



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

EPD Director's Office

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

DEC 13 2017

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

RE: Permit Issuance
Georgia Power Company - Plant Hammond
NPDES Permit No. GA0001457
City of Rome, Floyd County
SIC 4911

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
Mountain District Cartersville Office
P.O. Box 3250
Cartersville, Georgia 30120

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.

Sincerely,

Richard E. Dunn
Director

RED: ahd
Enclosure(s)

CC: EPD Watershed Compliance Program – Ms. Jill Causse (E-mail), EPA Region 4 mailbox: R4NPDESPermits@epa.gov, Ms. Molly Davis, Acting Chief NPDES Permitting Section, EPA Region 4 (E-mail)



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 Hammond
241 Ralph McGill Boulevard, NE
Atlanta, Georgia 30308

is issued a permit to discharge from a facility located at

5963 Alabama Highway, S.W.
Rome, Georgia 30165

to receiving waters

Coosa River (external outfall nos. 01, 03, 04, 05) and Smith Cabin Creek (external outfall no. 10)
in the Coosa 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 May 27, 2016, 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 January 1, 2018.

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



Richard E. Dunn, Director
Environmental Protection Division

PART I

A.1.a. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from external outfall number 01² – Final plant discharge commingled with stormwater.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|--|-------------------------|------------|----------------------------|------------|--------------------------------------|--------------------------------|------------------------|
| | 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 | Calculation ³ | Final Effluent |
| Actual Intake Flow (MGD) | Report | Report | | | Daily | Calculation ³ | Influent |
| Upstream Temperature ^{4,5,6} (°F) | -- | Report | -- | -- | 1/Week ^{4,5,6} | Instantaneous ^{4,5,6} | See Note 4 Below |
| Temperature ^{4,5,6} (°F) | -- | -- | -- | 90 | 1/Week ^{4,5,6} | Instantaneous ^{4,5,6} | See Note 4 and 6 Below |
| Delta Temperature ^{4,5,6} (°F) | -- | -- | -- | 5 | 1/Week ^{4,5,6} | Instantaneous ^{4,5,6} | See Note 4 and 6 Below |
| Chronic Whole Effluent Toxicity ⁷ | Report | Report | -- | -- | 1/Permit Term | Composite | Final Effluent |

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

- ¹ 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.
- ² There shall be no discharge of floating solids, oil, scum or visible foam other than trace amounts.
- ³ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

- 4 Upstream temperature measurement shall be taken at river mile 270.5 and the downstream temperature monitoring shall be taken at river mile 269.6 at the edge of the thermal mixing zone. Five (5) equidistant transects across the river shall be measured at a depth of one (1) meter. Temperature measurements shall be taken between the hours of 9:00 a.m. and 3:00 p.m. at all times and shall be taken on the same day of the week. The temperature differential shall be calculated as the downstream temperature minus the upstream temperature.
- 5 The permittee shall report the maximum absolute and differential temperature on the Discharge Monitoring Report in accordance with Part I.D of the permit.
- 6 See Part I.A.1.b for the thermal loading discharge tables.
- 7 WET testing shall be conducted once during the permit term after the effective date of the permit and the results submitted to the EPD in accordance with Part I.D of this permit. The testing must comply with the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-Term Methods of Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, U.S. EPA, 821-R-02-013, October 2002. Definitive tests must be run on the same samples concurrently using both an invertebrate species (i.e., *Ceriodaphnia dubia*) and a vertebrate species (i.e., Fathead Minnow, *Pimephales promelas*) and shall include a dilution equal to the facility's instream waste concentration (IWC) of 47%.

A.1.b. 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 01 – Final plant discharge commingled with stormwater.

Such discharges shall be limited and monitored by the permittee as specified in Table No. 1 and Table No. 2 below:

Table No. 1: Effluent limits for flows greater than >3571 cfs to 1501 cfs.

| Flow at Mayos Bar USGS Gage 02397000 (cfs) ¹ | August – June (MBTU/day ²) | July (MBTU/day ²) | Monitoring Frequency | Measurement Type | Sample Location |
|---|--|-------------------------------|----------------------|------------------|-----------------|
| Greater than > 3751 | 95,794 | 95,794 | Hourly | Instantaneous | Final Effluent |
| 3501 – 3750 | 95,794 | 92,299 | Hourly | Instantaneous | Final Effluent |
| 3251 – 3500 | 95,794 | 85,709 | Hourly | Instantaneous | Final Effluent |
| 3001 – 3250 | 88,825 | 79,118 | Hourly | Instantaneous | Final Effluent |
| 2751 – 3000 | 81,426 | 72,527 | Hourly | Instantaneous | Final Effluent |
| 2501 – 2750 | 74,026 | 65,936 | Hourly | Instantaneous | Final Effluent |
| 2251 – 2500 | 66,626 | 59,345 | Hourly | Instantaneous | Final Effluent |
| 2001 – 2250 | 59,227 | 52,754 | Hourly | Instantaneous | Final Effluent |
| 1751 – 2000 | 51,827 | 44,794 | Hourly | Instantaneous | Final Effluent |
| 1501 – 1750 | 44,427 | 33,824 | Hourly | Instantaneous | Final Effluent |

Table No. 2: Effluent limits for flows from 1500 cfs to 501 cfs.

| Flow at Mayos Bar USGS Gage 02397000 (cfs) ¹ | September – June (MBTU/Day ²) | July (MBTU/Day ²) | August (MBTU/Day ²) | Monitoring Frequency | Measurement Type | Sample Location |
|---|---|-------------------------------|---------------------------------|----------------------|------------------|-----------------|
| 1251 – 1500 | 37,028 | 26,968 | 37,028 | Hourly | Instantaneous | Final Effluent |
| 1001 – 1250 | 29,628 | 18,740 | 28,339 | Hourly | Instantaneous | Final Effluent |
| 751 – 1000 | 22,229 | 10,970 | 18,055 | Hourly | Instantaneous | Final Effluent |
| 501-750 | 15,404 | 2,742 | 10,696 | Hourly | Instantaneous | Final Effluent |

¹ Compliance with the thermal loads presented in the table above will be determined from the following equation:

$$\text{MBTU} = \frac{\sum Q \text{ (cfs)} * 3,600 \text{ (sec/hour)} * \text{Spec Weight (lb/cf)} * \text{Spec Heat Capacity (BTU/lb}^{\circ}\text{F)} * \text{Temp (}^{\circ}\text{F)}}{10^6 \text{ (BTU/Million BTU)}}$$

Where: Q = cooling water flow rate across the condensers
Specific Weight of water ~ 62.4 lb/cf
Specific Heat capacity of water = 1 BTU/lb*⁰F
Temp = Temperature difference (Internal Outfall 01A Condenser Outlet - Internal Outfall 01A Condenser Intake)

² MBTU = Million British Thermal Units, daily maximum

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 internal outfall number 01A^{1,2,3,4,5} – Once through cooling water.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|--|-----------------------|------------|----------------------------|------------|--------------------------------------|--------------------------|----------------------|
| | 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 | -- | -- | 1/Week | Calculation ⁶ | See Note 2 & 5 Below |
| Total Residual Chlorine ^{2,3,5} | -- | -- | -- | 0.2 | 1/Week | Grab ³ | See Note 2 & 5 Below |
| Total Residual Chlorine Time ^{2,3,5} (minutes/day/unit) | -- | -- | -- | 120 | 1/Week | -- | -- |

- ¹ Flow must be monitored 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.
- ² Total residual chlorine monitoring is only required during periods of condenser chlorination.
- ³ The permittee shall sample and measure the wastewater at the discharge tunnel prior to mixing with any other discharge.
- ⁴ Multiple grab samples are to be collected on 30-minute intervals during periods of TRC discharges attributable to condenser chlorination
- ⁵ See Part III.C.1, Special Conditions of this permit.
- ⁶ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.3. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from internal outfall number 01B – Ash transport water blowdown and stormwater

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--------------------------------------|-------------------------|-----------------------------|
| | 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 ³ | Final Effluent ² |
| Total Suspended Solids | -- | -- | 30 | 100 | 2/Month | Grab | Final Effluent ² |
| Oil & Grease | -- | -- | 15 | 20 | 2/Month | Grab | Final Effluent ² |

- ¹ 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.
- ² The permittee shall sample and measure the wastewater prior to mixing with any other discharge.
- ³ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.4. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from internal outfall number 01I³ – Chemical metal cleaning waste basin discharge.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--------------------------------------|-----------------------|------------------|
| | 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 | Estimate ⁴ | See Note 2 Below |
| Copper, Total | -- | -- | 1.0 | 1.0 | 2/Month | Grab | See Note 2 Below |
| Iron, Total | -- | -- | 1.0 | 1.0 | 2/Month | Grab | See Note 2 Below |
| Oil & Grease | -- | -- | 15 | 20 | 2/Month | Grab | See Note 2 Below |
| Total Suspended Solids | -- | -- | 30 | 100 | 2/Month | Grab | See Note 2 Below |

¹ 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.

² The permittee shall sample and measure the discharge prior to mixing with any other discharge.

³ See Part III.C.3 – Special Conditions of this permit.

⁴ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.5.a Effluent Limitations and Monitoring Requirements

Upon the effective date of the permit, the permittee is authorized to discharge from internal outfall number 01N³ – Flue gas desulfurization (FGD) wastewater. Beginning on December 31, 2022 and continuing until December 30, 2023³, the permittee shall monitor and report the discharge as specified below:

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|-------------------------------------|-----------------------|------------|---------------------|------------|--------------------------------------|-------------------------|------------------|
| | Mass Based | | Concentration Based | | Measurement Frequency | Sample Type | Sample Location |
| | Daily Avg. | Daily Max. | Daily Avg. | Daily Max. | | | |
| Flow (MGD) | Report | Report | -- | -- | 1/Week | Estimation ⁴ | See Note 2 Below |
| Arsenic, Total (µg/L) | -- | -- | Report | Report | 1/Week | Grab | See Note 2 Below |
| Mercury, Total (ng/L) | -- | -- | Report | Report | 1/Week | Grab | See Note 2 Below |
| Selenium, Total (µg/L) | -- | -- | Report | Report | 1/Week | Grab | See Note 2 Below |
| Nitrate/Nitrite as N (mg/L) | -- | -- | Report | Report | 1/Week | Grab | See Note 2 Below |

¹ 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.

² The permittee shall sample and measure the discharge prior to mixing with any other discharge.

³ See Part III.C.7 – Implementation Schedule of Compliance

⁴ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.5.b Effluent Limitations and Monitoring Requirements

Effective on December 31, 2023³, the permittee is authorized to discharge from outfall number 01N³ – Flue gas desulfurization (FGD) wastewater.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|---------------------|------------|--------------------------------------|-------------------------|------------------|
| | Mass Based | | Concentration Based | | Measurement Frequency | Sample Type | Sample Location |
| | Daily Avg. | Daily Max. | Daily Avg. | Daily Max. | | | |
| Flow (MGD) | Report | Report | -- | -- | 1/Week | Estimation ⁴ | See Note 2 Below |
| Arsenic, Total (µg/L) | -- | -- | 8 | 11 | 1/Week | Grab | See Note 2 Below |
| Mercury, Total (ng/L) | -- | -- | 356 | 788 | 1/Week | Grab | See Note 2 Below |
| Selenium, Total (µg/L) | -- | -- | 12 | 23 | 1/Week | Grab | See Note 2 below |
| Nitrate/Nitrite as N (mg/L) | -- | -- | 4.4 | 17 | 1/Week | Grab | See Note 2 Below |

- ¹ 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.
- ² The permittee shall sample and measure the discharge prior to mixing with any other discharge.
- ³ See Part III.C.7 – Implementation Schedule for Flue gas desulfurization (FGD) wastewater.
- ⁴ Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.6. 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 05¹ – Intake screen backwash.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--------------------------------------|-------------------------|-----------------|
| | 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 | -- | -- | 1/Month | Estimation ² | Final Effluent |

¹ 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.

² Best engineering practices or pump capacity/run times will be used to calculate or estimate the flow, and the specific methodology will be documented on site.

A.7. 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 03^{2,3} and 04^{2,3} – Ash pond #2 emergency overflow, and ash pond #4 emergency overflow commingled with stormwater.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--|-------------------------|-----------------|
| | 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 | -- | -- | When Discharging ⁵ | Estimation ⁴ | Final Effluent |
| Total Suspended Solids | -- | -- | 30 | 100 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Oil & Grease | -- | -- | 15 | 20 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Total Dissolved Solids | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Copper, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Selenium, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Arsenic, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Mercury, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Chromium, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Lead, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Cadmium, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--|-------------|-----------------|
| | Mass Based (lbs/day) | | Concentration Based (mg/L) | | Measurement Frequency | Sample Type | Sample Location |
| | Daily Avg. | Daily Max. | Daily Avg. | Daily Max. | | | |
| Zinc, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Nickel, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | 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 twice per month by grab sample.

- ¹ 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.
- ² There shall be no discharge of floating solids, oil, scum or visible foam other than trace amounts.
- ³ Discharges from this outfall shall consist of emergency overflows only due to precipitation related events. There shall be no discharge from the outfall except when a precipitation 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 precipitation weather events.
- ⁴ Best engineering practices or pump capacity/run times will be used to estimate the flow, and the specific methodology will be documented and retained on site.
- ⁵ 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.

A.8. 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 10^{2,3} – Ash pond #3 emergency overflow commingled with stormwater.

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

| Effluent Characteristics (Units) | Discharge Limitations | | | | Monitoring Requirements ¹ | | |
|----------------------------------|-----------------------|------------|----------------------------|------------|--|-------------------------|-----------------|
| | 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 | -- | -- | When Discharging ⁵ | Estimation ⁴ | Final Effluent |
| Total Suspended Solids | -- | -- | 30 | 100 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Selenium, Total | Report | Report | 0.0098 | 0.0147 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Cadmium, Total | Report | Report | 0.0009 | 0.00135 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Oil & Grease | -- | -- | 15 | 20 | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Total Dissolved Solids | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Copper, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Arsenic, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Mercury, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Chromium, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |
| Lead, Total | -- | -- | -- | Report | Once/Day When Discharging ⁵ | Grab | Final Effluent |

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

The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored twice per month by grab sample.

- ¹ 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.
- ² There shall be no discharge of floating solids, oil, scum or visible foam other than trace amounts.
- ³ Discharges from this outfall shall consist of emergency overflows only due to precipitation related events. There shall be no discharge from the outfall except when a precipitation 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 precipitation weather events.
- ⁴ Best engineering practices or pump capacity/run times will be used to estimate the flow, and the specific methodology will be documented and retained on site.
- ⁵ 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 above 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. 316(b) Annual Report
 - b. Sewer Overflow/Bypass Event Reports;
 - c. Noncompliance Notification;
 - d. Other noncompliance; and
 - e. 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. Total Residual Chlorine

- a. The permittee may not discharge total residual chlorine (TRC) from any single generating unit for more than two hours per day unless the permittee demonstrates to EPD that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted; and
- b. The TRC maximum is the instantaneous maximum which may occur at any time. The permittee shall develop a system for monitoring and recording the total time of TRC discharges. The results shall be reported in a suitably concise form beginning with the first scheduled Discharge Monitoring Report & Operation Monitoring Report (OMR) and continuing on each OMR thereafter.

