



**GEORGIA**  
DEPARTMENT OF NATURAL RESOURCES

**ENVIRONMENTAL PROTECTION DIVISION**

**Richard E. Dunn, Director**

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**EPD Director's Office**

2 Martin Luther King, Jr. Drive  
Suite 1456, East Tower  
Atlanta, Georgia 30334  
404-656-4713

Mr. Burns Wetherington,  
Environmental Affairs Manager  
Georgia Power Company  
Plant Mitchell  
241 Ralph McGill Boulevard NE  
Atlanta, Georgia 30308

AUG 18 2017

RE: Permit Issuance  
Georgia Power Company  
Plant Mitchell  
NPDES Permit GA0001465  
Albany, Dougherty County

Dear Mr. Wetherington,

Pursuant to the Georgia Water Quality Control Act, as amended, the Federal Clean Water Act, as amended, and the Rules and Regulations promulgated thereunder, we have issued the attached permit for the above-referenced facility.

Your facility has been assigned to the following EPD office for reporting and compliance. Signed copies of all required reports shall be submitted to the following address:

Environmental Protection Division  
Watershed Protection Branch  
Watershed Compliance Program  
2 Martin Luther King Jr. Drive, Suite 1152  
Atlanta, Georgia 30334

Please be advised that on and after the effective date indicated in the permit, the permittee must comply with all terms, conditions, and limitations of the permit. If you have questions concerning this correspondence, please contact Audra Dickson at 404.463.4934 or [audra.dickson@dnr.ga.gov](mailto:audra.dickson@dnr.ga.gov).

Sincerely,  
  
Richard E. Dunn  
Director

RED/ad

Enclosure(s)

CC: EPD Watershed Compliance Program – Mr. Shea Buettner (E-mail)  
Ms. Molly Davis, Chief NPDES Permitting Section, EPA Region 4 (E-mail)

Permit No. GA0001465

Issuance Date:

AUG 18 2017



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

## ENVIRONMENTAL PROTECTION DIVISION

### National Pollutant Discharge Elimination System Permit

In accordance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts,

Georgia Power Company  
Plant Mitchell  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308

is issued a permit to discharge from a facility located at

5200 Radium Springs Road  
Albany, Georgia 31705

to receiving waters

discharges (outfall nos. 01B, 01E, and 04) into the Flint River in the Flint River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit.

This permit is issued in reliance upon the permit application signed on August 28, 2014, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on September 1, 2017.

This permit and the authorization to discharge shall expire at midnight August 31, 2022.





Richard E. Dunn, Director  
Environmental Protection Division

**PART I**

**A.1. Effluent Limitations and Monitoring Requirements**

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 01B<sup>2</sup> – Ash pond discharge.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements <sup>1</sup>		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	Report	Report	--	--	2/Month	Estimation <sup>3</sup>	Final Effluent
Total Suspended Solids	--	--	30	100	1/Week	Grab	Final Effluent
Oil & Grease	--	--	15	20	1/Week	Grab	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

- <sup>1</sup> All the parameters must be monitored if, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- <sup>2</sup> There shall be no discharge of floating solids, oil, scum or visible foam other than trace amounts.
- <sup>3</sup> Best engineering practices or pump capacity and/or run times will be used to estimate the flow, and the specific methodology will be documented and retained on site.

**A.2. Effluent Limitations and Monitoring Requirements**

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall numbers 01E<sup>2, 3</sup> and 04<sup>2, 3</sup> – Ash pond #1 emergency overflow comingled with stormwater and ash pond 04 emergency overflow comingled with stormwater.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements <sup>1</sup>		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	Report	Report	--	--	Daily When Discharging <sup>5</sup>	Estimation <sup>4</sup>	Final Effluent
Total Suspended Solids	--	--	30	100	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Oil & Grease	--	--	15	20	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Total Dissolved Solids	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Copper, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Selenium, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Arsenic, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Mercury, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Chromium, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Lead, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements <sup>1</sup>		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Cadmium, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Zinc, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent
Nickel, Total	--	--	--	Report	Once/Day When Discharging <sup>5</sup>	Grab	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per day when discharging<sup>5</sup> by grab sample.

- <sup>1</sup> All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- <sup>2</sup> There shall be no discharge of floating solids, oil, scum or visible foam other than trace amounts.
- <sup>3</sup> Discharges from this outfall shall consist of emergency overflows only. There shall be no discharge from the outfall except when an emergency presents, such as excessive rainfall that meets the 100 year, 24 hour storm water criteria, several continuous or intermittent days of excessive rainfall that may adversely impact the stability of the impoundments or unforeseen catastrophic weather events.
- <sup>4</sup> Best engineering practices or pump capacity and/or run times will be used to estimate the flow, and the specific methodology will be documented and retained on site.
- <sup>5</sup> An inability to collect a sample because of adverse weather conditions during a monitoring period will not constitute failure to monitor the upstream or downstream as long as those conditions are immediately (within 24 hours) reported to the EPD Compliance Office. Documentation of an adverse event (with date, time and written description) must be reported with the Discharge Monitoring Report.

**B. Monitoring**

**1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. The permittee shall maintain a written sampling plan and schedule onsite.

**2. Sampling Period**

- a. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December.
- b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.
- c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

**3. Monitoring Procedures**

Analytical methods, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and methods listed in 40 CFR Part 136. The analytical method used shall be sufficiently sensitive. EPA-approved methods must be applicable to the concentration ranges of the NPDES permit samples.

**4. Detection Limits**

All parameters will be analyzed using the appropriate detection limits. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "NOT DETECTED" will be reported for that sample and the detection limit will also be reported.

**5. Recording of Results**

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates and times the analyses were performed, and the person(s) performing the analyses;

- c. The analytical techniques or methods used;
- d. The results of all required analyses.

**6. Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased monitoring frequency shall also be indicated. EPD may require, by written notification, more frequent monitoring or the monitoring of other pollutants not required in this permit.

**7. Records Retention**

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a minimum of three (3) years from the date of the sample, measurement, report or application, or longer if requested by EPD.

**8. Penalties**

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of EPD.

**C. Definitions**

1. The "daily average" mass means the total discharge by mass during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
2. The "daily maximum" mass means the total discharge by mass during any calendar day.
3. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
4. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
5. A "calendar day" is defined as any consecutive 24-hour period.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Severe property damage" means substantial physical damage to property, damage to treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
8. "EPD" as used herein means the Environmental Protection Division of the Department of Natural Resources.
9. "State Act" as used herein means the Georgia Water Quality Control Act (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 2).
10. "Rules" as used herein means the Georgia Rules and Regulations for Water Quality Control.
11. "Dewatering activity or dewatering activities" means prior to the closure process beginning, ash pond discharges will not cause water levels to drop beyond normal historical operation, hence once the dewatering activity has begun, the water levels may drop below historical operations.



12. "Adverse weather" means adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical.

**D. Reporting Requirements**

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.
  - a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: <https://netdmr.epa.gov/netdmr/public/home.htm>
  - b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.
  - c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15th day of the month following the sampling period.
  - d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
2. No later than December 21, 2020, the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:
  - a. Sewer Overflow/Bypass Event Reports;
  - b. Noncompliance Notification;
  - c. Other noncompliance; and
  - d. Bypass

**3. Other Reports**

All other reports required in this permit not listed above in Part I.D.2 or unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

**4. Other Noncompliance**

All instances of noncompliance not reported under Part I.B. and Part II. A. shall be reported to EPD at the time the monitoring report is submitted.

**5. Signatory Requirements**

All reports, certifications, data or information submitted in compliance with this permit or requested by EPD must be signed and certified as follows:

- a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:
  1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:
    - i a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or
    - ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
  3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.
- b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:
  1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;
  2. The authorization is made in writing by the person designated under (a) above; and

3. The written authorization is submitted to the Director.
- c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.
- d. Any person signing any document under (a) or (b) above shall make the following certification:

“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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

## **PART II**

### **A. Management Requirements**

#### **1. Notification of Changes**

- a. The permittee shall provide EPD at least 90 days advance notice of any planned physical alterations or additions to the permitted facility that meet the following criteria:
  1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b);
  2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or
  3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. The permittee shall give at least 90 days advance notice to EPD of any planned changes to the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Following the notice in paragraph a. or b. of this condition the permit may be modified. The permittee shall not make any changes, or conduct any activities, requiring notification in paragraph a. or b. of this condition without approval from EPD.
- d. The permittee shall provide at least 30 days advance notice to EPD of:
  1. any planned expansion or increase in production capacity; or
  2. any planned installation of new equipment or modification of existing processes that could increase the quantity of pollutants discharged or result in the discharge of pollutants that were not being discharged prior to the planned change

if such change was not identified in the permit application(s) upon which this permit is based and for which notice was not submitted under paragraphs a. or b. of this condition.

- e. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/L, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/L for acrolein and acrylonitrile, 500 µg/L for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/L antimony.
- f. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/L, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/L antimony.
- g. Upon the effective date of this permit, the permittee shall submit to EPD an annual certification in June of each year certifying whether or not there has been any change in processes or wastewater characteristics as described in the submitted NPDES permit application that required notification in paragraph a., b., or d. of this condition. The permittee shall also certify annually in June whether the facility has received offsite wastes or wastewater and detail any such occurrences.

## **2. Noncompliance Notification**

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

**3. Facility Operation**

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

**4. Adverse Impact**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

**5. Bypassing**

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to EPD at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
  1. A description of the discharge and cause of noncompliance; and
  2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above.

The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by EPD, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

**6. Sludge Disposal Requirements**

Sludge shall be disposed of in accordance with the regulations and guidelines established by EPD, the Federal Clean Water Act, and the Resource Conservation and Recovery Act (RCRA). Prior to disposal of sludge by any method other than co-disposal in a permitted sanitary landfill, the permittee shall submit a sludge management plan to the Watershed Protection Branch of EPD for written approval. For land application of nonhazardous sludge, the permittee shall comply with the applicable criteria outlined in the most current version of EPD's "Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates" and with the State Rules, Chapter 391-3-6-.17. EPD may require more stringent control of this activity. Prior to land applying nonhazardous sludge, the permittee shall submit a sludge management plan to EPD for review and approval. Upon approval, the plan for land application will become a part of the NPDES permit upon modification of the permit.

