

## INTRODUCTION

# PERMIT APPLICATION, CLOSURE OF ASH PONDS B, C, AND D PLANT BRANCH, GEORGIA POWER COMPANY

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On behalf of Georgia Power Company (GPC), Geosyntec Consultants, Inc. (Geosyntec) is pleased to submit the enclosed Coal Combustion Residuals (CCR) permit application package for the closure of three (3) CCR units (all are classified under State definition as NPDES-CCR Surface Impoundments) at the Plant Branch site (the Site) proposed to be closed through CCR removal (closure-by-removal). This permit application package has been developed in compliance with the Georgia Rules for Solid Waste Management, Chapter 391-3-4-.10(9), Coal Combustion Residuals – Permits. The purpose of this section is to introduce the Site, describe the closure strategy, and identify the supporting documents enclosed with this permit application package.

### Site Background and Ash Pond Description

Plant Branch is located on approximately 3,200 acres of land off State Route 24 (US 441), on the northern shore of Lake Sinclair near Milledgeville and Eatonton, Putnam County, Georgia. The plant commenced operations in the 1960s, ceased generating electricity prior to April 2015, and is currently in the process of being decommissioned. Over the course of power generation at the facility, five ash ponds, identified as Ash Ponds A, B, C, D, and E, were utilized for storage of CCR. 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. Ash Ponds B, C, D, and E are currently not active and will be closed by removal, specifically, by relocation of the CCR stored in those ash ponds to a new, permitted, fully-lined, on-site CCR landfill.

Ash Ponds B, C, and D are located adjacent to each other to the west of the former coal pile area, while Ash Pond E is located approximately 0.6 miles to the northwest of Ash Ponds B, C, and D. Because of the close proximity of Ash Ponds B, C, and D to each other, Ash Ponds B, C, and D are considered as a CCR combined unit per 391-3-4-.01.

### Ash Pond B

Construction of Ash Pond B was completed in 1967, with CCR placement commencing thereafter. Ash Pond B currently has a surface area of approximately 52 acres and contains approximately 1,900,000 cubic yards of CCR. Ash Pond B is partially wet, with water observed in the northern center area, while the southern half of Ash Pond B has been filled with CCR and covered with soil and vegetation. Ash Pond B includes an earthen dike retaining the CCR and water that is regulated as a Category II Dam under the Georgia Safe Dams Program.

### Ash Pond C

Construction of Ash Pond C was completed in November 1970, with CCR placement commencing in early 1971. Ash Pond C currently has a surface area of approximately 69 acres and contains approximately 2,900,000 cubic yards of CCR. Ash Pond C is partially wet, with water observed in the southern third of the ash pond area, while the northern two-thirds of the ash pond is covered with trees and/or brush. Ash Pond C includes an earthen dike retaining the CCR and water that is regulated as a Category II Dam under the Georgia Safe Dams Program. The Milledgeville-Eatonton 46 kilovolt (kV) transmission line crosses the northern portion of Ash Pond C.

### Ash Pond D

Construction of Ash Pond D was completed in September 1980, with CCR placement commencing thereafter. Ash Pond D currently has a surface area of approximately 46 acres and contains approximately 1,100,000 cubic yards of CCR. Ash Pond D is mostly dry and covered with trees and/or brush, with water generally only observed immediately upgradient of the outlet to Ash Pond C. Ash Pond D includes an earthen dike retaining the CCR and water that is regulated as a Category II Dam under the Georgia Safe Dams Program. The Georgia Transmission Company, Plant Harllee Branch, Bonaire 230 kV transmission line crosses the eastern portion of Ash Pond D.

### **Closure Strategy**

In November 2016, the Georgia Environmental Protection Division (GA EPD) adopted amendments to the State's Rules for Solid Waste Management. These amendments require all CCR units in Georgia to obtain a state permit, including inactive units at electric utilities. Ash Ponds B, C, D, and E at Plant Branch are to be closed in accordance with the State CCR Rule (GA EPD 391-3-4-.10).

