Figures 1.1 and 1.2).

Ash Pond A, the first ash pond constructed at the Site, was taken out of service in the late 1960's and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Therefore, Ash Pond A is not subject to the Georgia Environmental Protection Division's (GA EPD) Solid Waste Rule 391-3-4-.10 for Management of Coal Combustion Residuals (i.e., State CCR Rule) as the closure was completed prior to the effective date of the rule (November 22, 2016). On January 26, 2018, GPC submitted a report to the GA EPD titled "*Ash Pond A – Certification of Ash Removal, Harllee Branch Power Plant, Milledgeville, Georgia*" to provide documentation regarding the removal of CCR from Ash Pond A.

Plant Branch ceased producing electricity prior to April 2015 (the effective date of the Federal CCR Rule administered by the United States Environmental Protection Agency (USEPA) (USEPA 40 CFR §257) was October 19, 2015). Therefore, Ash Ponds B, C, and D are not subject to the Federal CCR Rule. Ash Ponds B, C, and D meet the definition of "NPDES–CCR Surface Impoundments" subject to State CCR Rule 391-3-4-.10(9)(c)7. Ash Ponds B, C, and D did not receive CCR on or after October 19, 2015, all surface impoundments still contain CCR and liquids, and all are located at an electric utility that has ceased producing electricity prior to October 19, 2015.

Ash Ponds B, C, and D will be closed by removal. This closure strategy will eliminate the need for future maintenance and long-term post-closure care. GPC will accomplish this by closing the three ash ponds by removing CCR to a new, fully lined, on-site CCR landfill and/or selling for beneficial reuse by others. Drawings depicting existing conditions, CCR removal, and final conditions illustrate the closure activities.

## 2. NOTIFICATION

GPC will submit a Notice of Intent to close Ash Ponds B, C, and D to the GA EPD Director no later than the date it initiates closure of the ash ponds. Closure activities will commence according to the closure schedule presented in Section 10 of this Closure Plan. Depending on the actual CCR excavation rate achieved during closure activities, complete CCR removal and final restoration of each pond, in accordance with this Closure Plan, will be accomplished within approximately ten (10) to fifteen (15) years following the beginning of closure activities.

### **3. BOUNDARY SURVEY AND LEGAL DESCRIPTION**

In accordance with State CCR Rule 391-3-4-.10(9)(b)(3), a sealed boundary survey of the Site property and the legal description of the CCR permit boundary are included on Sheet 3 in Exhibit 8. The total area bounded by the CCR permit boundary is approximately 239.7 acres.

### **4. CLOSURE PROCEDURES**

#### **4.1 OVERVIEW**

The purpose of this section of the Closure Plan is to describe the steps and procedures required to close the Plant Branch ash ponds in a manner consistent with recognized and generally accepted engineering practices. Though wetland and stream delineations are not required for closure-by-removal, GPC has located these features by surveying the area for natural resources. No wetlands and streams have been identified within the waste boundaries of the three ash ponds.

The major steps to close the ash ponds include: clearing and grubbing, dewatering, construction-phase stormwater and contact water management, excavating and transporting the CCR to a permitted disposal location (i.e., the new onsite CCR landfill) or selling it to an ash marketer for beneficial reuse, treating CCR contact water via the on-site wastewater treatment system (WWTS) to meet discharge requirements, removing or lowering select perimeter soil berms (dikes), and backfilling the excavated ash ponds with earthen fill to blend in with surrounding grades.

After removing the CCR and removing six inches of soil below the CCR, the existing dikes in Ash Ponds B, C, and D will be breached (i.e., removed or lowered). Soil from the dikes will be used as fill within the former ponds for grading. Once final grades are reached, vegetation will be established. The grading plans are intended to promote positive drainage of stormwater away from the closure area, generally restoring the lay-of-the-land to conditions similar to those before the ash ponds were constructed. Existing appurtenant structures, such as emergency overflow structures, culverts, underdrain piping, wells, and piezometers that are located within the ash ponds and associated perimeter berms, will be removed.

It is noted that components of overhead power transmission line infrastructure (i.e., power poles and guy wires) are located within the CCR limits of Ash Ponds C and D: the Milledgeville-Eatonton 46 kilovolt (kV) transmission line crosses the northern portion of Ash Pond C; and the Georgia Transmission Company, Plant Harlee Branch, Bonaire 230 kV transmission line crosses the eastern portion of Ash Pond D. CCR (along with the underlying 6-inches of soils) around the existing transmission

structures will be removed with caution in a manner that will not jeopardize the stability of the transmission structures. After CCR removal, structural fill will be placed around the existing transmission structures to promote positive drainage and restore the area to its original (i.e., pre-CCR removal) condition.