**7. Sludge Monitoring Requirements**

The permittee shall develop and implement procedures to ensure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported (in the unit of lbs) as specified in Part I.D of this permit.

**8. Power Failures**

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

**9. Operator Certification Requirements**

The permittee shall ensure that, when required, a certified operator is in charge of the facility in accordance with Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant operators And Laboratory Analysts Rule 43-51-6.(b)

**10. Laboratory Analyst Certification Requirements**

The permittee shall ensure that, when required, the person in responsible charge of the laboratory performing the analyses for determining permit compliance is certified in accordance with the Georgia Certification of Water and Wastewater Treatment Plant operators and Laboratory Analysts Act, as amended, and the Rules promulgated thereunder.

**B. Responsibilities**

**1. Right of Entry**

The permittee shall allow the Director of EPD, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a discharge source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

**2. Transfer of Ownership or Control**

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director of EPD in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and



- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of EPD's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

### **3. Availability of Reports**

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of EPD. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

### **4. Permit Modification**

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order of the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
  1. is different in conditions or more stringent than any effluent limitation in the permit; or
  2. controls any pollutant not limited in the permit.

### **5. Toxic Pollutants**

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that

establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

**6. Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

**7. State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

**8. Water Quality Standards**

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

**9. Property Rights**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

**10. Expiration of Permit**

The permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by EPD at least 180 days prior to the expiration date.

**11. Contested Hearings**

Any person who is aggrieved or adversely affected by an action of the Director of EPD shall petition the Director for a hearing within thirty (30) days of notice of such action.

**12. Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held

invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**13. Best Management Practices**

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage, in-plant transfer, process and material handling, loading and unloading operations, plant site runoff, and sludge and waste disposal.

**14. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**15. Duty to Provide Information**

- a. The permittee shall furnish to the EPD Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

**16. Duty to Comply**

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) and is grounds for enforcement action; for permit termination; revocation and reissuance, or modification; or for denial of a permit renewal application. Any instances of noncompliance must be reported to EPD as specified in Part I. D and Part II.A of this permit.
- b. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this

permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Georgia Water Quality Control Act (Act) also provides procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

**17. Upset Provisions**

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

### **PART III**

#### **A. Previous Permits**

1. All previous State wastewater permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

#### **B. Schedule of Compliance**

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule: N/A
2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

#### **C. Special Conditions**

1. No Discharge of Polychlorinated Biphenyl Compounds

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

2. Coal Ash Pond Dewatering Plan

- a. The permittee shall provide EPD at least 90 days written advance notice of any coal ash pond dewatering activities and a Coal Ash Pond Dewatering Plan (Plan) for review and approval. The Plan must contain at a minimum the following components:
  - i. Detailed description of the dewatering activities, current volume of wastewater in the ponds to be dewatered, wastewater treatment system components, flow schematics, and appropriate maps of the site;
  - ii. Detailed description of the process controls being installed, measured and maintained, including the effluent quality targets for total suspended solids, pH (s.u.), total residual chlorine, and turbidity (NTU);

- ii. Detailed description of the monitoring devices, equipment and associated activities;
- iv. At a minimum, once a week representative effluent sampling and monitoring for the following pollutants of concern: pH (s.u.), total suspended solids, biochemical oxygen demand,<sub>5-day</sub>, oil and grease, turbidity (NTU), total residual chlorine, total dissolved solids, copper, total, selenium, total, arsenic, total, mercury, total, chromium, total, lead, total, cadmium, total, zinc, total, nickel, total, ammonia, TKN, organic nitrogen, nitrate/nitrite, phosphorus, ortho phosphorus, and hardness;
- v. At a minimum, twice a month upstream and downstream stream representative sampling for the pollutants of concern listed above in Part III.C.2.a.iv above;
- vi. Description of the sufficiently sensitive analytical methods employed;
- vii. Description of data collection, record keeping and reporting to EPD;
- viii. Description of draw down rates to ensure the integrity of the ponds; and
- ix. An immediate (within 24 hours) Notification Process and general Corrective Measures Plan if any of the following scenarios should occur during the dewatering activities:
  - 1. The continuously monitored effluent quality targets for total suspended solids, pH (s.u.), total residual chlorine, or turbidity (NTU) are not achieved and the automatic return system fails resulting in a discharge of wastewater that did not meet the established effluent quality targets; or
  - 2. There is visible foam other than trace amounts discharged to waters of the State.

EPD will evaluate the submitted data and determine if there is a reasonable potential for the discharge to cause or contribute to a violation of the instream water quality standards and if necessary, may open the permit to include applicable effluent limits to protect the receiving water body.

- b. Additionally, upon submittal of the Plan, the permittee shall begin instream sampling to establish background conditions. The permittee shall perform representative sampling upstream and downstream of the permitted outfalls twice per month collected by a grab sample. The stream samples will be analyzed for the pollutants of concern listed in Part III.C.2.a.iv and meet the requirements in 40 CFR Part 136.

**D. Biomonitoring and Toxicity Reduction Requirements**

1. The permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5)(e) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, EPD may require the permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
  - b. Chronic biomonitoring tests;
  - c. Stream studies;
  - d. Priority pollutant analyses;
  - e. Toxicity reduction evaluations (TRE); or
  - f. Any other appropriate study.
2. EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply EPD with data and evidence to confirm toxicity elimination.

**E. Coal Ash Pond Impoundment Integrity**

Imminent impoundment failure conditions shall be reported **immediately** (within 24 hours) to the designated local entity in the County with responsibility for emergency management and EPD's 24 hour Emergency Response contact.

1. Operation and Maintenance

- a. The following impoundments that are used to hold or treat wastewater and associated waste materials shall be operated and maintained to prevent the discharge of pollutants to waters of the united states, except as authorized under this permit, as follows:
  - i. Ash Pond 1
  - ii. Ash Pond 2
  - iii. Ash Pond A (Ash Pond A is inactive and receives no wastes or wastewater. Any wastewater generating from future dewatering activities at Ash Pond A will be conveyed thru the wastewater treatment system prior to discharge.)
- b. When practicable, piezometers or other appropriate instrumentation shall be installed as a means of assessing impoundment integrity.
- c. Within 90 days of the effective date of this permit, the permittee shall submit a report that identifies and shows the location of all pipes, utilities or other penetrations through or beneath the impoundment(s). A Georgia-registered professional engineer must certify in the report what, if any, pipes, utilities, and penetrations exist and their condition. The report must address these penetrations and provide an inspection frequency and method of evaluation for them.

2. Inspections

- a. Inspections of dams, dikes and toe areas for erosion shall, at a minimum, include observations of:
  - I. Cracks or bulges;
  - II. Subsidence;
  - III. Wet or soft soil;
  - IV. Changes in geometry;
  - V. Elevation of the impounded water and freeboard, depth of sediment and slurry;
  - VI. Changes in vegetation such as being overly lush;
  - VII. Obstructive vegetation and trees;
  - VIII. Animal burrows;
  - IX. Changes to liners (if applicable);
  - X. Spillway integrity; and



XI. Any other changes which may indicate a potential compromise to impoundment integrity.

- b. All impoundments shall be inspected at least **weekly** by qualified personnel with knowledge and training in impoundment integrity.
- c. All impoundments shall be inspected annually by a State-registered professional engineer or professional geologist with knowledge and training in impoundment integrity.
- d. The findings of each inspection shall be documented in a written inspection report and the personnel conducting the inspection will certify that the inspection occurred.
- e. The certified inspection report shall be submitted to EPD annually by June 30<sup>th</sup>.

3. Corrective Measures

- a. For Category I structures or structures regulated under the Safe Dams Act, the permittee shall coordinate with EPD (EPD's Safe Dams Unit, EPD assigned Compliance Office, and EPD's Emergency Response Contact) and the permittee's Engineer of Record **immediately (within 24 hours)** after discovering any changes that may be signs of an imminent impoundment failure, or potentially significant compromise to the structural integrity of the impoundment; such as, but not limited to, significant increases in seepage or seepage carrying sediment, or as the formation of large cracks, slumping, or new wet areas not related to recent precipitation.
- b. For structures not regulated by the Safe Dams Act, the permittee shall retain a qualified professional and coordinate with EPD (EPD's Safe Dams Unit, EPD assigned Compliance Office, and EPD's Emergency Response Contact) **immediately (within 24 hours)** after discovering any changes that may be signs of an imminent impoundment failure, or potentially significant compromise to the structural integrity of the impoundment; such as, but not limited to, significant increases in seepage or seepage carrying sediment or the formation of large cracks, slumping, or new wet areas not related to recent precipitation.
- c. The permittee shall begin the corrective measures agreed upon by EPD and the permittee **within 60 days** of first observing any other issues which may have long term impacts on the structural integrity of the impoundment, such as trees growing on the impoundment or vegetation blocking spillways, culverts or other drainage pathways.

4. Reporting and Recordkeeping Requirements
  - a. **Within 5 days** of discovering conditions that indicate a potentially significant compromise to the structural integrity of the impoundment, the permittee must notify EPD (EPD's Safe Dams Unit and EPD assigned Compliance Office) in writing, describing the findings of the inspection, corrective actions taken, and expected outcomes.
  - b. The permittee shall maintain records of all impoundment inspection and maintenance activities, including corrective actions made in response to inspections and all other activities undertaken to repair or maintain the impoundments referenced in this permit. All records shall be retained, and made available to State or Federal inspectors upon request.
  - c. The permittee shall submit an **annual report** to EPD by June 30<sup>th</sup>, summarizing findings of all monitoring activities, inspections and corrective measures pertaining to the structural integrity, operation and maintenance of all impoundments referenced in this permit.
  - d. All pertinent impoundment permits, design, construction, operation, and maintenance information, including but not limited to: plans, geotechnical and structural integrity studies, copies of permits, associated documentation of certifications by all qualified personnel, State-registered professional engineers, professional geologists, and regulatory approvals, shall be retained and made available to State or Federal inspectors upon request.
  - e. The permittee shall maintain the applicable certification and training records of the personnel that conducted the inspections required under this Section.
5. Once the issuance of the Coal Combustion Residuals (CCR) permit is a final action of the Director and as required under Chapter 391-3-4 Rules for Solid Waste Management, the permittee shall no longer be subject to the requirements specified in Part III.E of this NPDES permit for that Ash Pond or, if collectively, for all the Ash Ponds.