2. No Discharge of Polychlorinated Biphenyl Compounds

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

3. Chemical Metal Cleaning Wastes

The permittee shall contain any chemical metal cleaning wastes generated for further treatment or disposal in a manner to meet the permit effluent limits specified in Part I.A.4 table prior to discharge. This requirement also applies to any preoperational chemical cleaning of metal process equipment.

4. §316(b) of the Clean Water Act (CWA) & Cooling Water Intake Structures

The permittee is subject to the EPA's §316(b) of the Clean Water Act (CWA) regulation for existing facilities and the current permit expired before July 14, 2018. Therefore, the permittee must submit to the EPD the information required in the applicable provisions of 40 CFR 122.21(r) – Application Requirements for Facilities with Cooling Water Intake Structures, when applying for the subsequent permit. The permittee requested this extension in accordance with the Rule and issuance of this permit constitutes EPD's approval of this request.

5. § 40 C.F.R. Part 423 Steam Electric Power Generating Point Source Category

The permittee is subject to the EPA's 40 CFR Part 423 regulation for existing facilities. The permittee must comply with the new federal regulations as described in 40 CFR 423 for the flue gas desulfurization water, 40 CFR 423.1(g), fly ash transport water, 40 CFR 423.13(h), and bottom ash transport water, 40 CFR 423.13(k) by December 31, 2023.

On April 25, 2017, EPA published a notice that it would reconsider the 40 CFR § 423 rule and announced a stay of the rule's pending implementation deadlines for the following wastestreams: fly ash transport water, bottom ash transport water, and flue gas desulfurization ("FGD") wastewater. See 82 Fed. Reg. 19005. On September 18, 2017, EPA withdrew the stay of the compliance dates and simultaneously postponed the earliest compliance dates for bottom ash transport water and the FGD wastewater in the 2015 Rule for a period of two years, whereas the revised earliest compliance date has been changed from November 1, 2018 to November 1, 2020. See 82 Fed. Reg. 43494.

On August 11, 2017, EPA announced a decision to conduct a rulemaking to potentially revise the effluent limitations for existing sources in the 2015 rule that applies to bottom ash transport water and FGD wastewater.

Upon the promulgation of the new 40 CFR § 423 rule, EPD may modify the permit to address the requirements of the revised sections of the rule.

6. Coal Ash Pond Dewatering Plan (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 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);

- iii. Detailed description of the monitoring devices, equipment and associated activities;
- iv. At a minimum, once per week representative effluent sampling and monitoring for the following pollutants of concern: pH (s.u.), total suspended solids, biochemical oxygen demand,_{5-day}, 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.6.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. A 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.6.a.iv and meet the requirements in 40 CFR Part 136.

7. Implementation Schedule for Flue Gas Desulfurization (FGD) Wastewater

Upon completion of the reconsideration process and promulgation of a new 40 CFR §423 rule, EPD may modify the permit to address the requirements of the revised sections of the rule. Additionally, if the revised rule modifies the compliance dates past December 31, 2023, the implementation schedule and deadlines in Part I.A.5.a, Part I.A.5.b, Part III.C.5 and Part III.C.7 may no longer be applicable and EPD will reevaluate based on the new rule. Until the promulgation of a new 40 CFR §423 is final, the permittee will implement the following permit conditions as follows:

- a. The effluent limitations and monitoring specified in Part I A.5 are effective on the effective date of this permit, except as specified below.
- b. The permittee shall achieve compliance with the effluent limitations in Part I.A.5 for arsenic, total, mercury, total, selenium, total and nitrate/nitrite specified in Part I.A.5.b of this permit in accordance with the following schedule:
 - (i) Beginning on December 31, 2022, the permittee shall start monitoring and reporting for flow, arsenic, total, mercury, total, selenium, total and nitrate/nitrite in accordance with Part I A.5.a of this permit.
 - (ii) No later than December 31, 2023, the permittee shall achieve compliance with the effluent limits for arsenic, total, mercury, total, selenium, total and nitrate/nitrite specified in Part I.A.5.b
- c. The permittee shall submit a written progress report to EPD on June 30th and December 31st every year describing the progress and steps take to achieve compliance with Part I.A.5 (discharges associated with flue gas desulfurization wastewater) of this permit.
 - (i) The June 30, 2019 progress report required in Part III.C.7.c. will provide a specific update of the permittee's and the Georgia Public Service Commission's evaluation of the 2019 Integrated Resource Plan (Plan). This Plan will evaluate the impact of all environmental regulations, fuel costs, implementation schedule achieving the other factors related to continued operations of Plant Hammond.
 - (ii) The June 30, 2019 progress report required in Part III.C.7.c will also provide an updated implementation schedule for meeting the requirements of 1.) Part I.A.5.a and Part I.A.5.b. (Implementation of numeric effluent limits for internal outfall no. 01N); 2.) Part III.C.5 (§ 40 C.F.R. Part 423 Steam Electric Power Generating Point Source Category, including an update for the conversion of the wet ash handling system to a dry ash handling system for bottom and fly ash transport water, and if applicable a revised implementation schedule to comply with the applicable regulations prior to December 31, 2023); and 3.) Part III.C.7 (Implementation Schedule for Flue Gas Desulfurization (FGD) Wastewater) of this permit.

- (iii) The permittee shall submit reports to the EPD assigned Compliance Office and the Wastewater Regulatory Program.

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 3
 - iv. Ash Pond 4
- 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 30th.

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 30th, 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.D of this NPDES permit for that Ash Pond or, if collectively, for all the Ash Ponds.



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. FACILITY INFORMATION

1.1 NPDES Permit No.: GA0001457

1.2 Name and Address of Owner/Applicant

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

1.3 Name and Address of Facility

Plant Hammond
5963 Alabama Highway, S.W.
Rome, Georgia, 30165
(Floyd County)

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

| Outfall ID | Latitude | Longitude | Receiving Waterbody |
|-------------------|-----------------|------------------|----------------------------|
| 01 | 34° 15' 02" | -85° 20' 43" | Coosa River |
| 03 | 34° 14' 58" | -85° 21' 15" | Coosa River |
| 04 | 34° 15' 01" | -85° 22' 16" | Coosa River |
| 05 | 34° 14' 58" | -85° 20' 35" | Coosa River |
| 10 | 34° 15' 38" | -85° 20' 11" | Smith Cabin Creek |

1.5 Production Capacity: N/A

1.6 SIC Code & Description: 4911 – Generation of electricity

1.7 Description of Industrial Processes: Generation of electricity through combustion of fossil fuels. Plant Hammond is an 865- megawatt (MW) steam electric power generating facility.

1.8 Description of the Wastewater Treatment Facility

See Attached Appendix C of this Fact Sheet for Process Flow Line Diagram

| Outfall | Operation Description | Treatment Description |
|----------------|---|--|
| 01 | Final plant discharge commingled with stormwater | Chlorination disinfection |
| 01A | Once through cooling water | Chlorination disinfection |
| 01B | Ash transport water blowdown commingled with stormwater | Sedimentation (Settling), & Flocculation |
| 01C | Low volume wastes (boiler blowdown, floor drains, & water treatment plant) | Reuse / recycle of treated effluent |
| 01D | Coal pile runoff commingled with stormwater | Reuse / recycle of treated effluent |
| 01E | Sewage treatment plant (Outfall 01 internal outfall) | Reuse / recycle of treated effluent |
| 01F | Ash transport water commingled with stormwater | Sedimentation (Settling) |
| 01G | Building sump emergency bypass | Treatment is not necessary |
| 01H | Coal pile runoff pond overflow to ash pond (primary) commingled with stormwater | Reuse / recycle of treated effluent |
| 01I | Cleaning chemical waste basin discharge | Chemical precipitation |
| 01J | Deleted - outfall decommissioned | Discharge not authorized |
| 01K | No. 1,2, & 3 Switchyard cooling water commingled with stormwater | Treatment is not necessary |
| 01L | No. 4 Switchyard cooling water commingled with stormwater | Treatment is not necessary |
| 01M | Priming water – Aux. cooling water | Reuse / recycle of treated effluent |
| 01N | Flue gas desulfurization (FGD) wastewater | Sedimentation (Settling) |
| 01O | Gypsum & limestone handling area runoff commingled with stormwater | Sedimentation (Settling) |
| 02 | Deleted - outfall decommissioned | Discharge not authorized |
| 03 | Ash pond #2 emergency overflow commingled with stormwater | Sedimentation (Settling) |
| 04 | Ash pond #4 emergency overflow comingled with stormwater | Sedimentation (Settling) |
| 05 | Intake water screen backwash | Treatment is not necessary |
| 06 | Deleted - outfall decommissioned | Discharge not authorized |
| 07 | Deleted - outfall decommissioned | Discharge not authorized |
| 08 | Deleted - outfall decommissioned | Discharge not authorized |
| 09 | Deleted - outfall decommissioned | Discharge not authorized |
| 10 | Ash pond #3 emergency overflow commingled with stormwater | Sedimentation (Settling) |
| 11 | 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 the power plant.*

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. 01 - Final plant discharge commingled with stormwater

| Effluent Characteristics (as Reported by Applicant) | Maximum Daily Value | Average Daily Value |
|--|--------------------------------|--------------------------------|
| Flow (MGD) | 620 | NA |
| Biochemical Oxygen Demand, _{5-day} (mg/L) | Less than < 8.0 | NA |
| Total Suspended Solids (mg/L) | 34.0 | NA |
| Temperature, Winter (°F) | 77 | NA |
| Temperature, Summer (°F) | 112.28 | NA |
| Ammonia (mg/L) | Less than < 0.1 | NA |
| Total Phosphorus (mg/L) | 0.22 | NA |

1.10.b Outfall No. 03 - Ash pond #2 emergency overflow commingled with stormwater

| Effluent Characteristics (as Reported by Applicant) | Maximum Daily Value | Average Daily Value |
|--|--------------------------------|--------------------------------|
| Flow (MGD) | 22 | NA |
| Biochemical Oxygen Demand, _{5-day} (mg/L) | Less than < 2.0 | NA |
| Total Suspended Solids (mg/L) | 43.9 | NA |
| Temperature, Winter (°F) | 47.3 | NA |
| Temperature, Summer (°F) | Ambient | NA |
| Ammonia (mg/L) | 0.18 | NA |
| Total Phosphorus (mg/L) | Less than < 0.2 | NA |

1.10.c Outfall No. 04 - Ash pond #4 emergency overflow commingled with stormwater

| Effluent Characteristics (as Reported by Applicant) | Maximum Daily Value | Average Daily Value |
|--|--------------------------------|--------------------------------|
| Flow (MGD) | 22 | NA |
| Biochemical Oxygen Demand _{5-day} (mg/L) | Less than < 2.0 | NA |
| Total Suspended Solids (mg/L) | 43.9 | NA |
| Temperature, Winter (°F) | 47.3 | NA |
| Temperature, Summer (°F) | Ambient | NA |
| Ammonia (mg/L) | 0.18 | NA |
| Total Phosphorus (mg/L) | Less than < 0.2 | NA |

1.10.d Outfall No. 05 – Intake water screen backwash

| Effluent Characteristics (as Reported by Applicant) | Maximum Daily Value | Average Daily Value |
|--|--------------------------------|--------------------------------|
| Flow (MGD) | 2.16 | NA |
| Biochemical Oxygen Demand _{5-day} (mg/L) | Less than < 8.0 | NA |
| Total Suspended Solids (mg/L) | 14.0 | NA |
| Temperature, Winter (°F) | 73.04 | NA |
| Temperature, Summer (°F) | 81.32 | NA |
| Ammonia (mg/L) | 0.12 | NA |
| Total Phosphorus (mg/L) | 0.16 | NA |

1.10.e Outfall No. 10 – Ash pond #3 emergency overflow commingled with stormwater

| Effluent Characteristics (as Reported by Applicant) | Maximum Daily Value | Average Daily Value |
|--|--------------------------------|--------------------------------|
| Flow (MGD) | 2.16 | NA |
| Biochemical Oxygen Demand _{5-day} (mg/L) | Less than < 2.0 | NA |
| Total Suspended Solids (mg/L) | 43.9 | NA |
| Temperature, Winter (°F) | 47.03 | NA |
| Temperature, Summer (°F) | Ambient | NA |
| Ammonia (mg/L) | 0.18 | NA |
| Total Phosphorus (mg/L) | Less than < 0.2 | NA |

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. 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

SPECIFIC WATER QUALITY CRITERIA FOR CLASSIFIED WATER USAGE

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 ¹ (cfs) | 1Q10 (cfs) | Hardness (mg/L) | Annual Average Flow (cfs) | Upstream Total Suspended Solids (mg/l) |
|------------|----------------------------|---------------|--------------------|---------------------------------|---|
| 01 | 1162 | 1162 | 37 | 6800 | 30 |
| 03 | 1162 | 1162 | 37 | 6800 | 30 |
| 04 | 1163 | 1163 | 37 | 6808 | 30 |
| 05 | 1138 | 1138 | 37 | 6793 | 30 |
| 10 | 3.2 | 2.9 | 37 | 22 | 11 |

¹ EPD used the U.S. Army Corps of Engineers Water Control Manual Plan G flows for the reasonable potential analysis.

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

Coosa River is listed as not supporting the designated use.

| Reach Name/ ID #/ Data Source | Reach Location/ County | River Basin/ Use | Criterion Violated | Potential Causes | Extent | Category | Priority | Notes |
|----------------------------------|--|---------------------------------|------------------------------------|---------------------|----------|----------|---------------|---|
| Coosa River R031501050209 | Beach Creek to StateLine Floyd County | Coosa Fishing/ Recreation | CFB, FCG(PCBs), DO, Temp, FC | 11, 12, NP | 17 miles | 4a.5 | 2015, 2018 | Cause for Temp is 11. Cause for other parameters is 12 except for FC which has a cause of NP. TMDLs completed CFB 2005 (revised 2009), FCG(PCBs) 2005 (revised 2009) & DO 2004. TMDL for Temperature is scheduled to be drafted in 2015 and the FC TMDL is scheduled to be drafted in 2018. |
| 1.3.10 | | | | | | | | |

3.4 Total Maximum Daily Load (TMDL)

TMDLs were completed for Commercial Fishing Ban (CFB) in 2005 and revised in 2009 and 2014, Fish Consumption Guidance (FCG) for PCBs in 2005 and revised in 2009 and 2014 and Dissolved Oxygen (DO) in 2004. The associated heat loads provided in the associated TMDLs are not applicable to this permit. The permit limits in this permit, which are more stringent, supersede the 2004 DO TMDL heat allocation.

3.5 Wasteload Allocation Date: September 26, 2016

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

4. EFFLUENT LIMITS AND PERMIT CONDITIONS

4.1 Reasonable Potential Analysis (RP)

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 RP conducted for the discharges there is no need for WQBEL for metals for outfalls 01, 03, 04, and 05, except for outfall 10 which triggered a need for WQBEL for selenium, total and cadmium, total. 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 Wastewater Concentration.