Plant demolition operations, maintenance of the existing electricity transmission and distribution structures, and development of new transmission and/or distribution structures may occur within the permit boundary. Activities not directly affecting the CCR removal operation within Ash Ponds B, C, and D, such as those needed to construct, dismantle, maintain, operate, 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.

Georgia Power will amend the Closure Plan whenever there is a change that would substantially affect the Closure Plan or unanticipated events necessitate a revision of the closure plan. The Closure Plan will be amended no later than 30 days following a triggering event.

#### **4.2 FUGITIVE DUST CONTROL PLAN**

This fugitive dust control plan identifies and describes the CCR fugitive dust control measures that GPC will use to minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from ash ponds, 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 ash ponds and ash pond closure activities will be 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 Plant Branch ash pond closures. 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 is transported via truck and/or rail cars to on-site and off-site locations will be conditioned to an appropriate moisture content 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.

GPC and construction personnel will assess the effectiveness of the control measures by performing visual observations of the ash ponds and surrounding 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.

#### **4.3 ORGANIC MATERIALS MANAGEMENT**

The ash ponds contain a variety of vegetation from trees and underbrush to non-woody plants. Woody vegetation will be cut above the ground and removed prior to removing CCR. Vegetation and wood waste will be managed in the following manner:

1. Trees and logs may be harvested, windrowed or stockpiled for mulching prior to off-site disposal, chipped for use on-site as a best management practice (BMP) measure, burned through approved methods, or disposed of at a permitted landfill.
2. Large bushes may be windrowed or stockpiled for mulching prior to disposal, burned through approved methods, or disposed of at a permitted landfill.
3. Stumps and tree roots may be windrowed or stockpiled for mulching prior to disposal, chipped for use on-site as a BMP measure, burned through approved methods, or disposed of at a permitted landfill.
4. Grass and brush may be windrowed or stockpiled for mulching prior to disposal, or disposed of at a permitted landfill.

Remaining wood waste from grubbing work within the CCR footprint will be managed and kept separate from surface-cut wood waste. Woodwaste that contains CCR will be managed within the ash pond limits in the following manner:

1. Stumps and tree roots may be mechanically screened to remove CCR, windrowed or stockpiled for mulching prior to disposal, burned through approved methods, or disposed of at a permitted landfill.
2. Grass and bushes may be mechanically screened to remove CCR, and windrowed or stockpiled for mulching prior to disposal at a permitted landfill.

The following procedures will be followed for on-site burning:

1. Use an air curtain destructor (ACD) for all burning. Obtain an ACD Permit by submitting an online permit application at <http://www.gatrees.org/online-permits/AddACDPermit.cfm?County=Putnam>.  
Burn Type 13 “Land Clearing – Burning with Air Curtain Destructor” is allowed for Putnam County as long as the following conditions are met:
  - (i) Authorization for such open burning is received from the fire department having local jurisdiction over the open burning location prior to initiation of any open burning at such location (if required);
  - (ii) The location of the ACD is at least 300 feet from any occupied structure or public road. An ACD used solely for utility line clearing or road clearing may be located at a lesser distance upon approval by the GA EPD;
  - (iii) No more than one ACD is operated within a ten (10)-acre area at one time or there must be at least 1,000 feet between any two ACDs;
  - (iv) Only wood waste consisting of trees, logs, large brush, and stumps which are relatively free of soil are burned in the ACD;
  - (v) Tires or other rubber products, plastics, heavy oils, or asphaltic based or impregnated materials are not used to start or maintain the operation of the ACD;
  - (vi) The ACD is constructed, installed, and operated in a manner consistent with good air pollution control practices for minimizing emissions of fly ash and smoke;
  - (vii) The cleaning out of the ACD pit is performed in a manner to prevent fugitive dust; and
  - (viii) The ACD cannot be fired before 10:00 a.m. and the fire must be completely extinguished, using water or by covering with dirt, at least one hour before sunset.
2. Follow GA EPD’s guidance document “Open Burning Air Curtain Destructor Operation Guide”.
3. Obtain a burn permit from the Georgia Forestry Commission.