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

## ENVIRONMENTAL PROTECTION DIVISION

The Georgia Environmental Protection Division proposes to issue an NPDES permit to the applicant identified below. The draft permit places conditions on the discharge of pollutants from the power plant to waters of the State.

**Technical Contact:** Audra Dickson (*audra.dickson@dnr.ga.gov*)  
404-463-4934

**Draft permit:**

<input type="checkbox"/>	first issuance
<input type="checkbox"/>	reissuance with no or minor modifications from previous permit
<input checked="" type="checkbox"/>	reissuance with substantial modifications from previous permit
<input type="checkbox"/>	modification of existing permit
<input checked="" type="checkbox"/>	requires EPA review

### 1.0 FACILITY INFORMATION

1.1 **NPDES Permit No.:** GA0001465

1.2 **Name and Address of Owner/Applicant**

Georgia Power Company  
Plant Mitchell  
241 Ralph McGill Boulevard, NE  
Atlanta, Georgia 30308

1.3 **Name and Address of Facility**

Plant Mitchell  
5200 Radium Springs Road  
Albany, Georgia 31075  
(Dougherty County)

**1.4 Location and Description of the discharge (as reported by applicant)**

<b>Outfall ID</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Receiving Waterbody</b>
01B	31° 26' 38"	-84° 08' 14"	Flint River
01E	31° 26' 37"	-84° 08' 14"	Flint River
04	31° 26' 08"	-84° 08' 28"	Flint River

**1.5 Production Capacity:** N/A

**1.6 SIC Code & Description:** 4911 – Generation of electricity

**1.7 Description of Industrial Processes:** Plant Mitchell is a steam electric power generating facility that generated electricity through combustion of fossil fuels. The facility became retired in April 2015. The only wastestreams generated and discharged at the site are low volume wastewater, legacy coal ash pond and stormwater.

**1.8 Description of the Wastewater Treatment Facility**

<b>Outfall</b>	<b>Operation Description</b>	<b>Treatment Description</b>
01B	Ash Pond Discharge	Sedimentation, flocculation, and chemical precipitation
01E	Ash Pond #1 Emergency Overflow comingled with stormwater	Sedimentation
04	Ash Pond #1 Emergency Overflow comingled with stormwater	Sedimentation
01	Deleted - outfall decommissioned	Discharge not authorized
01A	Deleted - outfall decommissioned	Discharge not authorized
01C	Deleted - outfall decommissioned	Discharge not authorized
01D	Deleted - outfall decommissioned	Discharge not authorized
01F	Deleted - outfall decommissioned	Discharge not authorized
01G	Deleted - outfall decommissioned	Discharge not authorized
02A	Deleted - outfall decommissioned	Discharge not authorized
02B	Deleted - outfall decommissioned	Discharge not authorized
02C	Deleted - outfall decommissioned	Discharge not authorized
03D	Deleted - outfall decommissioned	Discharge not authorized
05	Deleted - outfall decommissioned	Discharge not authorized
06	Deleted - outfall decommissioned	Discharge not authorized

07	Deleted - outfall decommissioned	Discharge not authorized
08	Deleted - outfall decommissioned	Discharge not authorized

**1.9 Type of Wastewater Discharge**

- process wastewater                       stormwater  
 domestic wastewater                       combined (describe)  
 other (description) – *Low volume discharges associated with plant decommissioning.*

**1.10 Characterization of Effluent Discharge as Reported by Applicant**  
(Form 2C, Section V, Part A only. Please refer to the application for additional analysis)

**1.10.a Outfall No. 01B – Ash Pond Discharge**

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD)	4.32	NA
Biochemical Oxygen Demand <sub>5-day</sub> (mg/L)	<2	NA
Total Suspended Solids (mg/L)	5	NA
Temperature, Winter (°C)	20.7	NA
Temperature, Summer (°C)	29.9	NA
Ammonia (mg/L)	0.2	NA
Total Phosphorus (mg/L)	0.04	NA

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**1.10.b** Outfall No. 01E - Ash pond #1 emergency overflow commingled with stormwater

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD)	11.52	NA
Biochemical Oxygen Demand <sub>,5-day</sub> (mg/L)	<2	NA
Total Suspended Solids (mg/L)	5	NA
Temperature, Winter (°C)	20.7	NA
Temperature, Summer (°C)	29.9	NA
Ammonia (mg/L)/	0.2	NA
Total Phosphorus (mg/L)	0.04	NA

**1.10.c** Outfall No. 04 - Ash pond #2 emergency overflow commingled with stormwater

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD)	33.12	NA
Biochemical Oxygen Demand <sub>,5-day</sub> (mg/L)	<2	NA
Total Suspended Solids (mg/L)	5	NA
Temperature, Winter (°C)	20.7	NA
Temperature, Summer (°C)	29.9	NA
Ammonia (mg/L)	0.2	NA
Total Phosphorus (mg/L)	0.04	NA

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## 2.0 APPLICABLE REGULATIONS

### 2.1 State Regulations

Chapter 391-3-6 of the Georgia Rules and Regulations for Water Quality Control

### 2.2 Federal Regulations

Source	Activity	Applicable Regulation
Generation of Electricity	Steam Electric	40 CFR 122
	Power Generating	40 CFR 125
	Point Source	40 CFR 423
	Category	

### 2.3 Industrial Effluent Limit Guideline(s)

Code of Federal Regulations, 40 CFR Part 423 – Steam Electric Power Generating Point Source Category

See Appendix A of this Fact Sheet for a copy of the 40 CFR Part 423 – Steam Electric Power Generating Source Category regulations.

## 3.0 WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of use classifications, numeric and or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each waterbody is expected to achieve, such as drinking water, fishing, or recreation. The numeric and narrative water quality criteria are deemed necessary to support the beneficial use classification for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses.

### 3.1 Receiving Waterbody Classification and Information

#### **Rules and Regulations of the State of Georgia 391-3-6-.03(6) – Fishing and Recreation**

Fishing,

1. Dissolved Oxygen - A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.

- 
2. pH - Within the range of 6.0 to 8.5.
  3. Bacteria - For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 ml in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 ml for any sample.
  4. Temperature - Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In stream designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.
  5. Toxic Wastes, Other Deleterious Materials - None in concentrations that would harm man, fish, and game or other beneficial aquatic life.

#### Recreation,

General recreational activities such as water skiing, boating, and swimming, or for any other use requiring water of a lower quality, such as recreational fishing. These criteria are not to be interpreted as encouraging water contact sports in proximity to sewage or industrial waste discharges regardless of treatment requirements:

(i) Bacteria:

1. Coastal waters: Culturable enterococci not to exceed a geometric mean of 35 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 CFU per 100 mL the same 30-day interval.
2. All other recreational waters: Culturable E. coli not to exceed a geometric mean of 126 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 CFU per 100 mL in the same 30-day interval.

- (ii) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.



- (iii) pH: Within the range of 6.0 - 8.5.
- (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

### 3.2 Ambient Information

Outfall ID	7Q10 (cfs)	1Q10 (cfs)	Hardness (mg/L)	Annual Average Flow (cfs)	Upstream Total Suspended Solids (mg/l)
01B	923	722	42	5900	8
01E	923	722	42	5900	8
04	923	722	42	5900	8

### 3.3 Georgia 305(b)/303(d) List Documents

#### 2014 Integrated 305(b)/303(d) List

Reach Name/ ID #/ Data Source	Reach Location/ County	River Basin/ Use	Criterion Violated	Potential Causes	Extent	Category	Priority	Notes
Flint River	Spring Creek to Hwy 27	Flint			20 miles	1		
RO31300060513	Dooly County	Fishing						
10								

### 3.4 Total Maximum Daily Load (TMDL)

There are no applicable TMDLs for this facilities discharge.

### 3.5 Wasteload Allocation Date:

Requested permit information for Reasonable Potential Analysis on February 9, 2017

See Appendix B of this Fact Sheet for the Wasteload Allocation (WLA).

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## 4.0 EFFLUENT LIMITS AND PERMIT CONDITIONS

### 4.1 Reasonable Potential Analysis (RPA)

Title 40 of the Federal Code of Regulations, 40 CFR 122.44(d) requires delegated States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criteria within a State water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia's Reasonable Potential Procedures are based on Georgia's Rules and Regulations for Water Quality Control (Rules), Chapter 391-3-6-.06(4)(d)5. The chemical specific and biomonitoring data and other pertinent information in EPD's files will be considered in accordance with the review procedures specified in the Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedence in the numeric or narrative criteria.

A Reasonable Potential Analysis was performed on the data submitted with the application and the results of those analyses are stated below in the following sections.

EPD evaluated the data provided in the application and supporting documents. If a pollutant is listed below, EPD determined it was a pollutant of concern and there may be a reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standards. If a pollutant is not listed below, EPD determined that the pollutant is not a pollutant of concern or has determined, based on the data provided in the application, there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standards. An example would be if the applicant reported "not detect," "below detection limit," or a value that was below the detection limit for a pollutant.

Based on the RPA conducted for the discharges there is no need for WQBEL for metals for outfalls 01B, 01E, and 04. See Appendix D - RP analysis spreadsheet calculation for each outfall attached to this Fact Sheet.

### 4.2 Whole Effluent Toxicity

Chronic WET test measures the effect of wastewater on indicator organisms' growth, reproduction and survival. Effluent toxicity is predicted when the No Observable Effect Concentrations for a test organism is less than the facility's instream waste concentration.

#### Outfall ID: 01B

Chronic testing for *Ceriodaphnia dubia* and *Pimephales promelas* was conducted from May 13, 2014 thru May 20, 2014 on outfall 01B.