As noted above, Plant Branch has been retired and Ash Pond A 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 State CCR Rule as the closure was completed prior to the effective date of the rule (i.e., 22 November 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 in Ash Pond A.

Plant Branch ceased producing electricity prior to April 2015 (i.e., 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, D, and E are not subject to the Federal CCR Rule. However, they are considered "NPDES-CCR Surface Impoundments" by the State CCR Rule, defined as "a CCR surface impoundment that no longer receives CCR on or after October 19, 2015 which still contains both CCR and liquids and is located at an electric utility or independent power producer that has ceased producing electricity prior to October 19, 2015." In order to comply with the State CCR Rule, GPC intends

to close Ash Ponds B, C, D, and E by removal of the stored CCR and placement of this CCR into a new onsite CCR landfill and/or selling for beneficial reuse by others. The full volume of CCR will be excavated to its bottom in the ash ponds as defined by the visual interface between CCR and underlying native soils. After reaching the CCR/native soil interface, a minimum six inches of additional soils will also be removed. Once excavation is complete, the ash pond earthen containment dikes will be lowered, breached, or removed, and the resulting soil materials will be utilized as fill material for restoration grading within the ash pond footprints to promote positive drainage patterns.

These closure activities are submitted for permitting as two independent packages: (i) the permit application for closure of Ash Ponds B, C, and D is being submitted as one package as a CCR combined unit; and (ii) the permit application for Ash Pond E is being submitted as a separate package as it is located apart from Ash Ponds B, C, and D. *This submittal presents the Ash Ponds B, C, and D permit application package only.* The Ash Pond E permit application package is being presented under separate cover. A third package will be submitted in the future under separate cover for the permitting of a new on-site CCR landfill (i.e., Landfill Site Acceptability Study and Permit Application).

### **Multi-Unit CCR Groundwater Monitoring System**

A Groundwater Monitoring Plan that describes the groundwater monitoring program, including sampling and analysis and well installation, has been prepared for the Site to meet the requirements of 391-3-4-.10(6), in accordance with 391-3-4-.10(9)(c)7(vi). GPC has 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 monitoring network wells have been collected and analyzed for 40 CFR §257, Subpart D, Appendix III and Appendix IV parameters 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 at GPC's environmental compliance website when 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 ash ponds by demonstrating that the groundwater monitoring concentrations do not exceed the groundwater protection standards established pursuant to 40 CFR 257.95(h) for constituents listed in Appendix IV.

## Closure Plan

Since all of the CCR units will be closed in a similar manner (through CCR removal), the applicable permit requirements for Ash Ponds B, C, and D as NPDES-CCR Surface Impoundments (State CCR Rule 391-3-4-.10(9)(c)7) are included in one permit application. Consistent with “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), a Closure Plan narrative was prepared and is included in this permit application. Items other than the Groundwater Monitoring Plan listed under Rule 391-3-4-.10(9)(c)7 are not required for closure-by-removal permits. The enclosed Closure Plan describes the CCR unit closure-by-removal activities, including wood waste management, dewatering, stormwater and wastewater management, and dust control. Design drawings depicting existing conditions, interim conditions (post-CCR removal), and final conditions (post-dike removal) are included in support of the permit application.

## CCR Permitting Requirements

GPC has prepared this permit application for closure-by-removal of Ash Ponds B, C, and D to address State CCR Rule criteria specified for NPDES-CCR Surface Impoundments as required in State CCR Rule 391-3-4-.10(9)(b) and 391-3-4-.10(9)(c)7 as follows.