Chronic testing for *Ceriodaphnia dubia* was conducted from November 10, 2015 thru November 17, 2015 and chronic testing for *Pimephales promelas* was conducted from December 1, 2015 thru December 8, 2015.

Results of the all aquatic biomonitoring tests indicated no statistically significant effect on survival for *C. dubia* or survival and growth or reproduction for *P. promelas* at up to 100% effluent concentration (i.e., NOEC > IWC). No toxic effects were detected.

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 (BOD₅, 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 | 01 | <p><u>WQBEL</u> The instream waste concentration is 47%. 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> <p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p> |
| | 03, 04 | <p><u>WQBEL</u> The instream waste concentration is 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> <p><u>TBEL</u> The pH effluent limit of 6.0 s.u. to 9.0 s.u. is required under 40 CFR 423.12(b)(1) Best Practicable Control Technology Currently Available (BPT).</p> |
| | 10 | <p><u>WQBEL</u> The instream waste concentration is 51%. When the instream waste concentration is greater than 50%, it results in a reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore a limit of 6.0 s.u. to 8.5 s.u. has been added.</p> <p><u>TBEL</u> The pH effluent limit of 6.0 s.u. to 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, 01I, 03, 04, 10 | <p><u>WQBEL</u> GA does not have a numeric Water Quality Standard for total suspended solids.</p> <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</p> |

| | | |
|--|----------------------------|---|
| | | control technology currently available (BPT). |
| Oil & Grease | 01B, 01I, 03, 04, 10 | <u>WQBEL</u> GA has a narrative Water Quality Standard for oil & grease. <u>TBEL</u> 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). |
| Temperature Maximum and Temperature Differential | 01 | <u>WQBEL</u> GA has in-stream temperature limits of 90°F and delta 5°F in accordance with Chapter 391-3-6-.03(6)(a)(v) of the Water Quality Standards. The proposed permit has been revised from instream monitoring to the inclusion of a numeric effluent limits. A maximum temperature of 90°F and delta 5°F at the edge of the approved mixing zone has been included. Upstream temperature measurement shall be taken at river mile 270.5 and the downstream temperature monitoring shall be taken at river mile 269.6 at the edge of the thermal mixing zone. Five (5) equidistant transects across the river shall be measured at a depth of one (1) meter. Temperature measurements shall be taken between the hours of 9:00 a.m. and 3:00 p.m. at all times and shall be taken on the same day of the week. The temperature differential shall be calculated as the downstream temperature minus the upstream temperature. The permittee shall report the maximum absolute and differential temperature on the Discharge Monitoring Report in accordance with Part I.D of the permit. Additionally, Section 5.2 of this Fact Sheet provides further discussion on additional thermal load effluent limits <u>TBEL</u> There is no applicable federal technology based effluent limit. |
| Total Phosphorus | 01 | <u>WQBEL</u> Per EPD Strategy for Total Phosphorus effluent limit of 1.0 mg/L is needed in the permit, but 0.22 mg/L was reported in the |

permit application, hence there is no reasonable potential to exceed the Strategies limit of 1 mg/L. An effluent limit is not recommended in the permit.

TBEL

There is no applicable federal technology based effluent limit.

4.5 Nonconventional Pollutants

| Pollutants of Concern | Outfall Number | Basis |
|-------------------------------|----------------|---|
| Total Residual Chlorine (TRC) | 01A | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The effluent limit of 0.2 mg/L for TRC is based on 40 CFR 423.13(b)(1) BAT.</p> |
| Nitrate/Nitrite as N | 01N | <p><u>WQBEL</u> GA does not have Water Quality Standard for internal discharges.</p> <p><u>TBEL</u> The daily average and daily maximum limit of 4.4/17 for nitrate/nitrite is based on 40 CFR 423.13(g)(1)(i) BAT. The facility is required to comply with these limits by December 31, 2023. See Section 5.1 of the Fact Sheet for further discussion on the Compliance Schedule.</p> |

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

| Pollutants of Concern | Outfall Number | Basis |
|-----------------------|----------------|--|
| Copper, Total | 011 | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The daily average and daily maximum effluent limit of 1.0 mg/L for copper is based on 40 CFR 423.13(e) Best Available Technology Economically Achievable (BAT).</p> |

| | | |
|-----------------|-----|--|
| Iron, Total | 011 | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The daily average and daily maximum effluent limit of 1.0 mg/L for iron is based on 40 CFR 423.13(e) Best Available Technology Economically Achievable (BAT).</p> |
| Mercury, Total | 01N | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The daily average and daily maximum limits of 356/788 ng/L for mercury are based on 40 CFR 423.13(g)(1)(i) BAT. The facility is required to comply with these limits by December 31, 2023. See Section 5.1 of the Fact Sheet for further discussion on the Implementation Schedule.</p> |
| Arsenic, Total | 01N | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The daily average and daily maximum limit of 8/11µg/L for arsenic is based on 40 CFR 423.13(g)(1)(i) BAT. The facility is required to comply with these limits by December 31, 2023. See Section 5.1 of the Fact Sheet for further discussion on the Implementation Schedule.</p> |
| Selenium, Total | 01N | <p><u>WQBEL</u> GA does not have Water Quality Standards for internal discharges.</p> <p><u>TBEL</u> The daily average and maximum daily of 12/23 µg/L for selenium is based on 40 CFR 423.13(g)(1)(i) BAT. The facility is required to comply with these limits by December 31, 2023. See Section 5.1 of the Fact Sheet for further discussion on the Implementation Schedule.</p> |
| Selenium, Total | 10 | <p><u>WQBEL</u> The daily average and daily maximum limit of 0.0098 mg/L and 0.0147 mg/L for selenium are based on calculated WQBEL. The daily maximum is calculated by multiplying the daily average by 1.5. See Appendix D for RPA calculation. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from this</p> |

outfall.

TBEL

There is no applicable federal technology based effluent limit.

Selenium

03 & 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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.

TBEL

There is no applicable federal technology based effluent limit.

Cadmium,
Total

10

WQBEL

The daily average and daily maximum limit of 0.0009 mg/L and 0.00135 mg/L for cadmium are based on calculated WQBEL. The daily maximum is calculated by multiplying the daily average by 1.5. See Appendix D for RPA calculation. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from this outfall.

TBEL

There is no applicable federal technology based effluent limit.

Cadmium,
Total

03 & 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 cadmium. EPD has included monitoring requirements when there is a discharge from these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.

| | | |
|------------------------|-------------|--|
| | | <u>TBEL</u> There is no applicable federal technology based effluent limit. Please see Section 5.1 for further discussion. |
| Total Dissolved Solids | 03, 04 & 10 | <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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls. |
| | | <u>TBEL</u> There is no applicable federal technology based effluent limit. |
| Arsenic, Total | 03, 04 & 10 | <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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls. |
| | | <u>TBEL</u> There is no applicable federal technology based effluent limit. |
| Chromium, Total | 03, 04 & 10 | <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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls. |
| | | <u>TBEL</u> There is no applicable federal technology based effluent limit. |

| | | |
|---------------|-------------|--|
| Copper, Total | 03, 04 & 10 | <p><u>WQBEL</u></p> <p>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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.</p> <p><u>TBEL</u></p> <p>There is no applicable federal technology based effluent limit.</p> |
| Lead, Total | 03, 04 & 10 | <p><u>WQBEL</u></p> <p>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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.</p> <p><u>TBEL</u></p> <p>There is no applicable federal technology based effluent limit.</p> |
| Mercury | 03, 04 & 10 | <p><u>WQBEL</u></p> <p>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 these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.</p> <p><u>TBEL</u></p> <p>There is no applicable federal technology based effluent limit.</p> |
| Nickel, Total | 03, 04 & 10 | <p><u>WQBEL</u></p> <p>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</p> |

Quality Standard for nickel. EPD has included monitoring requirements when there is a discharge from these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.

TBEL

There is no applicable federal technology based effluent limit.

Zinc, Total 03, 04 & 10

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 zinc. EPD has included monitoring requirements when there is a discharge from these outfalls. The permittee used a dilution factor of 2:1 when reporting their effluent characterization because they believed discharges would only occur as a result of precipitation related events. A footnote in the permit has been included to limit the discharges from these outfalls.

TBEL

There is no applicable federal technology based effluent limit.

4.7 Calculations for Water Quality Based Effluent Limits

4.7.a Instream Waste Concentration (IWC) Calculation

$$\text{IWC} = \frac{\text{Effluent Flow (gal/day)}}{\text{Effluent Flow (gal/day)} + 7\text{Q}10 \text{ (gal/day)}}$$

Outfall 01

$$\text{IWC} = \frac{620 \times 10^6 \text{ gal/day}}{620 \times 10^6 \text{ gal/day} + 703 \times 10^6 \text{ gal/day}} \times 100\% = 47\%$$

Outfall 03

$$\text{IWC} = \frac{22 \times 10^6 \text{ gal/day}}{22 \times 10^6 \text{ gal/day} + 703 \times 10^6 \text{ gal/day}} \times 100\% = 3.0\%$$

Outfall 04

$$\text{IWC} = \frac{22 \times 10^6 \text{ gal/day}}{22 \times 10^6 \text{ gal/day} + 704 \times 10^6 \text{ gal/day}} \times 100\% = 3.0\%$$

Outfall 05

$$\text{IWC} = \frac{2.16 \times 10^6 \text{ gal/day}}{2.16 \times 10^6 \text{ gal/day} + 702 \times 10^6 \text{ gal/day}} \times 100\% = 0.31\%$$

Outfall 10

$$\text{IWC} = \frac{2.16 \times 10^6 \text{ gal/day}}{2.16 \times 10^6 \text{ gal/day} + 2.1 \times 10^6 \text{ gal/day}} \times 100\% = 51\%$$

Note: For conservatism, the 7Q10 flow of 1088 cfs and 1090 cfs for outfalls 03 and 04, and the 7Q10 of 3.2 cfs for outfall 10 were used in the IWC calculations based on the USACE proposed Plan G operations for Coosa River. The discharge from outfalls 03, 04, and 10 will only occur during an emergency due to significant rainfall event. The discharge flow reported in the permit application for outfalls 03, 04, and 10 were based on a 100-year 24 hour storm event since the permittee does not have actual discharges available for these outfalls.

4.7.b Metals

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

For conservatism, the USACE proposed Water Control Plan G operations were used for Coosa River 7Q10 and the reasonable potential analysis. The 7Q10 flow of 1088 cfs was used for outfalls 01 and 03, the 7Q10 flow of 1090 cfs was used for outfall

04, the 7Q10 of 1087 cfs was used for outfall 05, and the 7Q10 of 3.2 cfs was used for outfall 10. The discharges from outfalls 03, 04, and 10 will only occur during an emergency of a significant rainfall event. The discharge flow reported in the permit application for outfalls 03, 04 and 10 were based on a 100-year 24 hour storm event since the permittee does not have actual discharge flow to report. The WLA – Receiving Stream Flow Data is attached to Appendix B of this Fact Sheet.

4.8 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 01

| Parameter | WQBELs | TBELs | Explanation |
|--|-----------|-------|-------------------------------------|
| pH (s.u.) | 6.0 – 9.0 | None | WQBEL- Water Quality Standard (WQS) |
| Temperature (°F) ¹ | 90 | None | WQBEL WQS – WLA |
| Temperature Differential Instream (°F) | Delta 5 | None | WQBEL WQS |

¹ See Section 5.2 below for thermal load discharge effluent limits

Outfall 01A (internal outfall)

| Parameter | WQBELs | TBELs | Explanation |
|---------------------------------------|--------|-------|-------------|
| Total Residual Chlorine (mg/L) | None | 0.2 | TBEL |
| Total Residual Time (Minute/day/unit) | None | 120 | TBEL |

Outfall 01B (internal outfall)

| Parameter | WQBELs | TBELs | Explanation |
|---------------------|------------------|--------|-------------|
| TSS (mg/L) | None | 30/100 | TBEL- BPT |
| Oil & Grease (mg/L) | GA Narrative WQS | 15/20 | TBEL-BPT |

Outfall 01I (internal outfall)

| Parameter | WQBELs | TBELs | Explanation |
|----------------------|---------------|--------------|--------------------|
| Copper, Total (mg/L) | None | 1.0/1.0 | TBEL- BAT |
| Iron, Total (mg/L) | None | 1.0/1.0 | TBEL-BAT |
| TSS (mg/L) | None | 30/100 | TBEL-BPT |
| Oil & Grease (mg/L) | None | 15/20 | TBEL-BPT |

Outfall 01N (internal outfall)

| Parameter | WQBELs | TBELs | Explanation |
|-----------------------------|---------------|--------------|--------------------|
| Arsenic, Total (µg/L) | None | 8/11 | TBEL--BAT |
| Mercury, Total (ng/L) | None | 356/788 | TBEL- BAT |
| Selenium, Total (µg/L) | None | 12/23 | TBEL-BAT |
| Nitrate/Nitrite as N (mg/L) | None | 4.4/17 | TBEL-BAT |

Outfalls 03 & 04

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

Outfall 10

| Parameter | WQBELs | TBELs | Explanation |
|------------------------|---------------------|--------------|--------------------|
| TSS (mg/L) | None | 30/100 | TBEL-BPT |
| Oil & Grease (mg/L) | GA Narrative WQS | 15/20 | TBEL-BPT |
| Selenium, Total (mg/L) | 0.0098/0.0147 | None | WQBEL |
| Cadmium, Total (mg/L) | 0.0009/0.00135 | None | WQBEL |
| pH (s.u.) | 6.0 – 8.5 | 6.0 – 9.0 | WQBEL-WQS |

5.0 Other Permit Requirements and Considerations

5.1 Permit Conditions

a. Total Residual Chlorine

- i. The permittee may not discharge total residual chlorine (TRC) from any single generating unit for more than two hours per day unless the permittee demonstrates to EPD that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted; and
- ii. The TRC maximum is the instantaneous maximum which may occur at any time. The permittee shall develop a system for monitoring and recording the total time of TRC discharges. The results shall be reported in a suitably concise form beginning with the first scheduled Operation Monitoring Report (OMR) and continuing on each OMR thereafter.

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. Chemical Metal Cleaning Wastes

The permittee shall contain any chemical metal cleaning wastes generated for further treatment or disposal in a manner to meet the permit effluent limits specified in Part I.A.3 table prior to discharge. This requirement also applies to any preoperational chemical cleaning of metal process equipment. The permittee shall describe the treatment and disposal procedures in the OMR submittal in accordance with Part I.D. of this permit.

d. §316(b) of the Clean Water Act (CWA) & Cooling Water Intake Structures

The permittee is subject to the EPA's §316(b) of the Clean Water Act (CWA) regulation for existing facilities and the current permit expired before July 14, 2018. Therefore, the permittee must submit to the EPD the information required in the applicable provisions of 40 CFR 122.21(r) – Application Requirements for Facilities with Cooling Water Intake Structures, when applying for the subsequent permit. The permittee requested this extension in accordance with the Rule and issuance of this permit constitutes EPD's approval of this request.

e. § 40 C.F.R. Part 423 Steam Electric Power Generating Point Source Category

The permittee is subject to the EPA's 40 CFR Part 423 regulation for existing facilities. The permittee must comply with the new federal regulations as described in 40 CFR 423 for the flue gas desulfurization water, 40 CFR 423.1(g), fly ash transport water, 40 CFR 423.13(h), and bottom ash transport water, 40 CFR 423.13(k) by December 31, 2023. On April 25, 2017, EPA published a notice that it would reconsider the 40 CFR § 423 rule and announced a stay of the rule's pending implementation deadlines for the following wastestreams: fly ash transport water, bottom ash transport water, and flue gas desulfurization ("FGD") wastewater. See 82 Fed. Reg. 19005. On September 18, 2017, EPA withdrew the stay of the compliance dates and simultaneously postponed the earliest compliance dates for bottom ash transport water and the FGD wastewater in the 2015 Rule for a period of two years,

whereas the revised earliest compliance date has been changed from November 1, 2018 to November 1, 2020. See 82 Fed. Reg. 43494.