The toxicity test results did not indicate chronic toxicity for the water flea or fathead minnow for sample concentrations tested below the requirements of the permit, when statistically compared to the laboratory control. For the samples tested, the NOEC was 1.2% effluent for water flea survival and 0.6% for water flea production. The NOEC was 1.2% effluent for fathead minnow survival and growth. No toxic effects were detected.

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### 4.3 Applicable Water Quality and Technology Based Effluent Limitations

#### Water Quality Based Effluent Limits (WQBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality standards. By analyzing the effect of a discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards. In such cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (*fishable/swimmable*).

WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water and downstream uses are protected. On the basis of the requirements of Title 40 of the *Code of Federal Regulations* (CFR) 125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

The term *pollutant* is defined in CWA section 502(6) and § 122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and § 401.16 (BOD<sub>5</sub>, TSS, fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

#### Applicable Technology Based Effluent Limits (TBELs)

Technology-based effluent limitations aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations. The NPDES regulations at Title 40 of the Code of Federal Regulations 125.3(a) require NPDES permit writers to develop technology-based treatment requirements, consistent with CWA section 301(b), that represent the minimum level of control that must be imposed in a permit. The regulation also indicates that permit writers must include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality.

For pollutants not specifically regulated by Federal Effluent Limit Guidelines, the permit writer must identify any needed technology-based effluent limitations and utilize best professional judgment to establish technology-based limits or determine other appropriate means to control its discharge if there is a reasonable potential to cause or contribute to a violation of the water quality standards.

#### 4.4 Conventional Pollutants

Pollutants of Concern	Outfall Number	Basis
pH	01B	<p><u>WQBEL</u> The instream waste concentration is 0.72%. When the instream waste concentration is less than 50%, it results in no reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore a limit of 6.0 s.u. to 9.0 s.u. has been added.</p> <hr/> <p><u>TBEL</u> The pH effluent limit of 6.0 s.u. – 9.0 s.u. is required under 40 CFR 423.12(b)(1) Best Practicable Control Technology Currently Available (BPT).</p>
	01E	<p><u>WQBEL</u> The instream waste concentration is 1.9%. When the instream waste concentration is less than 50%, it results in no reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore a limit of 6.0 s.u. to 9.0 s.u. has been added.</p> <hr/> <p><u>TBEL</u> The pH effluent limit of 6.0 s.u. – 9.0 s.u. is required under 40 CFR 423.12(b)(1) Best Practicable Control Technology Currently Available (BPT).</p>
	04	<p><u>WQBEL</u> The instream waste concentration is 5.3%. When the instream waste concentration is less than 50%, it results in no reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore a limit of 6.0 s.u. to 9.0 s.u. has been added.</p> <hr/> <p><u>TBEL</u> The pH effluent limit of 6.0 s.u. – 9.0 s.u. is required under 40 CFR 423.12(b)(1) Best Practicable Control Technology Currently Available (BPT).</p>
Total Suspended Solids (TSS)	01B, 01E and 04	<p><u>WQBEL</u> GA does not have a narrative Water Quality Standard for total suspended solids.</p> <hr/> <p><u>TBEL</u> The average daily and maximum daily limits for TSS of 30/100 mg/L are based on 40 CFR 423.12(b)(3) best practicable control technology currently available (BPT).</p>
Oil & Grease	01B, 01E and 04	<p><u>WQBEL</u> GA has a narrative Water Quality Standard for oil &amp; grease.</p>

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TBEL

The daily average and daily maximum limits for oil & grease of 15/20 mg/L are based on 40 CFR 423.12(b)(3) Best Practicable Control Technology Currently Available (BPT).

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#### 4.5 Toxics & Manmade Organic Compounds (126 Priority Pollutants and Metals)

##### Outfall 01B

Pollutants of Concern	Outfall Number	Basis
Arsenic, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for arsenic. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Cadmium, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for cadmium.
		<u>TBEL</u> There is no applicable federal technology based effluent limit. Please see Section 5.1 for further discussion.
Chromium, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for chromium. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Copper, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for copper. Please see Section 5.1 for further discussion.

		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Lead, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for lead. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Mercury	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for mercury. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Nickel, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for nickel. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Zinc, Total	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for zinc. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Selenium	01B	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for selenium. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.

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**Outfall Nos. 01E and 04**

<b>Pollutants of Concern</b>	<b>Outfall Number</b>	<b>Basis</b>
Total Dissolved Solids	01E and 04	<u>WQBEL</u> There are no numeric water quality standards for total dissolved solids. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Arsenic, Total	01E and 04	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for arsenic. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
Cadmium, Total	01E and 04	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for cadmium. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit. Please see Section 5.1 for further discussion.
Chromium, Total	01E and 04	<u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for chromium. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.

Copper, Total	01E and 04	<p><u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for copper. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.</p> <p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Lead, Total	01E and 04	<p><u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for lead. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.</p> <p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Mercury	01E and 04	<p><u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for mercury. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.</p> <p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Nickel, Total	01E and 04	<p><u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for nickel. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.</p> <p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Zinc, Total	01E and 04	<p><u>WQBEL</u> The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for zinc. EPD has included</p>



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monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.

TBEL

There is no applicable federal technology based effluent limit.

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Selenium                      01E and 04

WQBEL

The results of the reasonable potential analysis indicated there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standard for selenium. EPD has included monitoring requirements when there is a discharge from the outfall. Please see Section 5.1 for further discussion.

TBEL

There is no applicable federal technology based effluent limit.

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#### 4.6 Calculations for Water Quality Based Effluent Limits

##### 4.6.a Instream Waste Concentration (IWC) Calculation

$$\text{IWC} = \frac{\text{Effluent Flow (gal/day)}}{\text{Effluent Flow (gal/day)} + 7\text{Q10 (gal/day)}}$$

##### Outfall 01B

$$\text{IWC} = \frac{4,320,000 \text{ gal/day}}{4,320,000 \text{ gal/day} + 596,509,056 \text{ gal/day}} \times 100\% = 0.72\%$$

##### Outfall 01E

$$\text{IWC} = \frac{11,520,000 \text{ gal/day}}{11,520,000 \text{ gal/day} + 596,509,056 \text{ gal/day}} \times 100\% = 1.9\%$$

##### Outfall 04

$$\text{IWC} = \frac{33,120,000 \text{ gal/day}}{33,120,000 \text{ gal/day} + 596,509,056 \text{ gal/day}} \times 100\% = 5.3\%$$

#### 4.6.b Metals

See the reasonable potential (RP) spreadsheet calculations tables for applicable metals in Appendix C of this Fact Sheet.

#### 4.7 Comparison & Summary of Water Quality vs. Technology Based Effluent Limits

After preparing and evaluating applicable technology-based effluent limitations and water quality-based effluent limitations, the most stringent limits are applied in the permit. Pollutants of concern with an effluent limit of monitor and report are not included in the below table.

##### Outfall 01B, 01E, and 04

Parameter	WQBELs	TBELs	Explanation
pH (s.u.)	6.0 – 9.0	6.0 – 9.0	WQBEL/TBEL-BAT (BPT)
TSS (mg/L)	None	30/100	TBEL-BAT (BPT)
Oil & Grease (mg/L)	GA Narrative WQS	15/20	TBEL-BAT (BPT)

#### 5.0 Other Permit Requirements and Considerations

##### 5.1 Permit Conditions

- a. The following language is an excerpt out of the Preamble to the 40 CFR Part 423, regarding legacy wastewater.

##### Legacy Wastewater

“For purposes of the BAT limitations in this rule, this preamble uses the term “legacy wastewater” to refer to FGD wastewater, fly ash transport water, bottom ash transport water, FGMC wastewater, or gasification wastewater generated prior to the date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023 (see Section VIII.C.7). Under this rule, legacy wastewater must comply with specific BAT limitations, which EPA is setting equal to the previously promulgated BPT limitations on TSS in the discharge of fly ash transport water, bottom ash transport water, and low volume waste sources.

EPA did not establish zero discharge BAT limitations for legacy wastewater because technologies that can achieve zero discharge (such as the ones on which the final BAT requirements discussed in Sections VIII.C.2, 3, and 4, above, are based) are not shown to be available for legacy wastewater. Legacy wastewater already exists in wet form, and thus dry handling could not be used eliminate its discharge. Furthermore, EPA lacks data to show that legacy wastewater could be reliably incorporated into a closed-loop

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process that eliminates discharges, given the variation in operating practices among surface impoundments containing legacy wastewater.

EPA also decided not to establish BAT limitations for legacy wastewater based on a technology other than surface impoundments (chemical precipitation, chemical precipitation plus biological treatment, evaporation) because it does not have the data to do so. Data are not available because of the way that legacy wastewater is currently handled at plants.

The vast majority of plants combine some of their legacy wastewater with each other and with other wastestreams, including cooling water, coal pile runoff, metal cleaning wastes, and low volume waste sources in surface impoundments.<sup>[28]</sup> Once combined in surface impoundments, the legacy wastewater no longer has the same characteristics that it did when it was first generated. For example, the addition of cooling water can dilute legacy wastewater to a point where the pollutants are no longer present at treatable levels. Additionally, some wastestreams have significant variations in flow, such as metal cleaning wastes, which are generally infrequently generated, or coal pile runoff, which is generated during precipitation events. Because surface impoundments are typically open, with no cover, they also receive direct precipitation. As a result of all of this, the characteristics of legacy wastewater contained in surface impoundments (flow rate and pollutant concentrations) vary at both any given plant, as well as across plants nationwide. Furthermore, EPA generally would like to have enough performance data at a well-designed, well-operated plant or plants to derive limitations and standards using its well-established and judicially upheld statistical methodology. In this case, except in limited circumstances, plants do not treat the legacy wastewater that they send to an impoundment using anything beyond the surface impoundment itself.<sup>[29]</sup> Thus, the final rule establishes BAT limitations for legacy wastewater equal to the previously promulgated BPT limitations on TSS in discharges of fly ash transport water, bottom ash transport water, and low volume waste sources.