- Putnam County is subject to the GA EPD Summer Burn Ban (May 1<sup>st</sup> – September 30<sup>th</sup>). Therefore, ACD burning operations at Plant Branch will cease from May 1<sup>st</sup> through September 30<sup>th</sup> unless otherwise approved by the Georgia Forestry Commission or local fire department, whoever has local jurisdiction over the ACD operation.

#### **4.4 POND DEWATERING PROCESS**

Dewatering will include removing water using a variety of methods, including but not limited to passive, gravity-based methods (e.g. rim ditches) and/or active dewatering methods (e.g. pumps and well points) as needed to allow for CCR excavation and transportation. CCR contact water and legacy wastewater from the ash ponds will be further treated by an on-site wastewater treatment system (WWTS). Water will be managed and discharged in accordance with the Site's approved National Pollutant Discharge Elimination System (NPDES) Industrial Wastewater Discharge Individual Permit GA0026051 and the approved *Ash Pond Dewatering Plan* [GPC, 2017]. The Ash Pond Dewatering Plan was approved by GA EPD Watershed Protection Branch in June 2017 and describes treatment processes, monitoring and best management practices necessary to comply with the NPDES Industrial Wastewater Discharge Individual Permit requirements.

#### **4.5 STORMWATER AND CONTACT WATER MANAGEMENT**

During CCR removal, run-on stormwater, and run-off contact water (e.g., stormwater that has come into contact with CCR) will be controlled with best management practices such as channels, diversion berms, and pumps and managed in accordance with the NPDES Construction Storm Water and Industrial Wastewater Discharge Individual permits. GPC will prepare a phased Erosion, Sedimentation and Pollution Control Plan that will be followed for closure construction activities, as needed.

The existing Ash Ponds B, C, and D dikes will remain in place during CCR excavation, effectively containing CCR contact water runoff for treatment at the on-site WWTS in accordance with the Ash Pond Dewatering Plan. This will continue until CCR removal is verified as complete. Stormwater and contact water will be prevented from ponding as much as practicable to facilitate CCR removal. Alternatively, a phased approach may be utilized to allow clearing and grubbing, CCR and foundation soil excavation, final restoration, and perimeter berm removal.

Stormwater or non-contact water runoff will be routed around the excavation and conveyed (e.g., via pumps) to the existing surface water management system (ditches, channels, and drop inlets) until the CCR is removed and the soil berms are breached. Berms and rain tarps will be utilized at 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.

Following the end of CCR removal, but prior to the beginning of restoration grading, described in Section 4.10 of this plan, runoff generated and collected within Ash Ponds B, C, and D will be managed as discharges covered under the applicable NPDES construction stormwater discharge general permit, NPDES industrial stormwater discharge general permit, and/or the facility's NPDES industrial wastewater discharge individual permit.

#### **4.6 NPDES INDUSTRIAL WASTEWATER DISCHARGE INDIVIDUAL PERMIT**

Plant Branch currently discharges stormwater and/or wastewater under NPDES Industrial Wastewater Discharge Individual Permit GA0026051 with an effective date of November 1, 2017. This permit governs discharges into Lake Sinclair from outfalls 03, 04, 05, and 06. GPC submitted an Ash Pond Dewatering Plan [GPC, 2017] to GA EPD Watershed Protection Branch which was approved in June 2017. The permit establishes effluent limitations and monitoring requirements, which GPC will follow for discharges from the WWTS.

#### **4.7 WASTEWATER MANAGEMENT**

During ash pond closure, CCR contact water and legacy wastewater from the ash ponds will be treated by an on-site WWTS. The wastewater will be treated to meet the NPDES permit effluent discharge requirements. Treatment methods may include physical-chemical processes such as flocculations, clarification and filtration. The WWTS is located immediately to the east of Ash Pond B. The WWTS will not be decommissioned until verification of CCR removal is completed and wastewater treatment is no longer needed at the Site.

#### **4.8 CCR EXCAVATION AND REMOVAL CRITERIA**

The CCR will be excavated considering many site-specific factors including access into and out of the ash ponds, haul routes, dewatering methods, detailed CCR excavation and final restoration phasing plans, the excavation working face size, and excavation and hauling methods. In addition, GPC will establish methods for observing, monitoring, and documenting CCR excavation and compliance with the approved Closure Plan.