On August 11, 2017, EPA announced a decision to conduct a rulemaking to potentially revise the effluent limitations for existing sources in the 2015 rule that applies to bottom ash transport water and FGD wastewater.

Upon the promulgation of the new 40 CFR § 423 rule, EPD may modify the permit to address the requirements of the revised sections of the rule.

f. Coal Ash Pond Dewatering

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

- 1) 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;
- 2) 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);
- 3) Detailed description of the monitoring devices, equipment and associated activities;
- 4) At a minimum, once per week representative effluent sampling and monitoring for the following pollutants of concern: pH (s.u.), total suspended solids, biochemical oxygen demand,_{5-day}, 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;
- 5) At a minimum, twice per month upstream and downstream stream representative sampling for the pollutants of concern listed above;
- 6) Description of the sufficiently sensitive analytical methods;
- 7) Description of data collection, record keeping and reporting to EPD.;
- 8) Description of draw down rates to ensure the integrity of the ponds; and
- 9) A Notification Process and general Corrective Measures Plan if any of the following scenarios should occur during the dewatering activities:
 - i. 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
 - ii. There is visible foam other than trace amounts discharged to waters of the State.

EPD will evaluate the submitted data. Additionally, the permittee shall begin instream sampling when the Plan is submitted to EPD 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.6.a.iv and meet the requirements in 40 CFR Part 136. The permittee may request approval of the sampling locations to ensure the locations are representative of ambient conditions.

g. Implementation Schedule for Flue Gas Desulfurization FGD Wastewater, 40 CFR 423.1(g), Fly Ash Transport Waster, 40 CFR 423.13(h), and Bottom Ash Transport Water, 40 CFR 423.13(k) as of February 15, 2017

On January 4, 2016, the final rule, 40 CFR Part 423 became effective. As described in EPA's Fact Sheet, "the final rule phases in the new, more stringent requirements in the form of effluent limits for arsenic, mercury, selenium, and nitrate-nitrite for wastewater discharged from wet scrubber systems (flue gas desulfurization wastestream) and zero discharge of pollutants in ash transport water that must be incorporated into the plants' NPDES permits." Additionally, the following paragraphs are direct language from the Supplementary Information, Preamble to the 40 CFR Part 423 published by EPA and emphasis has been applied to applicable language.

For existing direct discharge sources, "the final rule establishes effluent limitations based on Best Available Technology Economically Achievable (BAT). BAT is based on technological availability, economic achievability, and other statutory factors and is intended to reflect the highest performance in the industry." For this facility, the "final rule establishes BAT limitations as follows:

- For fly ash transport water, and bottom ash transport water, , there are two sets of BAT limitations. The first set of BAT limitations is a numeric effluent limitation on Total Suspended Solids (TSS) in the discharge of these wastewaters (these limitations are equal to the TSS limitations in the previously established Best Practicable Control Technology Currently Available (BPT) regulations). The second set of BAT limitations is a zero discharge limitation for all pollutants in these wastewaters.
- For FGD wastewater, there are two sets of BAT limitations. The first set of limitations is a numeric effluent limitation on TSS and O&G in the discharge of FGD wastewater (these limitations are equal to the TSS limitations in the previously established BPT regulations for low volume waste). The second set of BAT limitations is numeric effluent limitations on mercury, arsenic, selenium, and nitrate/nitrite as N in the discharge of FGD wastewater.
- The direct discharge limitations in this rule apply only when implemented in an NPDES permit issued to a discharger after the effective date of this rule. Under the CWA, the permitting authority must incorporate these ELGs into NPDES permits as a floor or a minimum level of control. While the rule is effective on its effective date," January 4, 2016, "the rule allows a permitting authority to determine a date when the new effluent limitations for FGD wastewater, fly ash transport water and bottom ash transport water." *"The permitting authority must make these final effluent limitations applicable on or after November 1, 2018. For any final effluent limitation that is specified to become applicable after*

November 1, 2018, the specified date must be as soon as possible, but in no case later than December 31, 2023. “

Regardless of when a plant's NPDES permit is ready for renewal, the plant should immediately begin evaluating how it intends to comply with the requirements of the final ELGs. In cases where significant changes in operation are appropriate, the plant should discuss such changes with the permitting authority and evaluate appropriate steps and a timeline for the changes, even prior to the permit renewal process.

In cases where a plant's final NPDES permit will be issued after the effective date of the final ELGs, but before November 1, 2018, the permitting authority should apply limitations based on the previously promulgated BPT limitations or the plant's other applicable permit limitations until at least November 1, 2018. The permitting authority should also determine what date represents the soonest date, beginning November 1, 2018, that the plant can meet the final BAT limitations in this rule. The permit should require compliance with the final BAT limitations by that date, making clear that in no case shall the limitations apply later than December 31, 2023. Then, for permits that might be administratively continued, the final date will apply, even if that date is at the end of the implementation period. For permits that are issued on or after November 1, 2018, the permitting authority should determine the earliest possible date that the plant can meet the limitations in this rule (but in no case later than December 31, 2023), and apply the final limitations as of that date (BPT limitations or the plant's other applicable permit limitations would apply until such date).

As specified by the rule, the “as soon as possible” date determined by the permitting authority is November 1, 2018, unless the permitting authority determines another date after receiving information submitted by the discharger. Assuming that the permitting authority receives relevant information from the discharger, in order to determine what date is “as soon as possible” within the implementation period, the permitting authority must then consider the following factors:

- (a) Time to expeditiously plan (including to raise capital), design, procure, and install equipment to comply with the requirements of the final rule;*
- (b) Changes being made or planned at the plant in response to greenhouse gas regulations for new or existing fossil fuel-fired power plants under the Clean Air Act, as well as regulations for the disposal of coal combustion residuals under subtitle D of the Resource Conservation and Recovery Act;*
- (c) For FGD wastewater requirements only, an initial commissioning period to optimize the installed equipment; and*
- (d) Other factors as appropriate.”*

Chapter 391-3-6-.06(10)(a) of the Georgia Rules and Regulations requires the Director to determine the shortest reasonable period of time necessary to achieve such compliance, but in no case later than an applicable statutory deadline. The Federal statutory deadline for the applicable wastestreams is December 31, 2023. The permittee submitted relevant information in a document, entitled “Plant Hammond Effluent

Limitation Guidelines Rule Applicability Timing NPDES Permit Application 2016” with the NPDES application.

Additionally, Stipulation No. 15 of the Public Service Commission's (PSC) Final Order approving Georgia Powers Company's 2016 Integrated Resource Plan (IRP), Docket Nos. 40161 & 40162 included a stipulation to minimize capital expenditures at Plant Hammond through July 31, 2019. At that time, Georgia Powers Company and the PSC will further evaluate, through the IRP, the impact of all environmental regulations, fuel costs, and other factors related to continued operations of Plant Hammond, and as such Georgia Power Company will be better informed and be able to provide EPD explicit details on meeting the implementation schedule. The permittee will submit progress reports to EPD as prescribed in the proposed permit. Additionally the June 30, 2019 report will provide an updated implementation schedule for meeting the requirements of Part I.A.5.a and Part I.A.5.b. (Implementation of numeric effluent limits for internal outfall no. 01N), Part III.C.5 (§ 40 C.F.R. Part 423 Steam Electric Power Generating Point Source Category, including an update for the conversion of the wet ash handling system to a dry ash handling system for bottom and fly ash transport water, and if applicable a revised implementation schedule), and Part III.C.7 (Implementation Schedule for Flue Gas Desulfurization (FGD) Wastewater) of this permit.

EPD has reviewed the submitted information and determined the permittee has demonstrated good faith efforts to comply with the new rules, and will need an extended timeframe, past November 1, 2018, to implement the necessary changes to comply with the rules. As stated in the EPA document, *Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category: EPA's Response to Public Comments*, “The time provided for in the rule allows the permitting authority to account for time the facility needs to coordinate all the requirements of this rule, along with other regulatory requirements, to make the correct planning and financing decisions, and to implement the new requirements in an orderly and feasible way....given the extent of the capital expenditure and the complexity of these facilities, it is reasonable (referring to the deadline year 2023).”

The permittee must comply with the new federal regulations as described in 40 CFR 423 for the flue gas desulfurization water, 40 CFR 423.1(g), fly ash transport water, 40 CFR 423.13(h), and bottom ash transport water, 40 CFR 423.13(k) by December 31, 2023.

Status of the 40 CFR Part § 423 Rule at the time the proposed permit package was being prepared.

Since the draft permit was placed on public notice in 2017, EPA has subsequently announced its decision to reconsider the final rule's effective date of November 1, 2018 and administratively stay compliance dates that have not yet passed. See EPA April 12, 2017 Notice, delay of compliance deadlines. Docket ID No. EPA-HQ-OW-2009-0819, RIN 2040-AF14. The stay of the compliance dates does not affect EPA's BAT determination for discharge of treated wastewater from coal ash ponds.

In light of the stay of the compliance dates, EPD has included a reopener clause in the proposed permit. The clause allows EPD to modify the permit specific to the deadlines related to FGD wastewater, fly ash transport water and bottom ash transport water once EPA promulgates a new rule. On September 18, 2017, EPA withdrew the

stay of the compliance dates and simultaneously postponed the earliest compliance dates for bottom ash transport water and the FGD wastewater in the 2015 Rule for a period of two years, whereas the revised earliest compliance date has been changed from November 1, 2018 to November 1, 2020. See 82 Fed. Reg. 43494.

On August 11, 2017, EPA announced a decision to conduct a rulemaking to potentially revise the effluent limitations for existing sources in the 2015 rule that applies to bottom ash transport water and FGD wastewater.

Upon the promulgation of the new 40 CFR § 423 rule, EPD may modify the permit to address the requirements of the revised sections of the rule.

The following language has been included in the proposed permit pending the outcome of the reconsideration process and potential new rule.

“Upon completion of the reconsideration process and promulgation of a new 40 CFR §423 rule, EPD may modify the permit to address the requirements of the revised sections of the rule. Additionally, if the revised rule modifies the compliance dates past December 31, 2023, the implementation schedule and deadlines in Part I.A.5.a, Part I.A.5.b, Part III.C.5 and Part III.C.7 may no longer be applicable and EPD will reevaluate based on the new rule.”

h. 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.

5.2 Thermal Waste Load Allocation (WLA)- See Appendix B of this Fact Sheet for the Thermal Waste Load Allocation

The water quality modeling done for this WLA for Plant Hammond used the EPDRiv1 hydrodynamic water quality model developed for the Coosa River Basin Modeling Project. The model includes the 4 upstream HUC 8 watersheds (Conasauga, Etowah, Oostanaula, and Coosawattee), as well as the portion of the Upper Coosa watershed to the Alabama state line. Hydrodynamic and time-varying water-quality modeling is necessary for this section of the River because of its hydrodynamic and water quality complexity, and the significance, magnitude, and costs of the regulatory decisions being addressed. The major components of the model include variable releases from Carter’s and Allatoona Reservoirs/Dams and 36 upstream tributary watersheds, 11 mainstem wastewater treatment plant discharges, 11 municipal or private water withdrawals, and 2 electrical power generating facilities. The model was calibrated using intensive field study data collected in 2001, and recalibrated using data collected in 2005 and 2006.

The model was originally developed for the 2004 Total Maximum Daily Load (TMDL) Evaluation for Dissolved Oxygen (DO) in the Coosa River. The model utilized historical low flows, as well as the May 2003 *Alabama-Coosa-Tallapoosa Allocation Formula Agreement*, as the basis for the hydrodynamic inputs. However, due to the US Army Corps of Engineers recent record of decision to modify operations within the ACT basin, a different hydrodynamic approach was used for this modeling effort. The flow strategy,

referred to as Plan G in the May 2015 *Record of Decision for Updates to the Master Water Control Manual for the Alabama-Coosa-Tallapoosa River Basin*, results in modified minimum stream flows at Mayo's Bar as illustrated below:

Monthly Critical Flows of the Coosa River at Mayo's Bar

| <u>Month</u> | <u>2004 Modeled Flow (cfs)</u> | <u>2016 Minimum Flow (cfs)</u> |
|--------------|--------------------------------|--------------------------------|
| January | 2217 | 2402 |
| February | 2701 | 2584 |
| March | 2874 | 3288 |
| April | 2623 | 2735 |
| May | 2212 | 2561 |
| June | 1924 | 2236 |
| July | 1500 | 1713 |
| August | 1500 | 1348 |
| September | 1500 | 1157 |
| October | 1500 | 1281 |
| November | 1500 | 1541 |
| December | 2075 | 2180 |

EPDRiv1 requires site-specific meteorological parameters to perform water quality simulations. These data include cloud cover, wind speed, barometric pressure, wet bulb temperature, and dry bulb temperature, and were obtained from a meteorological station in Rome, GA. In this modeling effort, three different meteorological input files were used, spanning the years 2001, 2005, and 2006. Simulations were run with these 3 inputs to provide variability and to assess the effects of various meteorological conditions on the modeling results.

Thermal loadings in EPDRiv1 are processed as a volumetric flow rate with a corresponding temperature component. Since Plant Hammond utilizes a once-through cooling system, this model utilized the average cooling water flowrate as specified by Georgia Power (548 MGD), along with a temperature that varied by month. In order to accurately identify Plant Hammond's thermal impact to the River, modeling simulations were run with zero heat load from Plant Hammond, as a baseline. This represents the intake temperature as defined in Georgia's *Rules and Regulations for Water Quality Control, Section 391-3-6-.03*. Monthly heat loads were then added to the model to evaluate the temperature effects attributable to Plant Hammond. The temperature difference

between simulations (Heat Load – Baseline) represents the maximum allowable thermal loading that can be allocated to Plant Hammond’s cooling water system and still meet temperature standards downstream.

Total Maximum Daily Load

The results of the 2004 DO TMDL showed that reductions in oxygen-demanding discharges (UOD), as well as a reduction in the heat load discharged from Plant Hammond during the critical summer period, were necessary to meet instream DO standards at the state line. The modeling methodology used the total heat content of the discharge, which includes the ambient heat of the intake stream. The maximum allowable heat loads allocated to Plant Hammond are outlined below

2004 DO TMDL Modeled Heat Load Allocation

| <u>Month</u> | <u>Permit Limits (MBTU/day)¹</u> |
|--------------|---|
| June | 450,126 |
| July | 474,709 |
| August | 469,792 |
| September | 396,046 |

¹ MBTU = Million British Thermal Units, daily maximum

Plant Hammond Heat Load WLA Modeling Results

The table below lists the results of the temperature modeling conducted for this WLA. The modeling was done utilizing minimum flow conditions as well as flows greater than the minimum. This will allow for a hydrograph controlled release to accommodate increased operational flexibility for the facility while maintaining protection of the receiving stream. For simplicity, numeric brackets have been assigned to flows to generate a range under which given thermal limits can be applied.