Finally, while there are a few plants that discharge from an impoundment containing only legacy FGD wastewater,<sup>[30]</sup> EPA rejected establishing requirements for such legacy FGD wastewater based on a technology other than surface impoundments. EPA determined that, while it could be possible for plants to treat the legacy FGD wastewater with the same technology used to treat FGD wastewater subject to the BAT limitations described in Section VIII.C.1 (because their characteristics could be similar), establishing requirements based on any technology more advanced than surface impoundments for these legacy “FGD-only” wastewater impoundments could encourage plants to alter their operations prior to the date that the final limitations apply in order to avoid the new requirements. Likely, a plant would begin commingling other process wastewater with their legacy FGD wastewater in the impoundment so that any legacy “FGD-only” wastewater requirements would no longer apply. Alternatively, plants might choose to pump the legacy FGD wastewater out of the impoundment on an accelerated schedule and prior to the date that the final limitations apply. In this case, the more rapid discharge of the wastewater could result in temporary increases in environmental impacts (e.g., exceedances of WQC for acute impacts to aquatic life). EPA wanted to avoid creating such incentives in this rule, and it therefore decided to establish BAT limitations for discharges of legacy FGD wastewater based on the previously promulgated BPT limitations on TSS for low volume waste sources. Finally, EPA notes that, as a result of the zero discharge requirements for discharges of all

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pollutants in three wastestreams (fly ash transport water, bottom ash transport water, and flue gas mercury control wastewater), this rule provides strong incentives for steam electric power plants to greatly reduce, if not completely eliminate, the disposal and treatment of their major sources of ash-containing wastewater in surface impoundments. As a result, EPA anticipates that overall volumes of legacy wastewater will continue to decrease dramatically over time, as this rule becomes fully implemented...”

“For purposes of the BAT limitations in this rule, legacy wastewater is FGD wastewater, fly ash transport water, bottom ash transport water, FGMC wastewater, and gasification wastewater generated prior to the date established by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023 (see Section VIII.C.7 and Section VIII.C.8).<sup>[58]</sup> Direct discharges of legacy wastewater are, under this rule, subject to BAT effluent limitations on TSS in such wastewater, which are equal to the existing BPT effluent limitations on TSS in fly ash transport water, bottom ash transport water, and low volume waste sources.<sup>[59]</sup> See TDD Section 14 for additional information regarding the legacy wastewater BAT limitations and on implementing them into NPDES permits.”

b. No Discharge of Polychlorinated Biphenyl Compounds

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

c. Coal Ash Pond Dewatering Plan

Effective on January 4, 2016, Technology Based Effluent Limits were developed by EPA in 40 CFR Part 423, for the discharges associated with coal ash ponds. This facility is not currently undergoing any activities associated with the dewatering of the coal ash ponds. However, there is a potential for dewatering activities to initiate prior to the end of the permit term. EPD is requiring the permittee to submit a Coal Ash Pond Dewatering Plan (Plan) for review and approval at least 90 days prior to starting any coal ash pond dewatering activities. The timeframe will allow EPD the necessary time to review the Plan, conduct a site visit, if necessary, and address any concerns.

Additionally, the Plan must contain at a minimum the following components

- i. Detailed description of the dewatering activities, current volume of wastewater in the ponds to be dewatered, wastewater treatment system components, flow schematics, and appropriate maps of the site;
- ii. Detailed description of the process controls being installed, measured and maintained, including the effluent quality targets for total suspended solids, pH (s.u.), total residual chlorine, and turbidity (NTU);
- ii. Detailed description of the monitoring devices, equipment and associated activities;
- iv. At a minimum, once a week representative effluent sampling and monitoring for the following pollutants of concern: pH (s.u.), total suspended solids, biochemical oxygen demand,<sup>5-day</sup> oil and grease,

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turbidity (NTU), total residual chlorine, total dissolved solids, copper, total, selenium, total, arsenic, total, mercury, total, chromium, total, lead, total, cadmium, total, zinc, total, nickel, total, ammonia, TKN, organic nitrogen, nitrate/nitrite, phosphorus, ortho phosphorus, and hardness;

- v. At a minimum, twice a month upstream and downstream stream representative sampling for the pollutants of concern listed above in Part III.C.2.a.iv above;
- vi. Description of the sufficiently sensitive analytical methods employed;
- vii. Description of data collection, record keeping and reporting to EPD;
- viii. Description of draw down rates to ensure the integrity of the ponds; and
- ix. An immediate (within 24 hours) Notification Process and general Corrective Measures Plan if any of the following scenarios should occur during the dewatering activities:
  - 1. The continuously monitored effluent quality targets for total suspended solids, pH (s.u.), total residual chlorine, or turbidity (NTU) are not achieved and the automatic return system fails resulting in a discharge of wastewater that did not meet the established effluent quality targets; or
  - 2. There is visible foam other than trace amounts discharged to waters of the State.

EPD will evaluate the submitted data and determine if there is a reasonable potential for the discharge to cause or contribute to a violation of the instream water quality standards and if necessary, may open the permit to include applicable effluent limits to protect the receiving water body.

- b. Additionally, upon submittal of the Plan, the permittee shall begin instream sampling to establish background conditions. The permittee shall perform representative sampling upstream and downstream of the permitted outfalls twice per month collected by a grab sample. The stream samples will be analyzed for the pollutants of concern listed in Part III.C.2.a.iv and meet the requirements in 40 CFR Part 136.

d. Coal Ash Pond Impoundment Integrity

Part III.E of the permit requires inspections, record keeping and reporting and corrective measures to ensure the integrity of the coal ash pond impoundments. Ash Pond A is inactive and therefore not subject to the requirements of Part III.E.

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## 5.2 Anti-Backsliding

The limits in this permit are in compliance with the 40 C.F.R. 122.44(l), which requires a reissued permit to be as stringent as the previous permit.

## 6.0 REPORTING

The facility has been assigned to the following EPD office for reporting, compliance and enforcement.

Georgia Environmental Protection Division  
Watershed Compliance Program  
2 Martin Luther King Jr. Drive  
Suite 1152 East  
Atlanta, Georgia 30334

### 6.1 E-Reporting

The permittee is required to electronically submit documents in accordance with 40 CFR Part 127.

## 7.0 REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

## 8.0 PERMIT EXPIRATION

The permit will expire five years from the effective date.

## 9.0 PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

### 9.1 Comment Period

The Georgia Environmental Protection Division (EPD) proposes to issue a permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Georgia Environmental Protection Division  
Wastewater Regulatory Program  
2 Martin Luther King Jr. Drive  
Suite 1152 East  
Atlanta, Georgia 30334

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1152 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information, you can contact 404-463-1511.

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## 9.2 Public Comments

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address above, or via e-mail at [EPDcomments@dnr.ga.gov](mailto:EPDcomments@dnr.ga.gov) within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

## 9.3 Public Hearing

Any applicant, affected state or interstate agency, the Regional Administrator of the U.S. Environmental Protection Agency (EPA) or any other interested agency, person or group of persons may request a public hearing with respect to an NPDES permit application if such request is filed within thirty (30) days following the date of the public notice for such application. Such request must indicate the interest of the party filing the request, the reasons why a hearing is requested, and those specific portions of the application or other NPDES form or information to be considered at the public hearing.

The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or a designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements, as deemed appropriate.

Following a public hearing, the Director, unless it is decided to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit.

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that the determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be made available to all interested persons and those persons that submitted written comments to the Director on the proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance

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or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

#### **9.4 Final Determination**

At the time that any final permit decision is made, the Director shall issue a response to comments. The issued permit and responses to comments can be found at the following address:

<http://epd.georgia.gov/watershed-protection-branch-permit-and-public-comments-clearinghouse-0>

#### **9.5 Contested Hearings**

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-.01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.



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## Appendix A – 40 CFR 423 - Stream Electric Power Generating Regulations

### **§423.10 Applicability.**

The provisions of this part apply to discharges resulting from the operation of a generating unit by an establishment whose generation of electricity is the predominant source of revenue or principal reason for operation, and whose generation of electricity results primarily from a process utilizing fossil-type fuel (coal, oil, or gas), fuel derived from fossil fuel (e.g., petroleum coke, synthesis gas), or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium. This part applies to discharges associated with both the combustion turbine and steam turbine portions of a combined cycle generating unit.

### **§423.11 Specialized definitions.**

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

- (a) The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the “chlorine—total residual” methods in Table IB in 40 CFR 136.3(a), or other methods approved by the permitting authority.
- (b) The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.
- (c) The term *chemical metal cleaning waste* means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.
- (d) The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.
- (e) The term *fly ash* means the ash that is carried out of the furnace by a gas stream and collected by a capture device such as a mechanical precipitator, electrostatic precipitator, or fabric filter. Economizer ash is included in this definition when it is collected with fly ash. Ash is not included in this definition when it is collected in wet scrubber air pollution control systems whose primary purpose is particulate removal.
- (f) The term *bottom ash* means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected

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with bottom ash.

(g) The term *once through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

(h) The term *recirculated cooling water* means water which is passed through the main condensers for the purpose of removing waste heat, passed through a cooling device for the purpose of removing such heat from the water and then passed again, except for blowdown, through the main condenser.

(i) The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States*, May 1961 or equivalent regional rainfall probability information developed therefrom.

(j) The term *blowdown* means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

(k) The term *average concentration* as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

(l) The term *free available chlorine* means the value obtained using any of the “chlorine—free available” methods in Table IB in 40 CFR 136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority.

(m) The term *coal pile runoff* means the rainfall runoff from or through any coal storage pile.

(n) The term flue gas desulfurization (FGD) wastewater means any wastewater generated specifically from the wet flue gas desulfurization scrubber system that comes into contact with the flue gas or the FGD solids, including but not limited to, the blowdown from the FGD scrubber system, overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process. Wastewater generated from cleaning the FGD scrubber, cleaning FGD solids separation equipment, cleaning FGD solids dewatering equipment, or that is collected in floor drains in the FGD process area is not considered FGD wastewater.

(o) The term flue gas mercury control wastewater means any wastewater generated from an air pollution control system installed or operated for the purpose of removing mercury from flue gas. This includes fly ash collection systems when the particulate control system follows sorbent injection or other controls to remove mercury from flue gas. FGD wastewater generated at plants using oxidizing agents to remove mercury in the FGD system and not in a separate FGMC system is not included in this definition.