As previously noted, components of an overhead power transmission line infrastructure (i.e., power poles and guy wires) are located within the CCR limits of

Ash Ponds C and D: the Milledgeville-Eatonton 46 kilovolt (kV) transmission line crosses the northern portion of the Pond C; and the Georgia Transmission Company, Plant Harllee Branch, Bonaire 230 kV transmission line crosses the eastern portion of the Ash Pond D. CCR along with underlying six inches of soils around the existing transmission structures will be removed with caution in a way that will not jeopardize the stability of the transmission structure. After CCR removal, earthen fill will be placed around the existing transmission structures to promote positive drainage and facilitate access for potential repair and maintenance activities. Sheets 5 and 6 of the permit drawings, titled “CCR Removal Plan” and “Restoration Grading Plan”, depict, respectively, the CCR plus six inches of soils removal grades and the final restoration grades around the transmission line infrastructure in Ash Ponds C and D.

“CCR removal” refers to the process of verifying and documenting that the CCR has been removed from the ash ponds. The ash ponds are known to contain a mixture of fly ash and bottom ash collectively referred to as CCR. The CCR removal verification is based on removing visible CCR and a minimum of six additional inches of soil. The documentation of this procedure is presented in Section 2 of the companion Construction Quality Assurance (CQA) Plan.

#### **4.9 GEOTECHNICAL INSTRUMENTATION**

Geotechnical instrumentation may be utilized to obtain subsurface information to monitor ground conditions during CCR removal. Instrumentation may include settlement plates, slope inclinometers, vibrating wire piezometers, standpipes, and other instruments.

#### **4.10 SITE RESTORATION AND BORROW AREA MANAGEMENT**

The post-CCR-removal final restoration grading plan for Ash Ponds B, C, and D will reuse soil from the existing perimeter dikes to achieve final grades within the ash pond footprint. Engineering analyses indicate that the soil from the existing perimeter dikes should be sufficient to achieve the final restoration grades. However, if additional borrow soil is needed, onsite and/or offsite borrow areas may be developed. Best management practices will be followed for grading, drainage, and erosion control in the borrow area(s).

#### **4.11 GROUNDWATER MONITORING**

Pursuant to the Rules of Solid Waste Management, Chapter 391-3-4-.10(6), GPC prepared a Groundwater Monitoring Plan (included in Exhibit 6) and installed a multi-unit groundwater monitoring system within the uppermost aquifer underlying Ash Ponds B, C, and D. This multi-unit groundwater monitoring system consists of 12



monitoring network wells and 22 groundwater piezometers located around the combined perimeter of Ash Ponds B, C, and D. Since August 2016, independent groundwater samples from each monitoring network well have been collected and analyzed for Appendix III and Appendix IV test parameters (according to State CCR Rule 391-3-4-.10(6)(b), incorporating 40 CFR §257.93 Appendix III and IV constituents by reference) to establish a background statistical dataset. As of November 2018, eight (8) out of eight (8) rounds of background sampling events have been completed. As of November 2018, the results of six (6) rounds of background sampling events can be found at the Georgia Power Company Website under Environmental Compliance. The results of the remaining two (2) rounds of background sampling events will be posted as they become available.

Following CCR removal from Ash Ponds B, C and D, GPC proposes to conduct post-CCR-removal groundwater monitoring for five (5) years to verify the completion of closure-by-removal for the three (3) ash ponds by demonstrating that the groundwater monitoring concentrations at the Site do not exceed the groundwater protection standards established pursuant to GA EPD rules 391-3-4-.10(6) (incorporating 40 CFR 257.95(h)) for constituents listed in Appendix IV.

#### **4.12 DEMOLITION OF ASH POND INFRASTRUCTURE**

Various plant and ash pond infrastructure will be demolished before, during or after ash pond closure. The coal-fired plant is being demolished separately from the ash pond closure project and the demolition is anticipated to be completed before the ash pond closure begins. The existing power transmission infrastructure, such as transmission towers, power poles, and guywires, that are located in Ash Ponds C and D will remain in place.

The disposition of infrastructure in and around Ash Ponds B, C, and D varies. Some infrastructure will need to remain functional during ash pond closure. Some infrastructure will be demolished during ash pond closure. Other infrastructure may be repurposed to support ash pond closure.

The disposition of ash pond infrastructure is summarized in the following table.