The results are grouped by months and correspond to the maximum allowable thermal loading for a given range of flows. The modeling methodology used the total heat rejection from the facility, which is the heat added by Plant Hammond to the cooling water discharged to the River, and is independent of the intake temperature. Modeling results predict that the temperature increase is the critical standard for most of the year, while in July the critical standard is the instream temperature.

In order to translate modeled temperatures into the thermal loads presented in the table below, the following equation was used:

$$MBTU = \frac{\sum Q \text{ (cfs)} * 3,600 \text{ (sec/hour)} * \text{Spec Weight (lb/cf)} * \text{Spec Heat Capacity (BTU/lb}^{\circ}\text{F)} * \text{Temp } (^{\circ}\text{F)}}{10^6 \text{ (BTU/Million BTU)}}$$

Where: Q = cooling water flowrate across condensers
 Specific Weight of water ~ 62.4 lb/cf
 Specific Heat capacity of water = 1 BTU/lb*°F
 Temp = Temperature difference (Internal Outfall 01A Condenser Outlet – Internal Outfall 01A Condenser intake)

In the WLA modeling, the temperature difference was calculated using modeled intake and downstream temperatures in the equation above:

Results of Temperature Modeling

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | | |
|---|--|----------------------|---------------|
| | <i>Range of Streamflow (cfs)</i> | <i>August - June</i> | <i>July</i> |
| > 3751 | 95,794 | 95,794 | |
| 3501 - 3750 | 95,794 | 92,299 | |
| 3251 - 3500 | 95,794 | 85,709 | |
| 3001 - 3250 | 88,825 | 79,118 | |
| 2751 - 3000 | 81,426 | 72,527 | |
| 2501 - 2750 | 74,026 | 65,936 | |
| 2251 - 2500 | 66,626 | 59,345 | |
| 2001 - 2250 | 59,227 | 52,754 | |
| 1751 - 2000 | 51,827 | 44,794 | |
| 1501 - 1750 | 44,427 | 33,824 | |
| | <i>September - June</i> | <i>July</i> | <i>August</i> |
| 1251 - 1500 | 37,028 | 26,968 | 37,028 |

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits</u> <u>(MBTU/day)¹</u> | | |
|---|--|----------------------|-------------|
| | <i>Range of Streamflow (cfs)</i> | <i>August - June</i> | <i>July</i> |
| 1001 - 1250 | 29,628 | 18,740 | 28,339 |
| 751 - 1000 | 22,229 | 10,970 | 18,055 |
| 501 - 750 | 15,404 | 2,742 | 10,696 |

¹ MBTU = Million British Thermal Units, daily maximum

To allow for complete mixing of Plant Hammond’s cooling water discharge with the receiving stream, the facility’s instream temperature compliance point and boundary of the mixing zone is located ~3000 feet downstream of the discharge near the State Route 100 Bridge (River Mile 269.6). The upstream sampling location is river mile 270.5. For the heat loads given in the table above, the simulations predict that the maximum instream temperature will remain below 90°F at that location. The results also predict that the maximum temperature increase will remain below 5°F. As a result of comments received during the public notice period, EPD reevaluated applicable information and determined instream temperature limits will be retained from the current permit for outfall no. 01 at the edge of the mixing zone.

5.3 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.

The draft permit and associated fact sheet placed on public notice removed the 90°F and delta 5°F instream temperature limits at the edge of the mixing zone and replaced them with more stringent thermal limits based on stream flow and heat loading.

EPD does not believe the elimination of the temperature limits in the draft permit violates the CWA’s Anti-Backsliding Regulatory Provisions because more restrictive thermal loading effluent limits were been added to the draft permit to further restrict the discharge based on the river flow.

The water quality modeling performed to develop Plant Hammond’s wasteload allocation for the draft permit for temperature considered compliance with both the 90°F and 5°F criteria at the edge of the mixing zone, river mile 269.6. The Riv1 model indicates that the river, as a whole, will meet the temperature standards at river mile 269.6, based on permitting the facility at the recommended thermal limitations.

The temperature limits in the 2004 DO TMDL 2004 are based on minimum streamflow’s that are no longer agreed to. The new permit limits are based on new information including new minimum streamflows and water quality modeling.

The draft permit replaced the current instream temperature monitoring/limitation with effluent limitations, consistent with the NPDES requirements. The current permit only required instream temperature monitoring at the plant intake and river mile 269.6 downstream of the defined mixing zone to compute compliance with applicable water quality criteria using procedures contained in “Summary of Plant Hammond Coosa River – Weiss Reservoir Hydrothermal Analyses and Compliance Temperature Reporting Procedures.”

The NPDES permitting program prescribes the monitoring of plant effluent to determine permit compliance. Water quality models were used to determine allowable levels of discharge from the facility that will not cause or contribute to applicable water quality criteria in the receiving stream.

Additionally, the draft permit was transmitted to EPA Region IV in accordance with the 2007 Memorandum of Agreement, for review and comment. EPA did not have any comments regarding the removal of the temperature limits or concerns regarding anti-backsliding.

However, due to comments received, EPD has reevaluated applicable information and retained the 90⁰ F and delta 5⁰F temperature limits at the edge of the approved mixing zone.

6.0 REPORTING

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

Georgia Environmental Protection Division
Mountain District (Cartersville Office)
P.O. Box 3250
16 Center Road (30121)
Cartersville, Georgia 30120

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.

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

A public hearing for this facility is scheduled for Wednesday, April 12, 2017 at 7:00 p.m. at the E.C.O Center in Floyd County at 393 Riverside Parkway Rome, Georgia 30161.

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.

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

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).

(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; CO₂/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.

(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:

| 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 |

(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:

| 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 |

(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:

| 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 |
| 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:

| Pollutant or pollutant property | BPT effluent limitations | |
|--|-------------------------------------|-------------------------------------|
| | Maximum concentration (mg/l) | Average concentration (mg/l) |
| 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:

| Pollutant or pollutant property | BPT effluent limitations | |
|--|-------------------------------------|-------------------------------------|
| | Maximum concentration (mg/l) | Average concentration (mg/l) |
| 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:

| Pollutant or pollutant property | BPT effluent limitations |
|--|--|
| | Maximum concentration for any time (mg/l) |
| 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:

| Pollutant or pollutant property | BAT effluent limitations | |
|--|-------------------------------------|-------------------------------------|
| | Maximum concentration (mg/l) | Average concentration (mg/l) |
| 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:

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

¹No 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 |

(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.

(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)



- Rule 28 Revocation of Permits (Revised 07/18/72)
- Rule 29 Conditions on Permits (Revised 03/14/06)
- Rule 30 Permit Renewal (Revised 04/13/04)
- Rule 32 Breakdown Conditions: Emergency Variances, A., B.1., and D. only. (Revised 02/20/79)
- Rule 33 Part 70 Permits-General (Revised 04/12/11)
- Rule 33.1 Part 70 Permits—Definitions (Revised 04/12/11)
- Rule 33.2 Part 70 Permits—Application Contents (Revised 04/10/01)
- Rule 33.3 Part 70 Permits—Permit Content (Revised 09/12/06)
- Rule 33.4 Part 70 Permits—Operational Flexibility (Revised 04/10/01)
- Rule 33.5 Part 70 Permits—Timeframes for Applications, Review and Issuance (Adopted 10/12/93)
- Rule 33.6 Part 70 Permits—Permit Term and Permit Reissuance (Adopted 10/12/93)
- Rule 33.7 Part 70 Permits—Notification (Revised 04/10/01)
- Rule 33.8 Part 70 Permits—Reopening of Permits (Adopted 10/12/93)
- Rule 33.9 Part 70 Permits—Compliance Provisions (Revised 04/10/01)
- Rule 33.10 Part 70 Permits—General Part 70 Permits (Adopted 10/12/93)
- Rule 34 Acid Deposition Control (Adopted 03/14/95)
- Rule 35 Elective Emission Limits (Revised 04/12/11)
- Rule 36 New Source Review—Hazardous Air Pollutants (Adopted 10/06/98)
- Rule 42 Permit Fees (Revised 04/12/16)
- Rule 44 Exemption Evaluation Fee (Revised 04/08/08)
- Rule 45 Plan Fees (Adopted 06/19/90)
- Rule 45.2 Asbestos Removal Fees (Revised 08/04/92)
- Rule 47 Source Test, Emission Monitor, and Call-Back Fees (Adopted 06/22/99)
- Rule 50 Opacity (Revised 04/13/04)
- Rule 52 Particulate Matter—Concentration (Grain Loading)(Revised 04/13/04)
- Rule 53 Particulate Matter—Process Weight (Revised 04/13/04)
- Rule 54 Sulfur Compounds (Revised 01/14/14)
- Rule 56 Open Burning (Revised 11/11/03)
- Rule 57 Incinerators (Revised 01/11/05)
- Rule 57.1 Particulate Matter Emissions From Fuel Burning Equipment (Adopted 01/11/05)
- Rule 62.7 Asbestos-Demolition and Renovation (Adopted 06/16/92, Effective 09/01/92)
- Rule 63 Separation and Combination of Emissions (Revised 11/21/78)
- Rule 64 Sulfur Content of Fuels (Revised 04/13/99)
- Rule 68 Carbon Monoxide (Revised 04/13/04)
- Rule 71 Crude Oil and Reactive Organic Compound Liquids (Revised 12/13/94)
- Rule 71.1 Crude Oil Production and Separation (Revised 06/16/92)
- Rule 71.2 Storage of Reactive Organic Compound Liquids (Revised 09/26/89)
- Rule 71.3 Transfer of Reactive Organic Compound Liquids (Revised 06/16/92)
- Rule 71.4 Petroleum Sumps, Pits, Ponds, and Well Cellars (Revised 06/08/93)
- Rule 71.5 Glycol Dehydrators (Adopted 12/13/94)
- Rule 72 New Source Performance Standards (NSPS) (Revised 09/9/08)
- Rule 73 National Emission Standards for Hazardous Air Pollutants (NESHAPS) (Revised 09/9/08)
- Rule 74 Specific Source Standards (Adopted 07/06/76)
- Rule 74.1 Abrasive Blasting (Revised 11/12/91)
- Rule 74.2 Architectural Coatings (Revised 01/12/10)
- Rule 74.6 Surface Cleaning and Degreasing (Revised 11/11/03—effective 07/01/04)
- Rule 74.6.1 Batch Loaded Vapor Degreasers (Adopted 11/11/03—effective 07/01/04)
- Rule 74.7 Fugitive Emissions of Reactive Organic Compounds at Petroleum Refineries and Chemical Plants (Revised 10/10/95)
- Rule 74.8 Refinery Vacuum Producing Systems, Waste-Water Separators and Process Turnarounds (Revised 07/05/83)
- Rule 74.9 Stationary Internal Combustion Engines (Revised 11/08/05)
- Rule 74.10 Components at Crude Oil Production Facilities and Natural Gas Production and Processing Facilities (Revised 03/10/98)
- Rule 74.11 Natural Gas-Fired Residential Water Heaters—Control of NO_x (Revised 05/11/10)
- Rule 74.11.1 Large Water Heaters and Small Boilers (Revised 09/11/12)
- Rule 74.12 Surface Coating of Metal Parts and Products (Revised 04/08/08)
- Rule 74.15 Boilers, Steam Generators and Process Heaters (5 MMBTUs and greater) (Revised 11/08/94)
- Rule 74.15.1 Boilers, Steam Generators and Process Heaters (1 to 5 MMBTUs) (Revised 06/23/15)
- Rule 74.16 Oil Field Drilling Operations (Adopted 01/08/91)
- Rule 74.20 Adhesives and Sealants (Revised 09/11/12)
- Rule 74.23 Stationary Gas Turbines (Revised 1/08/02)
- Rule 74.24 Marine Coating Operations (Revised 09/11/12)
- Rule 74.24.1 Pleasure Craft Coating and Commercial Boatyard Operations (Revised 01/08/02)
- Rule 74.26 Crude Oil Storage Tank Degassing Operations (Adopted 11/08/94)
- Rule 74.27 Gasoline and ROC Liquid Storage Tank Degassing Operations (Adopted 11/08/94)
- Rule 74.28 Asphalt Roofing Operations (Adopted 05/10/94)
- Rule 74.30 Wood Products Coatings (Revised 06/27/06)
- Rule 74.31 Metal Working Fluids and Direct-Contact Lubricants (Adopted 11/12/13)
- Rule 75 Circumvention (Revised 11/27/78)
- Rule 101 Sampling and Testing Facilities (Revised 05/23/72)
- Rule 102 Source Tests (Revised 04/13/04)
- Rule 103 Continuous Monitoring Systems (Revised 02/09/99)
- Rule 154 Stage 1 Episode Actions (Adopted 09/17/91)
- Rule 155 Stage 2 Episode Actions (Adopted 09/17/91)
- Rule 156 Stage 3 Episode Actions (Adopted 09/17/91)
- Rule 158 Source Abatement Plans (Adopted 09/17/91)
- Rule 159 Traffic Abatement Procedures (Adopted 09/17/91)
- Rule 220 General Conformity (Adopted 05/09/95)
- Rule 230 Notice to Comply (Revised 9/9/08)
- * * * * *
- [FR Doc. 2017-19704 Filed 9-15-17; 8:45 am]
- BILLING CODE 6560-50-P**

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 423

[EPA-HQ-OW-2009-0819; FRL-9967-90-OW]

RIN 2040-AF76

Postponement of Certain Compliance Dates for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Under the Clean Water Act (“CWA”), The Environmental Protection Agency (EPA) intends to conduct a rulemaking to potentially revise certain best available technology economically achievable (“BAT”) effluent limitations and pretreatment standards for existing sources (“PSES”) for the steam electric power generating point source category, which were published in the **Federal Register** on November 3, 2015. EPA is, accordingly, postponing the associated compliance dates in the 2015 Rule. In particular, EPA is postponing the earliest compliance dates for the new, more stringent, BAT effluent limitations and PSES for flue gas desulfurization (“FGD”) wastewater and bottom ash transport water in the 2015 Rule for a period of two years. At this time, EPA does not intend to conduct a rulemaking that would potentially revise the new, more stringent BAT effluent limitations and pretreatment standards in the 2015 Rule for fly ash transport water, flue gas mercury control wastewater, and gasification wastewater, or any of the other requirements in the 2015 Rule. As such, EPA is not changing the compliance dates for the BAT limitations and PSES established by the 2015 Rule for these wastestreams. EPA’s action to postpone certain compliance dates in the 2015 Rule is intended to preserve the status quo for FGD wastewater and bottom ash transport

water until EPA completes its next rulemaking concerning those wastestreams, and it thus does not otherwise amend the effluent limitations guidelines and standards for the steam electric power generating point source category.