(p) The term transport water means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (*e.g.*, leaks from valve packing, pipe flanges, or piping) or minor maintenance events (*e.g.*, replacement of valves or pipe sections).

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(q) The term gasification wastewater means any wastewater generated at an integrated gasification combined cycle operation from the gasifier or the syngas cleaning, combustion, and cooling processes. Gasification wastewater includes, but is not limited to the following: Sour/grey water; CO<sub>2</sub>/steam stripper wastewater; sulfur recovery unit blowdown, and wastewater resulting from slag handling or fly ash handling, particulate removal, halogen removal, or trace organic removal. Air separation unit blowdown, noncontact cooling water, and runoff from fuel and/or byproduct piles are not considered gasification wastewater. Wastewater that is collected intermittently in floor drains in the gasification process area from leaks, spills, and cleaning occurring during normal operation of the gasification operation is not considered gasification wastewater.

(r) The term combustion residual leachate means leachate from landfills or surface impoundments containing combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (*e.g.*, bottom, dikes, berms). Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit. Combustion residual leachate includes wastewater from landfills and surface impoundments located on non-adjointing property when under the operational control of the permitted facility.

(s) The term oil-fired unit means a generating unit that uses oil as the primary or secondary fuel source and does not use a gasification process or any coal or petroleum coke as a fuel source. This definition does not include units that use oil only for start up or flame-stabilization purposes.

(t) The phrase "as soon as possible" means November 1, 2018, unless the permitting authority establishes a later date, after receiving information from the discharger, which reflects a consideration of the following factors:

(1) Time to expeditiously plan (including to raise capital), design, procure, and install equipment to comply with the requirements of this part.

(2) Changes being made or planned at the plant in response to:

(i) New source performance standards for greenhouse gases from new fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d)(1)(C) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d)(1)(C);

(ii) Emission guidelines for greenhouse gases from existing fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d); or

(iii) Regulations that address the disposal of coal combustion residuals as solid waste, under sections 1006(b), 1008(a), 2002(a), 3001, 4004, and 4005(a) of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6906(b), 6907(a), 6912(a), 6944, and 6945(a).

(3) For FGD wastewater requirements only, an initial commissioning period for the treatment system to optimize the installed equipment.

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(4) Other factors as appropriate.

**§423.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).**

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, utilization of facilities, raw materials, manufacturing processes, non-water quality environmental impacts, control and treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES Permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The phrase "other such factors" appearing above may include significant cost differentials. In no event may a discharger's impact on receiving water quality be considered as a factor under this paragraph.

(b) Any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction by the application of the best practicable control technology currently available (BPT):

(1) The pH of all discharges, except once through cooling water, shall be within the range of 6.0-9.0.

(2) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(3) The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>	
	<b>Maximum for any 1 day (mg/l)</b>	<b>Average of daily values for 30 consecutive days shall not exceed (mg/l)</b>
TSS	100.0	30.0
Oil and grease	20.0	15.0

(4) The quantity of pollutants discharged in fly ash and bottom ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash and bottom ash transport water times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>	
	<b>Maximum for any 1 day (mg/l)</b>	<b>Average of daily values for 30 consecutive days shall not exceed (mg/l)</b>
TSS	100.0	30.0
Oil and grease	20.0	15.0

(5) The quantity of pollutants discharged in metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>	
	<b>Maximum for any 1 day (mg/l)</b>	<b>Average of daily values for 30 consecutive days shall not exceed (mg/l)</b>
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(6) The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>	
	<b>Maximum concentration (mg/l)</b>	<b>Average concentration (mg/l)</b>
Free available chlorine	0.5	0.2

(7) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown sources times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>	
	<b>Maximum concentration (mg/l)</b>	<b>Average concentration (mg/l)</b>
Free available chlorine	0.5	0.2

(8) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(9) Subject to the provisions of paragraph (b)(10) of this section, the following effluent limitations shall apply to the point source discharges of coal pile runoff:

<b>Pollutant or pollutant property</b>	<b>BPT effluent limitations</b>
	<b>Maximum concentration for any time (mg/l)</b>
TSS	50

(10) Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the limitations in paragraph (b)(9) of this section.

(11) The quantity of pollutants discharged in FGD wastewater, flue gas mercury control wastewater, combustion residual leachate, or gasification wastewater shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(12) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass-based limitations specified in paragraphs (b)(3) through (b)(7), and (b)(11), of this section. Concentration limitations shall be those concentrations specified in this section.

(13) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (b)(1) through (b)(12) of this section attributable to each controlled waste source shall not exceed the specified limitations for that waste source.

**§423.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).**

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this part must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(b)(1) For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table

Pollutant or pollutant property	BAT Effluent Limitations
	Maximum concentration (mg/l)
Total residual chlorine	0.20

(2) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for

more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(c)(1) For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

<b>Pollutant or pollutant property</b>	<b>BAT effluent limitations</b>	
	<b>Maximum concentration (mg/l)</b>	<b>Average concentration (mg/l)</b>
Free available chlorine	0.5	0.2

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(d)(1) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

<b>Pollutant or pollutant property</b>	<b>BAT effluent limitations</b>	
	<b>Maximum concentration (mg/l)</b>	<b>Average concentration (mg/l)</b>
Free available chlorine	0.5	0.2
<b>Pollutant or pollutant property</b>	<b>Maximum for any 1 day –(mg/l)</b>	<b>Average of daily values for 30 consecutive days shall not exceed = (mg/l)</b>
The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	( <sup>1</sup> )	( <sup>1</sup> )
Chromium, total	0.2	0.2
Zinc, total	1.0	1.0

<sup>1</sup>No detectable amount.

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in



a particular location cannot operate at or below this level of chlorination.

(3) At the permitting authority's discretion, instead of the monitoring specified in 40 CFR 122.11(b) compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(e) The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed –(mg/l)
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(f) [Reserved—Nonchemical Metal Cleaning Wastes].

(g)(1)(i) *FGD wastewater*. Except for those discharges to which paragraph (g)(2) or (g)(3) of this section applies, the quantity of pollutants in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the table following this paragraph (g)(1)(i). Dischargers must meet the effluent limitations for FGD wastewater in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. These effluent limitations apply to the discharge of FGD wastewater generated on and after the date determined by the permitting authority for meeting the effluent limitations, as specified in this paragraph.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (ug/L)	11	8
Mercury, total (ng/L)	788	356
Selenium, total (ug/L)	23	12
Nitrate/nitrite as N (mg/L)	17.0	4.4

(ii) For FGD wastewater generated before the date determined by the permitting authority, as specified in paragraph (g)(1)(i), the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in §423.12(b)(11).

(2) For any electric generating unit with a total nameplate capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in §423.12(b)(11).

(3)(i) For dischargers who voluntarily choose to meet the effluent limitations for FGD wastewater in this paragraph, the quantity of pollutants in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the table following this paragraph (g)(3)(i). Dischargers who choose to meet the effluent limitations for FGD wastewater in this paragraph must meet such limitations by December 31, 2023. These effluent limitations apply to the discharge of FGD wastewater generated on and after December 31, 2023.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (ug/L)	4	
Mercury, total (ng/L)	39	24
Selenium, total (ug/L)	5	
TDS (mg/L)	50	24

(ii) For discharges of FGD wastewater generated before December 31, 2023, the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in §423.12(b)(11).

(h)(1)(i) *Fly ash transport water*. Except for those discharges to which paragraph (h)(2) of this section applies, or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in fly ash transport water. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of fly ash transport water generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitation in this paragraph. When the fly ash transport water is used in the FGD scrubber, the quantity of pollutants in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed in the table in paragraph (g)(1)(i) of this section.

(ii) For discharges of fly ash transport water generated before the date determined by the permitting authority, as specified in paragraph (h)(1)(i) of this section, the quantity of pollutants discharged in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed for TSS in §423.12(b)(4).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed for TSS in §423.12(b)(4).

(i)(1)(i) *Flue gas mercury control wastewater.* Except for those discharges to which paragraph (i)(2) of this section applies, there shall be no discharge of pollutants in flue gas mercury control wastewater. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of flue gas mercury control wastewater generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever flue gas mercury control wastewater is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge limitation in this paragraph.

(ii) For discharges of flue gas mercury control wastewater generated before the date determined by the permitting authority, as specified in paragraph (i)(1)(i) of this section, the quantity of pollutants discharged in flue gas mercury control wastewater shall not exceed the quantity determined by multiplying the flow of flue gas mercury control wastewater times the concentration for TSS listed in §423.12(b)(11).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in flue gas mercury control wastewater shall not exceed the quantity determined by multiplying the flow of flue gas mercury control wastewater times the concentration for TSS listed in §423.12(b)(11).

(j)(1)(i) *Gasification wastewater.* Except for those discharges to which paragraph (j)(2) of this section applies, the quantity of pollutants in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed in the table following this paragraph (j)(1)(i). Dischargers must meet the effluent limitations in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. These effluent limitations apply to the discharge of gasification wastewater generated on and after the date determined by the permitting authority for meeting the effluent limitations, as specified in this paragraph.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (ug/L)	4	
Mercury, total (ng/L)	1.8	1.3
Selenium, total (ug/L)	453	227
Total dissolved solids (mg/L)	38	22

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(ii) For discharges of gasification wastewater generated before the date determined by the permitting authority, as specified in paragraph (j)(1)(i) of this section, the quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration for TSS listed in §423.12(b)(11).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed for TSS in §423.12(b)(11).

(k)(1)(i) *Bottom ash transport water.* Except for those discharges to which paragraph (k)(2) of this section applies, or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of bottom ash transport water generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitation in this paragraph. When the bottom ash transport water is used in the FGD scrubber, the quantity of pollutants in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration listed in the table in paragraph (g)(1)(i) of this section.

(ii) For discharges of bottom ash transport water generated before the date determined by the permitting authority, as specified in paragraph (k)(1)(i) of this section, the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration for TSS listed in §423.12(b)(4).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration for TSS listed in §423.12(b)(4).