**Table 4.1. Proposed Disposition of Existing Infrastructure For Ash Ponds B, C, and D**

Existing Ash Pond Infrastructure	Maintain Functionality During CCR Removal	Demolish or Abandon During CCR Removal	Potential Repurpose for Ash Pond Closure	Demolish or Abandon During Dike Removal
36" HDPE Pipe (Ash Pond E to Ash Pond D Overflow Pipe)			X	X
Pozzalime Feeder		X		
24" HDPE Pipe (Former Sluice Line)			X	X
Plant and Ash Handling Discharge Lines to Ash Ponds B, C, and D (inactive)		X		
Former Coal Pile Runoff Pipe to Ash Pond D (inactive)		X		
Coal Pile Runoff Pipe to Ash Pond B		X		
Ash Pond B Piezometers (in pond)		X		
Ash Pond B Piezometers (in dike)	X			X
Ash Pond B 36" Corrugated Metal Pipe (CMP) Emergency Discharge Structure	X			X
Ash Pond B Primary Overflow Structure (abandoned)		X		
Ash Pond B 36" CMP Overflow Structure (abandoned by grouting)		X		
Ash Pond B 3" Steel Pipe Discharge Line (abandoned by grouting)		X		
Backflow Piping from Ash Pond B to Ash Pond C	X			X
Piping from Ash Pond B to EconoTanks (or equivalent)	X			X
Piping from EconoTanks (or equivalent) to WWTS	X			X
Piping from Ash Pond B to WWTS	X			X
Piping from WWTS to Ash Pond B	X			X
Piping conveying flows from WWTS to NPDES Outfall No. 03	X			
Ash Pond C Piezometers (in pond)		X		
Ash Pond C Piezometers (in dike)	X			X
Ash Pond C Lateral/Axial/Foundation/Toe Drains (in dike)	X			X

Existing Ash Pond Infrastructure	Maintain Functionality During CCR Removal	Demolish or Abandon During CCR Removal	Potential Repurpose for Ash Pond Closure	Demolish or Abandon During Dike Removal
Ash Pond C Collector Sumps from Drains	X			X
Ash Pond C High Density Polyethylene (HDPE) Sump Pump-back Lines	X			X
Ash Pond C to Pond B Siphon and Discharge Piping	X			X
Ash Pond C 2 – 30” HDPE Emergency Overflow Pipes	X			X
Ash Pond C 42” CMP Overflow Structure Pipe (abandoned by grouting)		X		
Ash Pond C Primary Overflow Structure (abandoned)		X		
Ash Pond D Piezometers (in pond)		X		
Ash Pond D Piezometers (in dike)	X			X
Ash Pond D Lateral/Axial/Foundation/Toe Drains (in dike)	X			X
Ash Pond D Collector Sumps from Drains	X			X
Ash Pond D HDPE Sump Pump-back Lines	X			X
Ash Pond D Ditch, Outlet Structure, and Culvert for Exterior Dike Slope Stormwater	X			X
Ash Pond D Overflow Structure Flume and Pipe	X			X
Interim Dike Stability Improvement Measures	X			X

#### 4.13 INTERIM DIKE STABILITY

Interim dike stability at Ash Ponds B, C, and D may be further enhanced by lowering the water table within the ash ponds and/or in the vicinity of pond dikes. This may be achieved by installing supplemental toe drain collection system (e.g., trench and sump) and/or removing water from the ash ponds, which could be performed prior to or during CCR removal activities.

#### 4.14 DRAWINGS

Permit drawings, titled “Plant Branch CCR Surface Impoundment Closures, Ash Ponds B, C, and D Closure-by-Removal, Permit Drawings” have been prepared depicting

existing, interim, and final conditions associated with closure construction. The Existing Site Conditions drawing (Sheet 4) show the current topography and site features, as well as the existing groundwater monitoring well and piezometer network. The CCR Removal Plan drawing (Sheet 5) portrays interim conditions showing the expected CCR excavation grades accounting for over-excavating six inches of soil prior to dike removal. The Restoration Grading Plan drawing (Sheet 6) portrays the post-dike removal grades, restoration grades, and final stormwater management measures. The drawings also identify select infrastructure remaining or demolished at the interim and final conditions.

## 5. CERTIFICATION OF CLOSURE

Upon completion of CCR removal, a professional engineer registered in Georgia will prepare, and GPC will submit a certification report documenting the removal to GA EPD. Pursuant to State CCR Rule 391-3-4-.10(7)(e), once all CCR removal is complete and groundwater monitoring concentrations at the Site have been demonstrated not to exceed the applicable Federal and State groundwater protection standards, GPC will submit a closure report to the GA EPD Director. The closure report will be completed on forms provided by GA EPD.