DATES: The final rule is effective September 18, 2017. In accordance with 40 CFR part 23, this regulation shall be considered issued for purposes of judicial review at 1 p.m. Eastern Standard Time on October 2, 2017. Under section 509(b)(1) of the CWA, judicial review of this regulation can be had only by filing a petition for review in the U.S. Court of Appeals within 120 days after the regulation is considered issued for purposes of judicial review. Under section 509(b)(2), the requirements in this regulation may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-OW-2009-0819. All documents in the docket are listed on the <https://www.regulations.gov> Web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <https://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Ronald Jordan, United States Environmental Protection Agency, Engineering and Analysis Division; telephone number: (202) 566-1003; email address: jordan.ronald@epa.gov. Electronic copies of this document and related materials are available on EPA's Web site at <https://www.epa.gov/eg/steam-electric-power-generatingeffluent-guidelines-2015-final-rule>. Copies of this final rule are also available at <http://www.regulations.gov>.

SUPPLEMENTARY INFORMATION:

I. Background

On November 3, 2015, the EPA published a final rule amending 40 CFR part 423, the effluent limitations guidelines and standards for the steam electric power generating point source category, under Sections 301, 304, 306, 307, 308, 402, and 501 of the CWA (33 U.S.C. 1311, 1314, 1316, 1317, 1318, 1342, and 1361). The amendments addressed limitations and standards on various wastestreams at steam electric power plants: FGD wastewater, bottom

ash transport water, fly ash transport water, flue gas mercury control wastewater, gasification wastewater, and combustion residual leachate. Collectively, this rulemaking is known as the "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," or "2015 Rule." For further information on the 2015 Rule, see 80 FR 67838 (November 3, 2015).

EPA received seven petitions for review of the 2015 Rule. The U.S. Judicial Panel on Multi-District Litigation issued an order on December 8, 2015, consolidating all of the petitions in the U.S. Court of Appeals for the Fifth Circuit, *Southwestern Electric Power Co., et al. v. EPA*, No. 15-60821.

In a letter dated March 24, 2017, the Utility Water Act Group ("UWAG")¹ submitted a petition for reconsideration of the 2015 Rule which requested that EPA suspend the Rule's approaching deadlines. UWAG supplemented its petition with additional information in a letter dated April 13, 2017. In a letter dated April 5, 2017, the Small Business Administration ("SBA") Office of Advocacy sent EPA a second petition for reconsideration of the 2015 Rule, which expressly supports UWAG's petition and raises issues that SBA considers to be pertinent to small businesses. The petitions raise wide-ranging objections to the Rule.² Among other things, the UWAG petition points to new data which they believe show that plants burning subbituminous and bituminous coal cannot comply with the 2015 Rule's limitations and standards for FGD wastewater and questions EPA's characterization of bottom ash transport water. UWAG also requested that EPA suspend or delay the "rule's fast-approaching compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current rule."

In an April 12, 2017 letter to those who submitted the reconsideration petitions, the Administrator announced his decision to reconsider the 2015 Rule. See DCN SE06612. As explained in that letter, after considering the objections raised in the reconsideration petitions, the Administrator determined that it is appropriate and in the public

¹ According to the petition, UWAG is a voluntary, ad hoc, unincorporated group of 163 individual energy companies and three national trade associations of energy companies: Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association.

² A copy of each petition and the supplemental information is included in the docket for this rule, Docket ID No. EPA-HQ-OW-2009-0819.

interest to reconsider the Rule. On April 14, 2017, EPA requested that the Fifth Circuit hold the case in abeyance while the Agency undertook reconsideration. On April 24, 2017, the Fifth Circuit granted the motion and placed the case in abeyance.

On June 6, 2017 (82 FR 26017), EPA proposed to postpone the compliance dates for the new, more stringent, BAT effluent limitations and PSES in the 2015 Rule for each of the following wastestreams: FGD wastewater, bottom ash transport water, fly ash transport water, flue gas mercury control wastewater, and gasification wastewater, while reconsideration of the 2015 Rule was underway. EPA explained that this postponement would preserve the regulatory status quo with respect to wastestreams subject to the 2015 Rule's new, and more stringent, limitations and standards during reconsideration and that postponement of compliance dates is intended to prevent the unnecessary expenditure of resources until EPA finalizes any rulemaking as a result of its reconsideration of the 2015 Rule. EPA also solicited comments on whether this postponement should be for a specified period of time, for example, two years.

On August 11, 2017, EPA sent a second letter to those who had requested reconsideration of the 2015 Rule, announcing the Administrator's decision to conduct a new rulemaking to potentially revise the new, more stringent BAT limitations and PSES in the 2015 Rule that apply to two wastestreams: FGD wastewater and bottom ash transport water. See DCN SE06670. On August 14, 2017, EPA filed a motion to govern further proceedings in the U.S. Court of Appeals for the Fifth Circuit, which explained that EPA intends to conduct further rulemaking to potentially revise the new, more stringent BAT/PSES requirements in the 2015 Rule applicable to FGD wastewater and bottom ash transport water, and requested, in part, that the Court sever and hold in abeyance all judicial proceedings concerning portions of the 2015 Rule related to those particular requirements. On August 22, 2017, the Court granted EPA's motion.

In an earlier action, EPA administratively postponed certain compliance dates that had not yet passed in part of the 2015 Rule pursuant to Section 705 of the Administrative Procedure Act ("APA"), 5 U.S.C. 705, which states that "[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it pending judicial review." 82 FR 19005 (April 25, 2017). EPA had postponed the compliance dates as a

temporary measure pursuant to Section 705 to preserve the status quo while the litigation in the Fifth Circuit was pending and EPA's reconsideration was underway. Because EPA has decided to conduct further rulemaking to potentially revise the new, more stringent BAT limitations and PSES in the 2015 Rule applicable to two specific wastestreams (FGD wastewater and bottom ash transport water), and it is today finalizing a rule which postpones the associated compliance dates in the 2015 Rule pending its next rulemaking, there is no longer any need for the Agency to maintain its prior action pursuant to Section 705 of the APA. EPA, hereby, withdraws that action.

II. Summary of Comments Received

EPA received thousands of written comments on the proposed rule to postpone certain compliance dates in the 2015 Rule. EPA also held a public hearing on July 31, 2017. The comments on the proposed rule generally fall into one of four categories: (1) Support for postponement of compliance dates; (2) opposition to the postponement of compliance dates; (3) comments on the substantive requirements of the 2015 Rule (which are outside the scope of this action, which concerns postponing certain compliance dates only); and (4) comments on the length of time that EPA should postpone the compliance dates.

Commenters that support the postponement rule generally assert that the postponement is appropriate to prevent industry from spending "unnecessary resources" until EPA completes its reconsideration of the 2015 Rule. Many commenters who support a postponement in compliance dates state that, given the substantial costs required to implement technology required to comply with the 2015 Rule, as well as the time needed for designing and optimizing treatment systems, certainty in the discharge requirements is needed and postponement of compliance dates allows for that. In addition, commenters argue that the Agency has both the authority and the responsibility to postpone the 2015 Rule until it completes any rulemaking following its reconsideration process.

Comments on the length of the postponement generally assert that EPA should postpone the compliance dates for a minimum of two years, until EPA has taken final action on any rule revisions, or some time period beyond when EPA has taken final action on any rule revisions.

Commenters that oppose the postponement rule generally assert that (1) the technology bases underlying the

2015 Rule are widely available and affordable now, many steam electric plants have already installed or are in the process of implementing these technologies, and postponing the compliance dates would hinder technology development; (2) any postponement allows power plants to continue to discharge pollutants that are harmful to public health and the environment, and the forgone public health and environmental benefits during any postponement outweigh the costs to industry; and (3) EPA lacks authority to postpone the compliance dates.

III. Rationale for Finalizing a Postponement of Compliance Dates

In light of new information not contained in the record for the 2015 Rule and the inherent discretion the Agency has to reconsider past policy decisions consistent with the CWA and other applicable law, EPA intends to conduct a new rulemaking regarding the appropriate technology bases and associated limits for the BAT/PSES requirements applicable to FGD wastewater and bottom ash transport water discharged from steam electric power plants. Given this, and after carefully considering comments received on the proposed rule, EPA finds it appropriate to postpone the earliest compliance dates for the new, more stringent, BAT effluent limitations and PSES applicable to FGD wastewater and bottom ash transport water in the 2015 Rule until it completes the new rulemaking. This maintains the 2015 Rule as a whole at this time, with the only change being to postpone specific compliance deadlines for two wastestreams. Thus, the earliest compliance dates for plants to meet the new, more stringent FGD wastewater and bottom ash wastewater limitations and standards in the 2015 Rule, which were to be determined by the permitting authority as a date "as soon as possible beginning November 1, 2018 . . .", are now to be determined by the permitting authority as a date "as soon as possible beginning November 1, 2020" EPA is not changing the "no later than" date of December 31, 2023, because EPA is not aware that the 2023 date is an immediate driver for expenditures by plants (petitioners had requested relief from the "fast-approaching compliance deadlines" in the 2015 Rule), and EPA plans to take up the appropriate compliance period in its next rulemaking. In order to be absolutely clear about what is being postponed, the final rule includes more precise regulatory text to implement the rule than was included in the proposed rule.

Agencies have inherent authority to reconsider past decisions and to revise, replace or repeal a decision to the extent permitted by law and supported by a reasoned explanation. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009); *Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 42 (1983). See also *Nat'l Ass'n of Home Builders v. EPA*, 682 F.3d 1032, 1038 & 1043 (D.C. Cir. 2012). Particularly relevant here, the CWA expressly authorizes EPA to revise effluent limitations and standards. 33 U.S.C. 1311(d), 1314(b), (g)(1), (m)(1)(A), 1317(b)(2). Moreover, in doing so, Section 304(b)(2)(B) of the CWA directs EPA to consider several factors, including "other factors as the Administrator deems appropriate," and the Agency is afforded considerable discretion in deciding how much weight to give each factor. See, e.g., *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1045 (D.C. Cir. 1978). In this case, where EPA has decided to undertake a new rulemaking, which may result in substantive changes to the 2015 Rule, that is an appropriate factor to consider and one that warrants the postponement of compliance dates for the new, more stringent BAT and PSES requirements for two wastestreams in the 2015 Rule, until such a rulemaking is complete (i.e., EPA issues any final rule that substantively revises the 2015 Rule or EPA decides not to issue such a final rule). This will prevent the potentially needless expenditure of resources during a rulemaking that may ultimately change the 2015 Rule in these respects.

As mentioned, some commenters stated that the record for the 2015 Rule demonstrates that the technologies underlying the new, more stringent requirements for FGD wastewater and bottom ash transport water are widely available and affordable. Notwithstanding statements in the 2015 Rule record, certain parties have raised serious concerns about the availability and affordability of the technology basis for the FGD wastewater and bottom ash transport water requirements in the 2015 Rule, and the Administrator wishes to take some time to carefully review these requirements in light of those concerns and ensure any such requirements are technologically available and economically achievable within the meaning of the statute. EPA has discretion in determining technological availability and economic achievability and is not constrained by the CWA to make the same policy decision as the former Administration, so long as its decision is reasonable. As explained above, the Agency may

reconsider past policy decisions consistent with the Clean Water Act and other applicable law. The Agency may also reconsider technical determinations in light of new information submitted to the Agency that was not in the record for the 2015 Rule. EPA intends to fully evaluate all of the issues raised in the petitions, including concerns about: Cost and impacts to steam electric facilities, public availability of information on which the rule is based, lack of data for plants that burn certain types of coal, and validity of certain pollutant data used in EPA's 2015 Rule analysis. For example, petitioners raised concerns about the numerical BAT limitations and PSES applicable to FGD wastewater in the 2015 Rule. They assert that there are differences among coal types that affect the performance and costs of biological treatment and that EPA did not have data to demonstrate the performance of biological treatment on all coal types. To resolve this concern, following the rulemaking, industry collected (and continues to collect) additional data on the performance of biological treatment for different coal types. As another example, petitioners raised questions about the inclusion and validity of certain data due, in part, to what they assert are flaws in data acceptance criteria, obsolete analytical methods, and the treatment of non-detect analytical results, which petitioners believed resulted in an overestimation of pollutant loadings for bottom ash transport water. EPA agrees that these are important issues that warrant further consideration in conjunction with the statutory factors for determining BAT for these wastestreams. EPA thus intends to re-evaluate these and other concerns raised in the petitions in the next rulemaking. EPA acknowledges that postponement of certain of the 2015 Rule's compliance dates may be disruptive to vendors and treatment technology suppliers. EPA, however, must also consider the substantial investments required by the steam electric power industry to comply with the BAT limitations and PSES,³ and that certainty regarding the limitations and standards deserves prominent consideration by the Agency when these limitations and standards may change. As UWAG pointed out in its April 13, 2017 letter, "a rule of this magnitude and complexity requires substantial time to come into compliance for multiple wastestreams. Detailed studies

³ In the 2015 Rule, EPA estimated the total annualized pre-tax compliance costs for the FGD and bottom ash requirements to be \$486.8 million. See DCN SE05978.

and planning, followed by large capital expenditures and subsequent installation and testing, are time-consuming." Companies have been evaluating their compliance options and are reaching the point at which they will be committing funds, incurring costs, or commencing construction to install technologies.

As part of the 2015 Rule, EPA estimated the costs associated with compliance with the 2015 Rule's new requirements. For all applicable wastestreams, EPA assessed the operations and treatment system components, identified equipment and process changes that the plant would likely make to meet the 2015 Rule, and estimated the cost to implement those changes. This includes, among other things, the capital costs of installing the technology (based on estimates of the level of control) and the operation and maintenance costs of operating the technology. See Technical Development Document ("TDD"), pp. 9-1 through 9-52. EPA estimated that the total post-tax annualized compliance costs would be \$339.6 million/year. See Regulatory Impact Analysis ("RIA"), Table 3-2 (Option D).⁴

The 2015 rulemaking record also describes evaluation of the initial capital costs that regulated parties would incur in the near term (if a stay were not in place) to meet the 2015 Rule's effluent limitations and standards. For the purpose of analysis, in the RIA, EPA assumed that all capital costs are incurred concurrently with technology installation according to discharge permit renewal schedules, but EPA realizes that feasibility studies and planning may need to be completed in advance of that date. Specifically, plants would incur engineering design costs, costs to acquire equipment, freight shipping costs to transport equipment from manufacturers to the installation site, costs for actions to prepare the site (such as installing concrete foundations and buildings for the new equipment), and construction expenses associated with connecting electrical and piping systems to new equipment. See TDD, p. 9-3. EPA estimated post-tax annualized capital costs of \$204.4 million/year. See RIA, Table 3-2 (Option D). Although there is a wide degree of variability among the costs particular plants would

⁴ EPA analyzed both pre-tax and post-tax costs. Pre-tax costs provide insight on the total expenditures as initially incurred by the plants. Post-tax costs are a more meaningful measure of compliance impact on privately owned for-profit plants, and incorporate approximate capital depreciation and other relevant tax treatments in the analysis. RIA, p. 3-6.

expend, EPA estimates that the average post-tax annualized capital compliance costs for a plant would be approximately \$1.5 million/year. See TDD, Table 9-19 (plants with compliance costs); RIA, Table 3-2 (Option D). To the extent that these costs are associated with the 2015 Rule requirements for FGD wastewater and bottom ash transport water, and in the event that EPA revises these requirements in a future rulemaking, these are costs that would be incurred for activities that ultimately might not be necessary. In that case, this would reflect costs incurred by facilities and potentially passed on to utility rate payers that ultimately did not need to be spent.