(l) *Combustion residual leachate.* The quantity of pollutants discharged in combustion residual leachate shall not exceed the quantity determined by multiplying the flow of combustion residual leachate times the concentration for TSS listed in §423.12(b)(11).

(m) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of any mass based limitations specified in paragraphs (b) through (l) of this section. Concentration limitations shall be those concentrations specified in this section.

(n) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a) through (m) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

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(The information collection requirements contained in paragraphs (c)(2) and (d)(2) were approved by the Office of Management and Budget under control number 2040-0040. The information collection requirements contained in paragraph (d)(3) were approved under control number 2040-0033)

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## **Appendix B – Water Quality Waste Load Allocation**



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

## ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch  
 2 Martin Luther King, Jr. Drive  
 Suite 1152, East Tower  
 Atlanta, Georgia 30334  
 404-463-1511

### Memorandum

Date: February 9, 2017

To: Josh Welte

Through: Audra Dickson

From: Audra Dickson

Subject: Permit Information Request for Reasonable Potential of Stream  
 GA Power Plant Mitchell  
 NPDES Permit No. GA0001465  
 Dougherty County, Flint River Basin

This is a request for permit information for the reasonable potential of the stream for the reissuance of the above referenced facility. Ammonia was reported as 0.2 mg/L for each outfall. Fecal coliform was reported as 18 col/100 ml.

### Wastewater Regulatory Program

*(Duplicate this section for each outfall)*

Outfall No.: 01B	Lat/Long: 31° 26' 38" -84° 08' 14"
Name of Receiving Waters: Flint River	River Basin: Flint River
Average Flow (mgd): N/A	Maximum (Design) Flow (mgd): 4.32 (3,000 gpm)
Summer Temperature (min & max): 29.9 C	Winter Temperature (min & max): 20.7 C

### Watershed Planning and Monitoring Program

Please provide the following items about the receiving stream and indicate "NA" if an item does not apply.

- 7Q10 923 cfs
- 1Q10 772 cfs
- Mean Annual Stream Flow 5899 cfs
- Receiving Stream Hardness 42 mg/L as CaCO3
- Upstream TSS 8 mg/L

Outfall No.: 01E	Lat/Long: 31° 26' 37" -84° 08' 14"
Name of Receiving Waters: Flint River	River Basin: Flint River
Average Flow (mgd): N/A	Maximum (Design) Flow (mgd): 11.52 (8,000 gpm)
Summer Temperature (min & max): 29.9 C	Winter Temperature (min & max): 20.7 C

**Watershed Planning and Monitoring Program**

Please provide the following items about the receiving stream and indicate "NA" if an item does not apply.

- 7Q10 923 cfs
- 1Q10 772 cfs
- Mean Annual Stream Flow 5899 cfs
- Receiving Stream Hardness 42 mg/L as CaCO3
- Upstream TSS 8 mg/L

Outfall No.: 04	Lat/Long: 31° 26' 08" -84° 08' 28"
Name of Receiving Waters: Flint River	River Basin: Flint River
Average Flow (mgd): NA	Maximum (Design) Flow (mgd): 33.12 (23,000 gpm)
Summer Temperature (min & max): 29.9 C	Winter Temperature (min & max): 20.7 C

**Watershed Planning and Monitoring Program**

Please provide the following items about the receiving stream and indicate "NA" if an item does not apply.

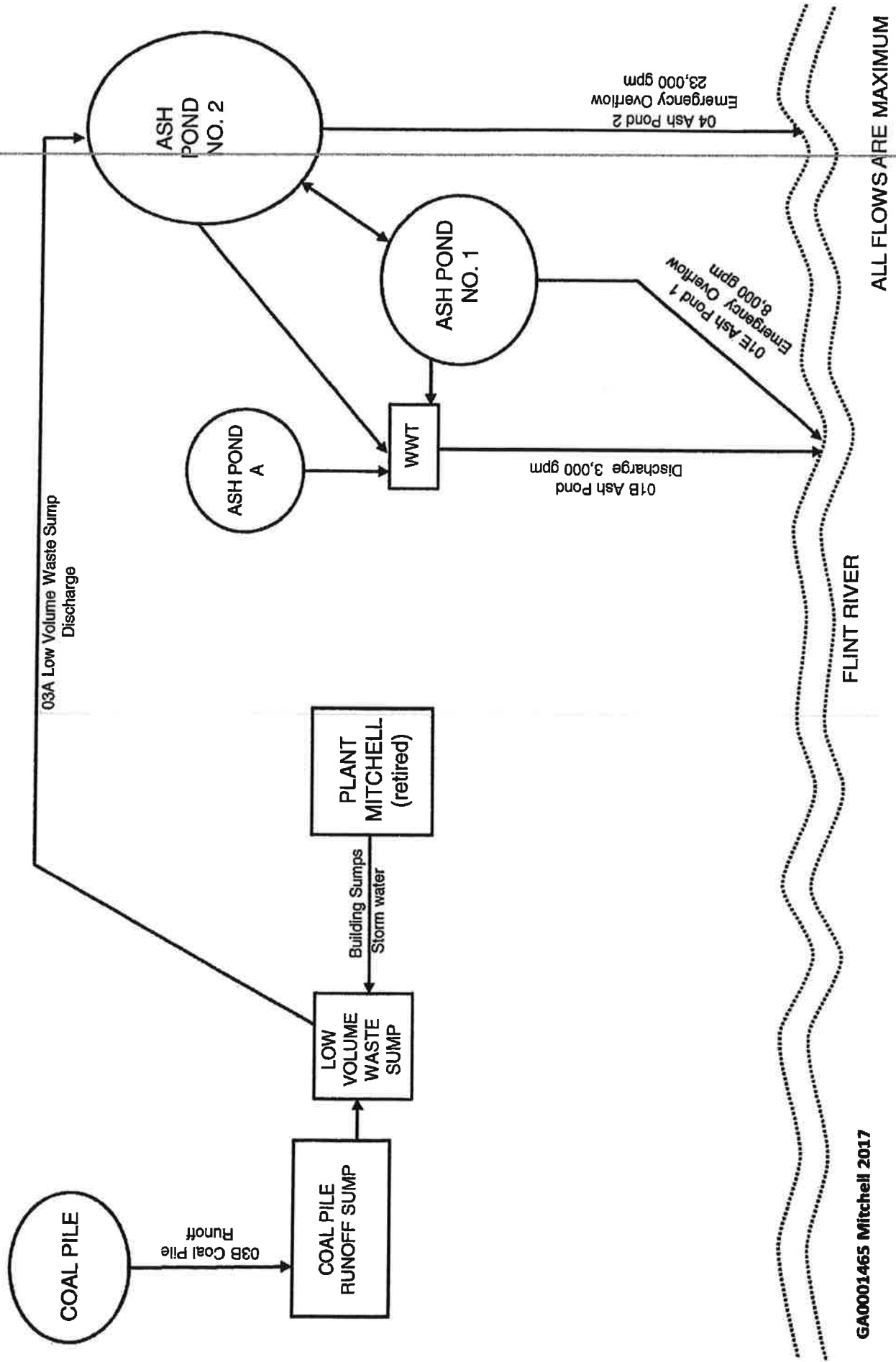
- 7Q10 923 cfs
- 1Q10 772 cfs
- Mean Annual Stream Flow 5899 cfs
- Receiving Stream Hardness 42 mg/L as CaCO3
- Upstream TSS 8 mg/L



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## **Appendix C – Process Flow Line Diagram**

GEORGIA POWER COMPANY - PLANT MITCHELL  
NPDES PERMIT NO. GA0001465



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**Appendix D – Reasonable Potential Analysis (RPA)**  
**Calculation for Metals Spreadsheet**

## Reasonable Potential Analysis for Freshwater

Permit Name: Georgia Power Company Plant Mitchell  
NPDES Permit No. GA0001465 (outfall 01B)

**Stream Data:**

Receiving stream Hardness:	42	mg/L
Upstream TSS:	8	mg/L
7Q10:	923.00	ft <sup>3</sup> /s
	596,509,056	gal/day
1Q10:	772.00	ft <sup>3</sup> /s
	498,921,984	gal/day

**Effluent Data:**

Flow	4,320,000	gal/day
TSS	5.00	mg/L
Instream TSS:	7.98	mg/L
Acute Dilution factor:	116.49	
Chronic Dilution factor:	139.08	

**Water Quality Criteria:**

Mean annual streamflow at discharge:	5,899.00	ft <sup>3</sup> /s
	3,812,358,526	gal/day
Dilution factor:	883.490	
IWC	0.719006506	

$$IWC = \frac{Flow \text{ (gal/day)}}{Flow \text{ (gal/day)} + 7Q10 \text{ (gal/day)}}$$

**Acute Water Quality Criteria (WQC<sub>Acute</sub>)**

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Maximum effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Acute</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.54	10.0	0.05	340.00	no
Cadmium	4.00.E+06	-1.131	0.247	7.0	0.01	0.87	no
Chromium III	3.36.E+06	-0.930	0.20	10.0	0.02	279.99	no
Chromium VI	3.36.E+06	-0.930	0.20	10.0	0.02	16.00	no
Copper	1.04.E+06	-0.744	0.36	5.2	0.02	5.93	no
Lead	2.80.E+06	-0.800	0.19	10.0	0.02	24.82	no
Mercury	2.91.E+06	-1.136	0.31	0.5	0.00	1.40	no
Nickel	4.90.E+05	-0.572	0.46	5.0	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.30	21.0	0.1	56.19	no

$$\text{Acute Dilution Factor} = \frac{1Q10 \left( \frac{\text{gal}}{\text{day}} \right) + \text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}{\text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}$$