GPC, as required by the GA EPD, will submit confirmation that a notation on the property deed has been recorded in accordance with State CCR Rule 391-3-4-.10(7)(f).

## 6. ESTIMATE OF CCR VOLUME TO BE REMOVED

The estimated volumes of CCR present in the ash ponds were calculated using AutoCAD software and are presented in Table 6.1 below.

**Table 6.1. Estimated CCR Quantity**

Ash Pond	CCR Quantity Estimate (cubic yards)
B	1,884,000
C	2,873,000
D	1,050,000
<b>Estimated Total</b>	<b>5,807,000</b>

## 7. VEGETATION PLAN

The final restoration areas for the three (3) ash ponds and the potential onsite borrow area will be seeded and maintained (fertilized) to meet the requirements in the Manual for Erosion and Sediment Control in Georgia. These areas will be stabilized as appropriate for the final conditions. Areas will be stabilized within two weeks after

reaching final grades. Areas where permanent vegetation is slow to establish will receive temporary seeding. GPC may submit soil samples to the County Extension Agent (or other agronomic laboratory) for analysis and determination of proper soil amendments.

## **8. EROSION AND SEDIMENT CONTROL (E&SC)**

Erosion and sediment control measures will be designed, permitted, installed, and maintained in accordance with the Manual for Erosion and Sediment Control in Georgia [GSWCC, 2016], the permit drawings, and the detailed design drawings prepared in accordance with the State CCR Rule. A phased Erosion, Sedimentation, and Pollution Control Plan will be prepared as part of the detailed design depicting erosion, sediment, and stormwater and contact water management strategies during CCR excavation.

## **9. COST OF CLOSURE**

Pursuant to State CCR Rule 391-3-4-.10(9)7(vii), financial assurance is not required for Ash Ponds B, C, and D, because they are NPDES-CCR Surface Impoundments and closed through removal of CCR.

## **10. CLOSURE SCHEDULE**

The following is a conceptual-level schedule communicating the anticipated milestones of major closure activities. The schedule will be refined as closure activities begin. This schedule could extend depending on opportunities to beneficially re-use CCR and/or disposal of CCR at Plant Branch and is as follows:

**Table 10.1 Anticipated Closure Schedule for Ash Ponds B, C, and D**

Activity	Duration/Schedule
Mobilization and Site Preparation	Year 1
Ash Pond Closure Construction Activities	Year 1 to Year 15 (estimated 10 to 15 years)
Submit a Certification Report Documenting the Removal to GA EPD	Upon completion of CCR removal
Groundwater Monitoring During Ash Pond Closure	Year 1 to Year 15 (estimated 10 to 15 years)
Post CCR-Removal Groundwater Monitoring	5 years following completing closure construction
Submit a Closure Report to the GA EPD Director	Upon demonstrating groundwater monitoring concentrations at the Site do not exceed the applicable Federal and State groundwater protection standards