In light of these imminent planning and capital expenditures that facilities incurring costs under the 2015 Rule would need to undertake in order to meet the earliest compliance deadlines for the new, more stringent limitations and standards in the 2015 Rule, and the fact that the Agency is conducting a new rulemaking regarding the appropriate technology bases and associated limits for BAT limitations and PSES applicable to FGD wastewater and bottom ash transport water, the Agency views it as appropriate to postpone the earliest compliance dates that have not yet passed for these wastestreams in 2015 Rule. This will preserve the regulatory status quo with respect to requirements for FGD wastewater and bottom ash transport water until the new rulemaking is complete.

Some commenters also express concerns that postponement of compliance dates would hinder technology advancements. EPA's experience does not support this concern. The record for the 2015 Rule demonstrates that technology advancements were not hindered during that rulemaking. Rather, as explained in the preamble to the final 2015 Rule, vendors continued to improve existing technologies and to develop new technologies during the rulemaking leading up to the 2015 Rule.

EPA acknowledges that postponement of the compliance dates could lead to a delay in the accrual of some of the benefits attributable to the 2015 Rule. The 2015 Rule required that steam electric power plants would comply with the new, more stringent requirements no later than 2023, with plants expected to implement new control technologies over a five-year compliance period of 2019-2023 according to their permit renewal schedule. In the record for the 2015 Rule, EPA estimated the value of certain benefits linked to reduced pollutant

discharges that could be monetized for the period 2019 through 2042. Based on the 2015 Rule data and methodology, and depending on the inclusion of the Clean Power Plan, EPA estimates that foregone annualized benefits for a two-year delay would be between \$26.6 million and \$33.6 million.⁵ EPA similarly estimates that plants would experience annualized cost savings of between \$27.5 million and \$36.8 million as a result of a two-year delay. See DCN SE06668 for additional details, including calculations of the foregone benefits and cost savings. EPA understands that these estimates have uncertainty due to, for example, the possibility of unexpected implementation approaches, and thus that the actual cost savings could have been somewhat higher or lower than estimated. Similarly, due to data and analysis limitations, the foregone monetized benefits are likely underestimated. These estimates, however, are consistent with and reflect the best data and analysis available at the time of the 2015 Rule.

EPA notes that, as explained earlier, there is uncertainty as to the FGD wastewater and bottom ash transport water BAT/PSES requirements while EPA conducts a new rulemaking. If EPA did not postpone the compliance dates, industry would likely incur costs as it prepares to comply with the 2015 Rule, irrespective of what EPA ultimately determines to be BAT/PSES for FGD wastewater and bottom ash transport water. By contrast, under the 2015 Rule, even if permits were written today, the earliest those permits would have required compliance with the limitations and standards at issue are “as soon as possible beginning November 1, 2018.” So, while some companies would have to plan to comply and spend money right away, the benefits would not begin to accrue until 2018, at the earliest. Also, these benefits may not be lost if a permitting authority requires similar effluent limitations where necessary to meet applicable water quality standards, under CWA section 301(b)(1)(C). EPA has carefully weighed the concerns about potentially foregone benefits with the consideration of the costs that could needlessly be incurred should the requirements be changed, as well as the

overall uncertainty and potential confusion that would be caused by imposing the 2015 Rule requirements while simultaneously undertaking rulemaking that may change those requirements. On balance, EPA has concluded the more reasonable approach is to postpone the compliance dates in the 2015 Rule.

Thus, EPA agrees with commenters who argue that it should postpone the new, more stringent BAT/PSES requirements for FGD wastewater and bottom ash transport water in the 2015 Rule until it completes a new rulemaking on these wastestreams. After reflecting on the time it typically takes the Agency to propose and finalize revised effluent limitations guidelines and standards, and in light of the characteristics of this industry and the anticipated scope of the next rulemaking, EPA projects it will take approximately three years to propose and finalize a new rule (Fall 2020). See DCN SE06667. Consequently, EPA is postponing the earliest compliance dates for the new, more stringent, BAT effluent limitations and PSES for FGD wastewater and bottom ash transport water for a period of two years (November 1, 2020).⁶ To the extent that commenters believe a postponement under this rule should last beyond the time it takes EPA to complete its new rulemaking, such comments are appropriately considered as part of, and in light of, that new rulemaking and not this action. As explained, this rule is intended only as a relatively short-term measure until EPA completes the next rulemaking, and EPA anticipates that the next rulemaking will necessarily address compliance dates in some fashion. Although EPA proposed to postpone the compliance dates for the new, more stringent requirements applicable to fly ash transport water, gasification wastewater, and flue gas mercury control (FGMC) wastewater, in addition to the requirements for FGD wastewater and bottom ash transport water, this final rule does not postpone those former compliance dates. Commenters stated that EPA has no basis to postpone compliance dates for requirements that parties have not expressly argued should be reconsidered, such as those for fly ash transport water and FGMC wastewater. EPA agrees that the final rule should postpone only those requirements that the Agency plans to potentially revise in the next rulemaking. Because EPA is not

conducting a new rulemaking concerning any of the other issues addressed by the 2015 Rule, including requirements for fly ash transport water, gasification wastewater, and FGMC wastewater, EPA is not changing the compliance dates for these wastestreams or any of the other compliance dates for the requirements in that Rule. The record for the 2015 Rule demonstrates that changes associated with converting a fly ash system are unrelated from an engineering perspective to conversions/upgrades for bottom ash transport water and FGD treatment systems. Converting a fly ash system requires installing a silo to capture the dry fly ash, which is subsequently transported offsite to beneficial reuse markets (e.g., cement plants) or landfilled. Bottom ash is handled separately, regardless of whether it is wet or dry. The same is true for FGD wastes. EPA recognizes however, that from a financing and long-term planning perspective, there are advantages to a facility in knowing the full suite of requirements it will need to comply with over a longer term planning horizon.

Some facilities commented that they may need to know what the ultimate requirements will be for bottom ash transport water and FGD wastewater to assist them in considering alternatives for meeting the requirements for the other waste streams (fly ash transport water and FGMC wastewater) for which EPA is not postponing the earliest compliance dates. EPA notes that there continues to be discretion under the 2015 Rule for permitting authorities to consider: Time needed to “expeditiously plan (including time to raise capital), design, procure, and install equipment” to comply with the rule; changes being made at the plant to comply with several other rules; and “other factors as appropriate” in determining exactly when, within a specified compliance period, the 2015 Rule’s new, more stringent limitations apply to any given plant. See 40 CFR 423.11(t).

In light of the compliance date postponements being finalized today, in determining the “as soon as possible date,” EPA believes it would be reasonable for permitting authorities to consider the need for a facility to make integrated planning decisions regarding compliance with the requirements for all of the wastestreams currently subject to new, more stringent requirements in the 2015 Rule, as well as the other rules identified in § 423.11(t) to the extent that a facility demonstrates such a need. This could include harmonizing schedules to the extent provided for

⁵ The calculations are based on the benefits and costs estimated for the 2015 Rule, which were detailed in the “Benefit and Cost Analysis for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category” (BCA) and “Regulatory Impact Analysis for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category” (RIA) reports.

⁶ If EPA does not complete a new rulemaking by November, 2020, it plans to further postpone the compliance dates such that the earliest compliance date is not prior to completion of a new rulemaking.

under the 2015 Rule⁷ for meeting the 2015 Rule requirements for fly ash transport water and FGMC wastewater to allow time for a facility to have certainty regarding what their ultimate requirements will be under the steam electric ELGs, as well as the requirements under the other rules listed in § 423.11(t).

This rule is effective immediately upon publication. Section 553(d) of the Administrative Procedure Act, 5 U.S.C. 553(d), provides that publication of a substantive rule must be made no less than 30 days before its effective date, subject to several exceptions. Section 553(d)(1) establishes an exception for “a substantive rule which grants or recognizes an exemption or relieves a restriction.” The exception in Section 553(d)(1) reflects the purpose of the 30-day notice requirement, which is to give affected entities time to prepare for the effective date of a rule or to take any other action which the issuance of a rule may prompt. This rule fits within Section 553(d)(1) because it postpones certain requirements on steam electric power plants to control their pollutant discharges by two years, and as a result, it relieves a restriction on regulated entities for that period.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review; and, Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is considered an Executive Order 13771 deregulatory action. Details on the estimated cost savings of this final rule can be found in EPA’s analysis of the potential costs and benefits associated with this action.

C. Paperwork Reduction Act

This final rule does not involve any information collection activities subject to the PRA, 44 U.S.C. 3501 *et seq.*

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a

substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This action maintains the 2015 Rule as a whole at this time, with the only change being to postpone specific compliance deadlines for two wastestreams. As described above, EPA estimates that steam electric plants, including some small entities, would experience annualized cost savings of \$27.5 million as a result of this two-year delay. We have therefore concluded that this action will relieve regulatory burden for some directly regulated small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments.

F. Executive Order 13132: Federalism

This action does not have federalism implications, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000).

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This final rule is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because EPA previously determined that the environmental health risks or safety risks addressed by the requirements EPA is finalizing do not present a disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a “significant energy action” because it is not likely to have a significant adverse effect on the supply, distribution or use of energy.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards that would require Agency consideration under NTTAA section 12(d), 15 U.S.C. 272 note.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This is a final rule to delay action, and it does not change the requirements of the effluent limitations guidelines and standards published in 2015. While the postponement in compliance dates could delay the protection the 2015 Rule would afford to all communities, including those impacted disproportionately by the pollutants in certain wastewater discharges, this action would not change any impacts of the 2015 Rule upon implementation. The EPA therefore believes it is more appropriate to consider the impact on minority and low-income populations in the context of possible substantive changes as part of any future rulemaking.

L. Congressional Review Act

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 423

Environmental protection, Electric power generation, Power plants, Waste treatment and disposal, Water pollution control.

Dated: September 12, 2017.

E. Scott Pruitt,
Administrator.

For reasons stated in the preamble, EPA amends 40 CFR part 423 as set forth below:

PART 423—STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY

■ 1. The authority citation for part 423 continues to read as follows:

Authority: Secs. 101; 301; 304(b), (c), (e), and (g); 306; 307; 308 and 501, Clean Water Act (Federal Water Pollution Control Act

⁷ For any final effluent limitation that is specified to become applicable after November 1, 2018, the specified date must be as soon as possible, but in no case later than December 31, 2023.

Amendments of 1972, as amended; 33 U.S.C. 1251; 1311; 1314(b), (c), (e), and (g); 1316; 1317; 1318 and 1361).

■ 2. Amend § 423.11 by revising paragraph (t) introductory text to read as follows:

§ 423.11 Specialized definitions.

* * * * *

(t) The phrase “as soon as possible” means November 1, 2018 (except for purposes of § 423.13(g)(1)(i) and (k)(1)(i), and § 423.16(e) and (g), in which case it means November 1, 2020), unless the permitting authority establishes a later date, after receiving information from the discharger, which reflects a consideration of the following factors:

* * * * *

§ 423.13 [Amended]

■ 3. Amend § 423.13 paragraphs (g)(1)(i) and (k)(1)(i) by removing the text “November 1, 2018” and adding the text “November 1, 2020” in its place.

§ 423.16 [Amended]

■ 4. Amend § 423.16 paragraphs (e) two times, and (g) by removing the text “November 1, 2018” and adding the text “November 1, 2020” in its place.

[FR Doc. 2017-19821 Filed 9-15-17; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 635

[Docket No. 170602535-7835-01]

RIN 0648-XF480

Atlantic Highly Migratory Species; Adjustments to 2017 Northern Albacore Tuna Quota, 2017 North and South Atlantic Swordfish Quotas, and 2017 Atlantic Bluefin Tuna Reserve Category Quota

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary final rule.

SUMMARY: NMFS adjusts the northern albacore tuna annual baseline quota for 2017 with available underharvest of the 2016 adjusted U.S. northern albacore quota. NMFS also adjusts the North and South Atlantic swordfish baseline quotas for 2017 based on available underharvest from the 2016 adjusted U.S. quotas and international quota transfers. NMFS also augments the 2017

Atlantic bluefin tuna Reserve category quota with available underharvest of the 2016 adjusted U.S. bluefin tuna quota. This action is necessary to implement binding recommendations of the International Commission for the Conservation of Atlantic Tunas (ICCAT), as required by the Atlantic Tunas Convention Act (ATCA), and to achieve domestic management objectives under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

DATES: Effective September 18, 2017, through December 31, 2017.

ADDRESSES: Supporting documents such as Environmental Assessments and Fishery Management Plans and their Amendments described below may be downloaded from the HMS Web site at www.nmfs.noaa.gov/sfa/hms/. These documents also are available upon request from Sarah McLaughlin, Steve Durkee, or Gray Redding at the telephone numbers below.

FOR FURTHER INFORMATION CONTACT: Sarah McLaughlin, 978-281-9260, Steve Durkee, 202-670-6637, or Gray Redding, 301-427-8503.

SUPPLEMENTARY INFORMATION: Regulations implemented under the authority of the Atlantic Tunas Convention Act (ATCA; 16 U.S.C. 971 *et seq.*) and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 *et seq.*) governing the harvest of northern albacore, swordfish, and bluefin tuna by persons and vessels subject to U.S. jurisdiction are found at 50 CFR part 635. Section 635.27(e) describes the northern albacore annual quota recommended by ICCAT and the annual northern albacore quota adjustment process. Section 635.27(c) describes the quota adjustment process for both North and South Atlantic swordfish. Section 635.27(a) subdivides the ICCAT-recommended U.S. bluefin tuna quota among the various domestic fishing categories, per the allocations established in the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan (2006 Consolidated HMS FMP) (71 FR 58058, October 2, 2006), as amended by Amendment 7 to the 2006 Consolidated HMS FMP (Amendment 7) (79 FR 71510, December 2, 2014), and describes the annual bluefin tuna quota adjustment process. NMFS is required under ATCA and the Magnuson-Stevens Act to provide U.S. fishing vessels with a reasonable opportunity to harvest the ICCAT-recommended quotas.

The northern albacore quota implementation and quota adjustment processes, along with the bluefin tuna

quota adjustment process, were previously analyzed in Amendment 7, which published in August 2014 and included a Final Environmental Impact Statement, Final Regulatory Impact Review (RIR), Final Regulatory Flexibility Analysis (FRFA), and Final Social Impact Statement. ICCAT conducted another bluefin tuna stock assessment update in 2014, and, after considering the scientific advice in the stock assessment, adopted a recommendation regarding western Atlantic bluefin tuna management that increases the U.S. bluefin tuna quota for 2015 and 2016 (ICCAT Recommendation 14-05). NMFS published a final rule to implement that baseline annual U.S. bluefin tuna quota on August 28, 2015 (80 FR 52198), and prepared an Environmental Assessment (EA), RIR, and FRFA for that action. ICCAT Recommendation 16-08 extended the U.S. bluefin tuna allocation established in Recommendation 14-05 through 2017.