**Chronic Water Quality Criteria (WQC<sub>Chronic</sub>)**

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Average effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Chronic</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.54	10.0	0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.247	7.0	0.0	0.13	no
Chromium III	3.36.E+06	-0.930	0.20	10.0	0.0	36.42	no
Chromium VI	3.36.E+06	-0.930	0.20	10.0	0.0	11.00	no
Copper	1.04.E+06	-0.744	0.36	5.20	0.0	4.27	no
Lead	2.80.E+06	-0.800	0.19	10.0	0.0	0.97	no
Mercury	2.91.E+06	-1.136	0.31	0.5	0.0	0.012	no
Nickel	4.90.E+05	-0.572	0.46	5.00	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.30	21.0	0.0	56.65	no
Selenium	NA	NA	NA	5.0	0.0	5.00	no

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{\text{instream}} \text{ (mg/L)} \times 10^{-6}}$$

$$\text{Instream } C_D = \frac{\text{Effluent } C_T \text{ (mg/L)} \times f_D}{DF} \text{ mg/L}$$

$$\text{Chronic Dilution Factor} = \frac{7Q10 \left( \frac{\text{gal}}{\text{day}} \right) + \text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}{\text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}$$

**Total Recoverable Effluent Limit**

Metal	C <sub>S</sub> (μg/L)	Chronic C <sub>T</sub> (μg/L) 30-Day Avg	Chronic C <sub>T</sub> (Kg/day) 30-Day Avg	Acute C <sub>T</sub> (μg/L) Daily Max	Acute C <sub>T</sub> (Kg/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	--	--

(1) 
$$\text{Acute } C_T = \frac{\frac{WQC_{Acute}}{f_D} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{Q_E}$$

$$\text{Chronic } C_T = \frac{\frac{WQC_{Chronic}}{f_D} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{Q_E}$$

(2) 
$$\text{Acute } C_T = \frac{\frac{WQC_{Acute}}{f_D} \times (Q_E + 1Q10)}{Q_E}$$

$$\text{Chronic } C_T = \frac{\frac{WQC_{Chronic}}{f_D} \times (Q_E + 7Q10)}{Q_E}$$

**NOTES:**

- (1) Chronic and acute total recoverable metal effluent concentration (C<sub>T</sub>) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C<sub>S</sub>) in the stream is 0 μg/L, equations above become:

**NOTES:**

- \*Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.
- \*If the calculated instream concentration is less than 50% of the instream water quality criteria, then the constituent will be considered not to be present at levels of concern in the effluent and it will not be included in the permit.
- \*If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that constituent will be placed in the permit.

## Reasonable Potential Analysis for Freshwater

Permit Name: Georgia Power Company Plant Mitchell  
NPDES Permit No. GA0001465 (outfall 01E)

### Stream Data:

Receiving stream Hardness:	42	mg/L
Upstream TSS:	8	mg/l
7Q10:	923.00	ft <sup>3</sup> /s
	596,509,056	gal/day
1Q10:	772.00	ft <sup>3</sup> /s
	498,921,984	gal/day

### Effluent Data:

Flow	11,520,000	gal/day
TSS	8.00	mg/L
Instream TSS:	7.94	mg/L
Acute Dilution factor:	44.31	
Chronic Dilution factor:	52.78	

### Water Quality Criteria:

Mean annual streamflow at discharge:	5,899.00	ft <sup>3</sup> /s
	3,612,356,328	gal/day
Dilution factor:	331.934	
IWC	1.894646298	

$$IWC = \frac{\text{Flow (gal/day)}}{\text{Flow (gal/day)} + 7Q10 \text{ (gal/day)}}$$

### Acute Water Quality Criteria (WQC<sub>Acute</sub>)

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Maximum effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Acute</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.00	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.00	0.87	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.00	279.99	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.00	16.00	no
Copper	1.04.E+06	-0.744	0.00	0.0	0.00	5.93	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.00	24.82	no
Mercury	2.91.E+06	-1.136	0.00	0.0	0.00	1.40	no
Nickel	4.90.E+05	-0.572	0.00	0.0	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.00	0.0	0.0	56.19	no

$$\text{Acute Dilution Factor} = \frac{1Q10 \left( \frac{\text{gal}}{\text{day}} \right) + \text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}{\text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}$$

### Chronic Water Quality Criteria (WQC<sub>Chronic</sub>)

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Average effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Chronic</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.0	0.13	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.0	36.42	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.0	11.00	no
Copper	1.04.E+06	-0.744	0.00	0.00	0.0	4.27	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.0	0.97	no
Mercury	2.91.E+06	-1.136	0.31	0.0	0.0	0.012	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.00	0.0	0.0	56.65	no
Selenium	NA	NA	NA	0.0	0.0	5.00	no

$$f_D = \frac{1}{1 + K_{PO} \times \text{TSS}_{\text{instream}} \text{ (mg/L)} \times 10^{-6}}$$

$$\text{Instream } C_D = \frac{\text{Effluent } C_T \text{ (mg/L)} \times f_D}{DF} \text{ mg/L}$$

$$\text{Chronic Dilution Factor} = \frac{7Q10 \left( \frac{\text{gal}}{\text{day}} \right) + \text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}{\text{Flow} \left( \frac{\text{gal}}{\text{day}} \right)}$$

### Total Recoverable Effluent Limit

Metal	C <sub>S</sub> (μg/L)	Chronic C <sub>T</sub> (μg/L) 30-Day Avg	Chronic C <sub>T</sub> (Kg/day) 30-Day Avg	Acute C <sub>T</sub> (μg/L) Daily Max	Acute C <sub>T</sub> (Kg/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	-	-

$$(1) \text{ Acute } C_T = \frac{\text{WQC}_{\text{Acute}} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{Q_E}$$

$$\text{Chronic } C_T = \frac{\text{WQC}_{\text{Chronic}} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{Q_E}$$

$$(2) \text{ Acute } C_T = \frac{\text{WQC}_{\text{Acute}} \times (Q_E + 1Q10)}{Q_E}$$

$$\text{Chronic } C_T = \frac{\text{WQC}_{\text{Chronic}} \times (Q_E + 7Q10)}{Q_E}$$

#### NOTES:

- Chronic and acute total recoverable metal effluent concentration (C<sub>T</sub>) from EPA 823-B-96-007, June 1996, page 33:
- Assuming background dissolved metal concentration (C<sub>S</sub>) in the stream is 0 μg/L, equations above become:

#### NOTES:

\*Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.

\*If the calculated instream concentration is less than 50% of the instream water quality criteria, then the constituent will be considered not to be present at levels of concern in the effluent and it will not be included in the permit.

\*If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that constituent will be placed in the permit.

End of report

## Reasonable Potential Analysis for Freshwater

Permit Name: Georgia Power Company Plant Mitchell  
NPDES Permit No. GA0001465 (outfall 04)

**Stream Data:**

Receiving stream Hardness:	42	mg/L
Upstream TSS:	8	mg/L
7Q10:	923.00	ft <sup>3</sup> /s
	596,509,056	gal/day
1Q10:	772.00	ft <sup>3</sup> /s
	498,921,984	gal/day

**Effluent Data:**

Flow	33,120,000	gal/day
TSS	5.80	mg/L
Instream TSS:	7.84	mg/L
Acute Dilution factor:	16.06	
Chronic Dilution factor:	19.01	

**Water Quality Criteria:**

Mean annual streamflow at discharge:	5,899.00	ft <sup>3</sup> /s
	3,812,358,528	gal/day
Dilution factor:	116.107	
IWC	5.260240071	

$$IWC = \frac{Flow \left( \frac{gal}{day} \right)}{Flow \left( \frac{gal}{day} \right) + 7Q10 \left( \frac{gal}{day} \right)}$$

**Acute Water Quality Criteria (WQC<sub>Acute</sub>)**

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Maximum effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Acute</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.00	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.00	0.87	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.00	279.99	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.00	16.00	no
Copper	1.04.E+06	-0.744	0.00	0.0	0.00	5.93	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.00	24.82	no
Mercury	2.91.E+06	-1.136	0.00	0.0	0.00	1.40	no
Nickel	4.90.E+05	-0.572	0.00	0.0	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.00	0.0	0.0	56.19	no

$$Acute \text{ Dilution Factor} = \frac{1Q10 \left( \frac{gal}{day} \right) + Flow \left( \frac{gal}{day} \right)}{Flow \left( \frac{gal}{day} \right)}$$

**Chronic Water Quality Criteria (WQC<sub>Chronic</sub>)**

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Average effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Chronic</sub> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.0	0.13	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.0	36.42	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.0	11.00	no
Copper	1.04.E+06	-0.744	0.00	0.00	0.0	4.27	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.0	0.97	no
Mercury	2.91.E+06	-1.136	0.31	0.0	0.0	0.012	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.0	224.77	no
Zinc	1.25.E+06	-0.704	0.00	0.0	0.0	56.65	no
Selenium	NA	NA	NA	0.0	0.0	5.00	no

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{Instream} (mg/L)^{1+\alpha} \times 10^{-6}}$$

$$Instream \ C_D = \frac{Effluent \ C_T (mg/L) \times f_D}{DF} \quad mg/L$$

$$Chronic \text{ Dilution Factor} = \frac{7Q10 \left( \frac{gal}{day} \right) + Flow \left( \frac{gal}{day} \right)}{Flow \left( \frac{gal}{day} \right)}$$

**Total Recoverable Effluent Limit**

Metal	C <sub>S</sub> (μg/L)	Chronic C <sub>T</sub> (μg/L) 30-Day Avg	Chronic C <sub>T</sub> (Kg/day) 30-Day Avg	Acute C <sub>T</sub> (μg/L) Daily Max	Acute C <sub>T</sub> (Kg/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	-	-

$$(1) \quad Acute \ C_T = \frac{\frac{WQC_{Acute}}{f_D} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{Q_E}$$

$$Chronic \ C_T = \frac{\frac{WQC_{Chronic}}{f_D} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{Q_E}$$

$$(2) \quad Acute \ C_T = \frac{\frac{WQC_{Acute}}{f_D} \times (Q_E + 1Q10)}{Q_E}$$

$$Chronic \ C_T = \frac{\frac{WQC_{Chronic}}{f_D} \times (Q_E + 7Q10)}{Q_E}$$

**NOTES:**

- (1) Chronic and acute total recoverable metal effluent concentration (C<sub>T</sub>) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C<sub>S</sub>) in the stream is 0 μg/L, equations above become:

**NOTES:**

\*Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.

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