**11. REFERENCES**

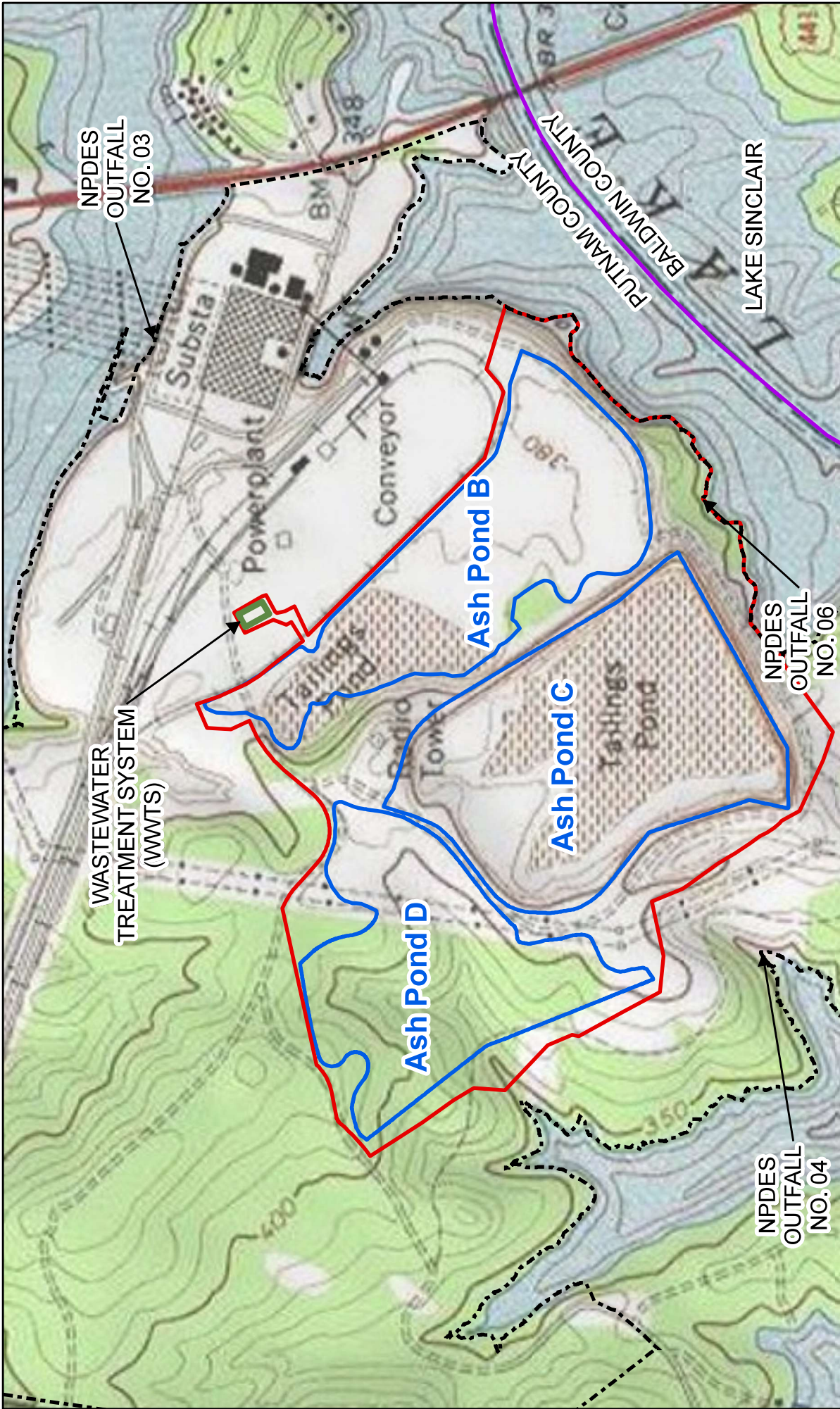
GPC (2017). "Georgia Power Plant Branch, NPDES Permit No. GA0026051, Ash Pond Dewatering Plan".

GSWCC (2016). "Manual for Erosion and Sediment Control in Georgia".

Geosyntec (2018). "Closure Plan for Ash Pond E, Plant Branch, Georgia Power Company".

# FIGURES





**Site Layout - Topographic Map**  
 Georgia Power Company  
 1100 Milledgeville Road  
 Putnam County, GA 31061

**Geosyntec**  
 consultants

Kennesaw, GA      November 2018

**Figure 1.1**

N

1,000 Feet

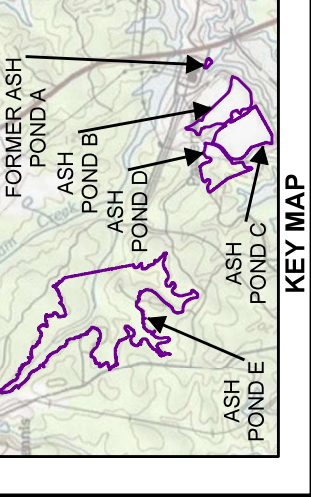
1,000 500 0

**Legend**

- County Boundary
- Property Boundary
- Proposed CCR Permit Boundary
- Pond Boundary

**Notes:**

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**Site Layout - Aerial Map**  
 Georgia Power Company  
 1100 Milledgeville Road  
 Putnam County, GA 31061

**Geosyntec**  
 consultants

Kennesaw, GA      November 2018

**Figure 1.2**

**Legend**

- County Boundary
- - - - Property Boundary
- Proposed CCR Permit Boundary
- Pond Boundary

**Notes:**  
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 cubed  
 Source: Esri, DigitalGlobe,

Scale: 1,000 Feet  
 0      500      1,000

North Arrow