### General CCR Unit Permit Application Requirements

- *391-3-4-.10(9)(b)1. - A completed form designated by EPD.*  
The completed form is included in Exhibit 2 of Part A of the Permit Application
- *391-3-4-.10(9)(b)2. - Written verification that the site conforms to all local zoning or land use ordinances.*  
Zoning Confirmation is included in Exhibit 4 of Part A of the Permit Application.
- *391-3-4-.10(9)(b)3. - Property boundary survey and legal description.*  
The property boundary survey and legal description is included in Sheet Number 3 of the Permit Drawings included in Exhibit 8 of Part A of this Permit Application.
- *391-3-4-.10(9)(b)4. - Financial assurance mechanism meeting the criteria in Rule 391-3-4-.13.*  
For Ash Ponds B, C, and D, financial assurance is not required because for NPDES-CCR Surface Impoundments, closure through removal of CCR is not subject to the financial assurance requirements per 391-3-4-.10(9)(c)7(vii).
- *391-3-4-.10(9)(b)5. - A qualified professional engineer's certification that all application requirements have been met.*  
The professional engineer's certification is included in Exhibit 3 of Part A of this Permit Application.

### NPDES-CCR Surface Impoundment Permit Application Requirements

- *391-3-4-.10(9)(c)7(i) - Technical report of geological and hydrogeological units within the disposal site.*

GPC is closing Ash Ponds B, C, and D by removal consistent with “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), which only requires that a closure narrative be provided. However, GPC prepared a geological and hydrogeological report and it is included in Exhibit 1 of Part B of this Permit Application.

- *391-3-4-.10(9)(c)7(ii) - Potentiometric surface map of the water table.*

A potentiometric surface map of the water table is presented in Figure A2 of the Groundwater Monitoring Plan included in Exhibit 6 of Part A of this Permit Application.

- *391-3-4-.10(9)(c)7(iii) - Siting report which includes identification of wetlands, floodplains, and seismic impact zones.*

A Siting Report is not required because GPC is closing Ash Ponds B, C, and D by removal consistent with “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), which only requires that a closure narrative be provided.

- *391-3-4-.10(9)(c)7(iv) - Closure plan that includes at a minimum:*

- *391-3-4-.10(9)(c)7(iv)(i) - Narrative describing how the CCR unit will be closed including the elimination of free liquids and stabilization of remaining waste or by closure through removal of CCR.*

A Closure Plan is included in Exhibit 7 of Part A of this Permit Application.

- *391-3-4-.10(9)(c)7(iv)(ii) - Identification of any pipes, utilities, or other penetrations through or beneath the impoundment. The inspection frequency and method of evaluation should be provided.*

A pipe penetration report is not required for Ash Ponds B, C, and D, because GPC is closing Ash Ponds B, C, and D by removal consistent with the “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), which only requires that a closure narrative be provided.

- *391-3-4-.10(9)(c)7(iv)(iii) - Final cover analysis.*

A final cover analysis is not required for Ash Ponds B, C, and D, because GPC is closing Ash Ponds B, C, and D by “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), which only requires that a closure narrative be provided.

- 391-3-4-.10(9)(c)7(v) - *Stability analysis that at a minimum includes the following:*
  - 391-3-4-.10(9)(c)7(v)(i) - *On-site or local soil conditions that may result in significant differential settling.*
  - 391-3-4-.10(9)(c)7(v)(ii) - *On-site or local geologic or geomorphologic features.*
  - 391-3-4-.10(9)(c)7(v)(iii) - *On-site or local human-made features or events, both surface and subsurface.*

A stability analysis is not required for Ash Ponds B, C, and D, because GPC is closing Ash Ponds B, C, and D by “closure through removal” under State CCR Rule 391-3-4-.10(9)(c)7(vii), which only requires that a closure narrative be provided.

- 391-3-4-.10(9)(c)7(vi) - *Groundwater monitoring plan in accordance with Rule 391-3-4-.10(6).*

In accordance with State CCR Rule 391-3-4-.10(6), GPC prepared a Groundwater Monitoring Plan (included in Exhibit 6 of Part A of this Permit Application) and installed a multi-unit groundwater monitoring system within the uppermost aquifer at Ash Ponds B, C, and D. This multi-unit groundwater monitoring system consists of 12 groundwater monitoring wells and 22 groundwater piezometers located around the combined perimeter of the three ash ponds. Since August 2016, independent groundwater samples from each monitoring network groundwater well have been collected and analyzed for 40 CFR 257, Subpart D, Appendix III and Appendix IV test parameters to establish a background statistical dataset. As of October 2018, eight (8) out of eight (8) rounds of background sampling events are completed.
- 391-3-4-.10(9)(c)7(vii) - *Closure through removal of CCR is subject only to (iv)(I) above and is not subject to the financial assurance requirements of Rule 391-3-4-.13.*

For Ash Ponds B, C, and D, financial assurance is not required because for NPDES-CCR Surface Impoundments, closure through removal of CCR is not subject to financial assurance requirements per State CCR Rule 391-3-4-.10(9)(c)7(vii).

**EXHIBIT 2. APPLICATION FORM (GEORGIA EPD)**

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**Send completed application to:**

Environmental Protection Division, Solid Waste Management Program  
4244 International Parkway, Suite 104  
Atlanta, GA 30354-3902

County: \_\_\_\_\_

Facility Name: \_\_\_\_\_

## CCR Unit - Application for Solid Waste Handling Permit

(Please type or print)

### I. APPLICANT INFORMATION

Owner's Name or Registered Corporation Name: **Georgia Power Company – Plant Branch**

Facility Address: **1100 Milledgeville Road**

Phone: **404-506-6505**

City: **Milledgeville**

State: **GA**

ZIP Code: **31061**

Authorized Official: **Aaron D. Mitchell**

Title: **General Manager – Environmental Affairs**

Mailing Address: **241 Ralph McGill Blvd. NE, BIN 10221**

Phone: **404-506-6505**

City: **Atlanta**

State: **GA**

ZIP Code: **30308**

Email Address: **GPCENV@SOUTHERNCO.COM**

Facility CCR Website(s): **WWW.GEORGIAPOWER.COM**

II. PROPERTY DETAILS: Complete below **and attach** a street or highway map indicating the site/facility location. Application must be accompanied by written zoning confirmation.

County: **Putnam County**

City: **Milledgeville**

Co-ordinates (in decimal degrees, near facility center): **N33.190303, W83.305425**

Property for Processing/Disposal is:  Owned  Leased (please complete owner details below)

Property Owner (if leased):

Address:

Phone:

City:

State:

Zip:

### III. APPLICATION TYPE:

New Permit

Major Modification to Existing Permit

Transfer of Permit

Other

IV. CCR UNITS: List all CCR units covered under this application

**Ash Pond B**  
**Ash Pond C**  
**Ash Pond D**



V. OWNERS: List all owners of the facility (defined as holding a 5% or greater share). All owners listed below must complete the Supplemental Form for O.C.G.A. 12-8-23.1(a)(3)(B)

**Georgia Power Company**

VI. SIGNATURE

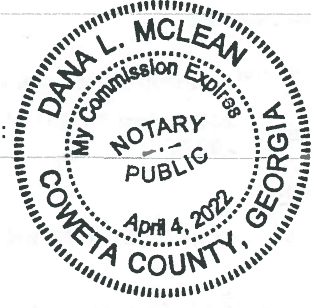
Authorized Official's Signature: *A D Mitchell*

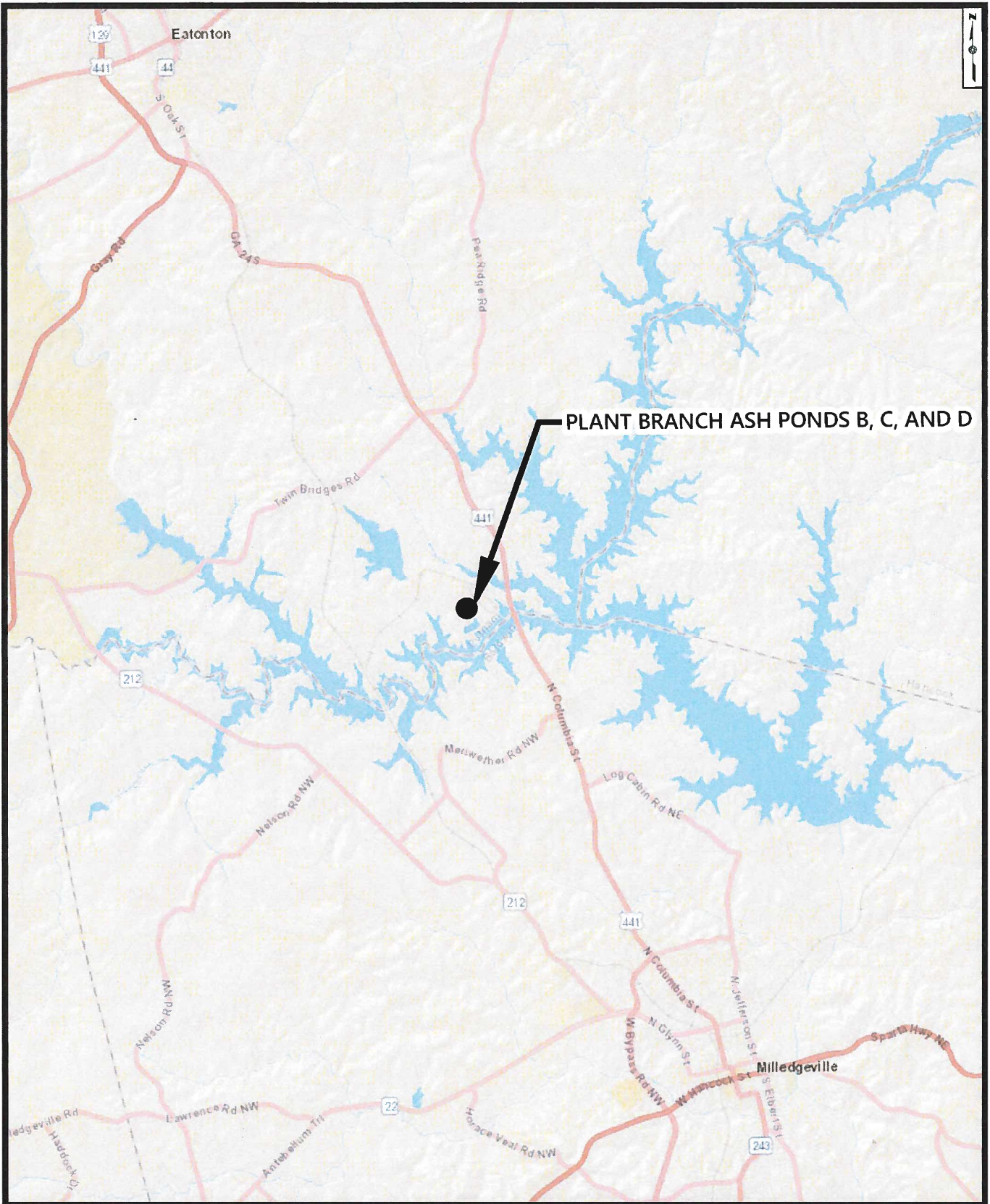
Date: *11/13/18*

Sworn to and subscribed before me this 13 day of November, 20 18.

Notary Public: *Dana L Mclean*

My commission expires:





PLANT BRANCH ASH PONDS B, C, AND D

Location Map



Georgia Power Company - Plant Branch  
 CCR Surface Impoundments Ash Ponds B, C, and D

Date: 10/29/2018



**Send with completed application to:**  
 Environmental Protection Division, Solid Waste Management Program  
 4244 International Parkway, Suite 104  
 Atlanta, GA 30354-3902

County: \_\_\_\_\_

Facility: \_\_\_\_\_

## Solid Waste Handling Permit Supplemental Form for O.C.G.A. 12-8-23.1(a)(3)(B)

(Please type or print)

I. INFORMATION: This form must be completed by each owner, or an authorized official of a corporation, holding a 5% or greater ownership share. This form must be notarized.

Name of Facility Applying for Solid Waste Handling Permit: **Georgia Power Company – Plant Branch**

Owner's Name or Registered Corporation Name: **Georgia Power Company**

Authorized Official: **Aaron D. Mitchell**

Title: **General Manager – Environmental Affairs**

Mailing Address: **241 Ralph McGill Boulevard, BIN 10221**

Phone: **(404) 506 - 6505**

City: **Atlanta**

State: **GA**

ZIP Code: **30308**

Email Address: **GPCENV@SOUTHERNCO.COM**

A.	Yes	No
(1) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association intentionally misrepresented or concealed any material fact in the application submitted to the director?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association obtained or attempted to obtain the permit by misrepresentation or concealment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association been convicted by final judgment, and all appeals have been exhausted, in the State of Georgia or any federal court of any felony involving moral turpitude within three years immediately preceding the application for a permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association been convicted of any violations of any environmental laws punishable as a felony in any state or federal court within five years preceding the application for a permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association knowingly, willfully, and consistently violated the prohibitions specified in Code Section 12-8-30.7?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6) Has the applicant, or if the applicant is a corporation, partnership, or association, has any officer, director, manager, or shareholder of five percent or more of stock financial interest in the corporation, partnership, or association been adjudicated in contempt of any court order enforcing any federal environmental laws or any environmental laws of the State of Georgia within five years preceding the application for a permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**B.** On a separate sheet, please provide detailed explanations for each question above answered "yes."

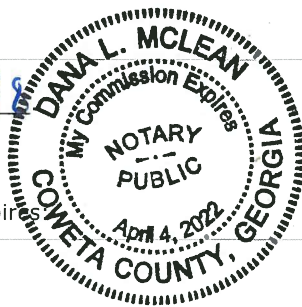
Signature: *Aaron D. Mitchell*

Date: *11/13/18*

Sworn to and subscribed before me this 13 day of November, 2018

Notary Public: *Dana L. McClean*

My commission expires





**EXHIBIT 3. PROFESSIONAL ENGINEER CERTIFICATION**

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November 9, 2018

Mr. Richard Dunn  
Director  
Georgia Environmental Protection Division  
2 Martin Luther King Jr. Drive  
Suite 1456  
Atlanta, GA 30334-9000

**Re: Professional Engineer Certification  
Rule 391-3-4.10-(9)(b)5**

Dear Mr. Dunn:

Geosyntec Consultants, Inc. (Geosyntec) is an engineering firm employing professional engineers in good standing in accordance with State statutes, and the firm has experience in the design and construction of solid waste disposal facilities. Mehmet Iscimen, P.E., with Geosyntec, is the Engineer of Record for this permit application. He is registered in the State of Georgia and has more than 16 years of experience in Engineering.

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I do hereby certify that the application requirements of the Georgia Environmental Protection Division Solid Waste Rule 391-3-4-.10 for Management of Coal Combustion Residuals have been met."*



**ATTEST:**

Geosyntec Consultants, Inc.

**Engineering Firm**

Mehmet Iscimen, P.E.

**Name of Professional Engineer**



**Signature**

11/14/2018

**Date**

**EXHIBIT 4. LOCAL ZONING OR LAND USE CONFIRMATION**

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# PUTNAM COUNTY BOARD OF COMMISSIONERS



DISTRICT ONE:  
KELVIN IRVIN

DISTRICT TWO:  
DANIEL W. BROWN

CHAIRMAN:  
DR. STEPHEN HERSEY

DISTRICT THREE:  
ALAN FOSTER

DISTRICT FOUR:  
TREVOR J. ADDISON

September 18, 2018

Mr. Jeffrey W. Cown  
Branch Chief  
Georgia Environmental Protection Division  
2 Martin Luther King Jr. Drive, SE  
Suite 1054, East Floyd Tower  
Atlanta, GA 30334-9000

RE: Georgia Power – Plant Branch

Permit Application – CCR Surface Impoundments

Dear Mr. Cown:

The Georgia Power Plant Branch – CCR Surface Impoundments (AP-B, AP-C, AP-D, and AP-E) located at 1100 Milledgeville Road, Milledgeville, Georgia comply with local zoning and land use ordinances.

Sincerely,

A handwritten signature in blue ink that reads "Stephen J. Hersey". The signature is fluid and cursive, with a long horizontal line extending to the right.

Stephen J. Hersey  
Chairman  
Putnam County