The North Atlantic swordfish quota adjustment process was previously analyzed in the EA, RIR, and FRFA that were prepared for the 2012 Swordfish Quota Adjustment Rule (July 31, 2012; 77 FR 45273). The South Atlantic swordfish quota adjustment process was previously analyzed in the EA, RIR, and FRFA that were prepared for the 2007 Swordfish Quota Specification Final Rule (October 5, 2007; 72 FR 56929). In the 2016 North and South Atlantic Swordfish Quotas Adjustment Final Rule (July 26, 2016, 81 FR 48719), after taking public comment on the issue, NMFS announced its intent to no longer issue proposed and final specifications/rules for North and South Atlantic swordfish quotas adjustments in cases where the quota adjustment follows previously codified and analyzed formulas. Therefore, beginning this year, NMFS is instead issuing a temporary final rule to adjust the quota, in a similar process to northern albacore and bluefin tuna quota adjustments. NMFS will continue to undertake notice and comment rulemaking when adopting new quotas, quota formulas, or otherwise altering conservation and management measures.

Note that weight information for northern albacore and bluefin tuna below is shown in metric tons (mt) whole weight (ww), and both dressed weight (dw) and ww is shown for swordfish.

Northern Albacore Annual Quota and Adjustment Process

Since 1998, ICCAT has adopted recommendations regarding the northern albacore fishery. The current

Appendix B – Water Quality Waste Load Allocation

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334
(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Memorandum

Date: June 10, 2016
To: Paul Lamarre
Through: Audra Dickson
From: Charles Nezianya
Subject: Waste Load Allocation (WLA) Request
Georgia Power Company Plant Hammond
NPDES Permit No. GA0001457
Floyd County, Coosa River Basin

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 01 | Lat/Long: 34.1502 / -85.2043 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): 264.12 | Maximum (Design) Flow (mgd): 670 |
| Summer Temperature (min & max): 87.98°F | Winter Temperature (min & max): 72.86°F |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|--|---|
| <input type="checkbox"/> BOD ₅ | <input type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input checked="" type="checkbox"/> Total Phosphorus | <input type="checkbox"/> TRC | <input checked="" type="checkbox"/> Temperature |

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
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(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Watershed Planning and Monitoring Program

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

- 7Q10 1162 cfs
- 1Q10 1162 cfs
- Mean Annual Stream Flow 6800 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 30 mg/L LCG

Note: 7Q10 and 1Q10 flows for Coosa River are based on USACE proposed Plan G operations of the ACT basin, as summarized in the May 2015 Record of Decision for Updates to the Master Water Control Manual for the Alabama - Coosa - Tallapoosa River Basin.

Georgia Department of Natural Resources

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(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|--|---|
| Outfall No.: 03 | Lat/Long: 34.1458 / -85.2115 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): Intermittent/Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): | Winter Temperature (min & max): |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|---|--------------------------------------|
| <input checked="" type="checkbox"/> BOD ₅ | <input checked="" type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input type="checkbox"/> Total Phosphorus | <input type="checkbox"/> TRC | <input type="checkbox"/> Temperature |

Watershed Planning and Monitoring Program

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

- 7Q10 1162 cfs
- 1Q10 1162 cfs
- Mean Annual Stream Flow 6800 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 30 mg/L LCG

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
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Richard E. Dunn, Director

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|--|---|
| Outfall No.: 04 | Lat/Long: 34.1501 / -85.2216 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): Intermittent/Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): | Winter Temperature (min & max): |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|---|--------------------------------------|
| <input checked="" type="checkbox"/> BOD ₅ | <input checked="" type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input type="checkbox"/> Total Phosphorus | <input type="checkbox"/> TRC | <input type="checkbox"/> Temperature |

Watershed Planning and Monitoring Program

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

- 7Q10 1163 cfs
 - 1Q10 1163 cfs
 - Mean Annual Stream Flow 6808 cfs
 - Receiving Stream Hardness 37 mg/L
 - Upstream TSS 30 mg/L
- LCG

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334
(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 05 | Lat/Long: 34.1458 / -85.2035 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): 2.2 | Maximum (Design) Flow (mgd): 2.2 |
| Summer Temperature (min & max): 81.32°F | Winter Temperature (min & max): 73.04°F |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|---|--------------------------------------|
| <input checked="" type="checkbox"/> BOD ₅ | <input checked="" type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input checked="" type="checkbox"/> Total Phosphorus | <input type="checkbox"/> TRC | <input type="checkbox"/> Temperature |

Watershed Planning and Monitoring Program

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

- 7Q10 1138 cfs
- 1Q10 1138 cfs
- Mean Annual Stream Flow 6793 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 30 mg/L

LCG

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Georgia Department of Natural Resources

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Richard E. Dunn, Director

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 10 | Lat/Long: 34.1538 / -85.2011 |
| Name of Receiving Waters: Smith Cabin Creek | River Basin: Coosa |
| Average Flow (mgd): Intermittent /Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): | Winter Temperature (min & max): |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|---|--------------------------------------|
| <input checked="" type="checkbox"/> BOD ₅ | <input checked="" type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input type="checkbox"/> Total Phosphorus | <input type="checkbox"/> TRC | <input type="checkbox"/> Temperature |

Watershed Planning and Monitoring Program

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

- 7Q10 3.2 cfs
- 1Q10 2.9 cfs
- Mean Annual Stream Flow 22 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 11 mg/L LCG

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.



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: September 26, 2016

To: Jeff Larson

Through: Elizabeth Booth *EB*

From: Josh Welte *JW*
Larry Guerra *LCG*

Subject: Wasteload Allocation
Georgia Power Company - Plant Hammond
Permit Reissuance GA0001457
Coosa River, Floyd County, WQMU 1490

Introduction

The State of Georgia's November 2015 *List of Priority Waters* includes a segment of the Coosa River from Beach Creek to the Alabama state line. Inclusion of this segment is based upon the 2012 303(d) listing for temperature. The cause of the temperature impairment is known, and this memorandum summarizes a Wasteload Allocation (WLA) that was developed specifically to address it. Reissuance of Georgia Power Company's National Pollutant Discharge Elimination System (NPDES) permit for Plant Hammond will serve as a direct to implementation alternative to address this water quality concern. This approach is documented in the Georgia Environmental Protection Division's (EPD) February 2015 *Draft Priority Framework Document*. This memorandum summarizes issues involved with this facility, the receiving water, the modeling methodology used, and other pertinent items.

Background and Relevant Issues

Georgia Power is currently permitted to discharge various process wastewater streams from Plant Hammond to the Coosa River. The current extended permit for the facility includes a general temperature limit for the cooling water discharge. This WLA is an attempt to accurately model and quantify appropriate thermal loading limits necessary to consistently meet water quality standards in the River.

Facility

Georgia Power's Plant Hammond is an 865-megawatt steam-electric power generating facility (SIC 4911) located on 1,100 acres in Floyd County. The plant includes four coal-fired generating units and utilizes a once-through condenser cooling system with a permit to withdraw up to 655 million gallons per day (MGD) of water from the Coosa River for its cooling needs. The majority of this water is then discharged back to the River ~750 feet downstream from the intake. Other wastewater discharges from the site include ash transport blowdown, noncontact cooling water, intake screen backwash, scrubber wastewater, low volume wastes, as well as various runoff streams and emergency overflows common to coal-fired power plants.

Receiving Water

Plant Hammond is located along the Coosa River ~15 miles downstream from the confluence of the Oostanaula and Etowah Rivers in Rome, Georgia, and ~15 miles upstream from the Alabama state line. This section of the River has designated uses of Fishing and Recreation. Stream flows are managed by the US Army Corps of Engineers through operational releases from Carter's and Allatoona Dams.

There are several NPDES-permitted facilities along the Coosa River near Plant Hammond. These include the City of Rome Coosa WPCP discharge (~5 miles upstream), as well as several Temple-Inland Paperboard intakes and discharges in the immediate vicinity of Plant Hammond.

305(b)/303(d) Listed Waters

The following information is taken from Georgia EPD's 2014 305(b)/303(d) list. The majority of Plant Hammond's wastewater streams, including the once-through condenser cooling water, are discharged to the stream segment identified below:

2014 Rivers/Streams Not Supporting Designated Uses

| Stream | Location | Water Use Classification | Criterion Violated | Potential Cause(s) | Actions to Alleviate | Miles | 305(b) | 303(d) | Priority |
|-------------|---------------------------------------|--------------------------|--|-----------------------------|--|-------|--------|--------|------------|
| Coosa River | Beach Creek to State Line (Floyd Co.) | Fishing, Recreation | Commercial Fishing Ban, Fish Consumption Guidance, (PCBs), Fecal Coliform, Dissolved Oxygen, Temperature | 11 and 12, Nonpoint Sources | PCBs have been banned for several years and concentrations are decreasing in the river ecosystem. A TMDL for DO was completed in 2004. Fecal TMDLs will be completed in 2016. Appropriate thermal limits at Plant Hammond will help to address temperature concerns. | 17 | X | X | 2015, 2018 |

Water Quality Standard

The State of Georgia's *Rules and Regulations for Water Quality Control, Section 391-3-6-.03* specify several numeric and narrative water quality standards for all waters of the State. The numeric standard for temperature in streams designated as Fishing and/or Recreation reads as follows:

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.

NPDES Permit Limits and Conditions

The table below lists the current permit limits for Plant Hammond's once-through cooling water discharge, identified as outfall 01A in the permit.

Current Permit Limits (Issued November 2007, Expired/Extended June 2012)

| <u>Constituent/Parameter</u> | <u>Permit Limits</u> |
|-------------------------------------|--|
| Effluent Flow (MGD) | — |
| Compliance Temperature (°F) | 90 ⁰ or 5 ⁰ above intake temp. |
| Total Residual Chlorine, TRC (mg/L) | 0.20 |
| TRC Time (minutes/day/unit) | 120 |

Waste Load Allocation Modeling

Modeling Approach

The water quality modeling done for this WLA used the EPDRiv1 hydrodynamic water quality model developed for the Coosa River Basin Modeling Project. The model includes the 4 upstream HUC 8 watersheds (Conasauga, Etowah, Oostanaula, and Coosawattee), as well as the portion of the Upper Coosa watershed to the Alabama state line. Hydrodynamic and time-varying water-quality modeling is necessary for this section of the River because of its hydrodynamic and water quality complexity, and the significance, magnitude, and costs of the regulatory decisions being addressed. The major components of the model include variable releases from Carter's and Allatoona Reservoirs/Dams and 36 upstream tributary watersheds, 11 mainstem wastewater treatment plant discharges, 11 municipal or private water withdrawals, and 2 electrical power generating facilities. The model was calibrated using intensive field study data collected in 2001, and recalibrated using data collected in 2005 and 2006.

The model was originally developed for the 2004 Total Maximum Daily Load (TMDL) Evaluation for Dissolved Oxygen (DO) in the Coosa River. The model utilized historical low flows, as well as the May 2003 *Alabama-Coosa-Tallapoosa Allocation Formula Agreement*, as the basis for the hydrodynamic inputs. However, due to the US Army Corps of Engineers recent record of decision to modify operations within the ACT basin, a different hydrodynamic approach was used for this modeling effort. The flow strategy, referred to as Plan G in the May 2015 *Record of Decision for Updates to the Master Water Control Manual for the Alabama-Coosa-Tallapoosa River Basin*, results in modified minimum stream flows at Mayo's Bar as illustrated below:

Monthly Critical Flows of the Coosa River at Mayo's Bar

| <u>Month</u> | <u>2004 Modeled Flow (cfs)</u> | <u>2016 Minimum Flow (cfs)</u> |
|--------------|--------------------------------|--------------------------------|
| January | 2217 | 2402 |
| February | 2701 | 2584 |
| March | 2874 | 3288 |
| April | 2623 | 2735 |
| May | 2212 | 2561 |
| June | 1924 | 2236 |
| July | 1500 | 1713 |
| August | 1500 | 1348 |
| September | 1500 | 1157 |
| October | 1500 | 1281 |
| November | 1500 | 1541 |
| December | 2075 | 2180 |

EPDRiv1 requires site-specific meteorological parameters to perform water quality simulations. These data include cloud cover, wind speed, barometric pressure, wet bulb temperature, and dry bulb temperature, and were obtained from a meteorological station in Rome, GA. In this modeling effort, three different meteorological input files were used, spanning the years 2001, 2005, and 2006. Simulations were run with these 3 inputs to provide variability and to assess the effects of various meteorological conditions on the modeling results.

Thermal loadings in EPDRiv1 are processed as a volumetric flow rate with a corresponding temperature component. Since Plant Hammond utilizes a once-through cooling system, this model utilized the average cooling water flowrate as specified by Georgia Power (548 MGD), along with a temperature that varied by month. In order to accurately identify Plant Hammond's thermal impact to the River, modeling simulations were run with zero heat load from Plant Hammond, as a baseline. This represents the intake temperature as defined in Georgia's *Rules and Regulations for Water Quality Control, Section 391-3-6-.03*. Monthly heat loads were then added to the model to evaluate the temperature effects attributable to Plant Hammond. The temperature difference between simulations (Heat Load – Baseline) represents the maximum allowable thermal loading that can be allocated to Plant Hammond's cooling water system and still meet temperature standards downstream.

Total Maximum Daily Load

The results of the 2004 DO TMDL showed that reductions in oxygen-demanding discharges (ODD), as well as a reduction in the heat load discharged from Plant Hammond during the critical summer period, were necessary to meet instream DO standards at the state line. The modeling methodology used the total heat content of the discharge, which includes the ambient heat of the intake stream. The maximum allowable heat loads allocated to Plant Hammond are outlined below:

2004 DO TMDL Modeled Heat Load Allocation

| <u>Month</u> | <u>Permit Limits (MBTU/day)¹</u> |
|--------------|---|
| June | 450,126 |
| July | 474,709 |
| August | 469,792 |
| September | 396,046 |

¹ MBTU = Million British Thermal Units, daily maximum

Plant Hammond Heat Load WLA Modeling Results

The table below lists the results of the temperature modeling conducted for this WLA. The modeling was done utilizing minimum flow conditions as well as flows greater than the minimum. This will allow for a hydrograph controlled release to accommodate increased operational flexibility for the facility while maintaining protection of the receiving stream. For simplicity, numeric brackets have been assigned to flows to generate a range under which given thermal limits can be applied.

The results are grouped by months and correspond to the maximum allowable thermal loading for a given range of flows. The modeling methodology used the total heat rejection from the facility, which is the heat added by Plant Hammond to the cooling water discharged to the River.

and is independent of the intake temperature. Modeling results predict that the temperature increase is the critical standard for most of the year, while in July the critical standard is the instream temperature.

In order to translate modeled temperatures into the thermal loads presented in the table below, the following equation was used:

$$\frac{Q \text{ (cfs)} * 86,400 \text{ (sec/day)} * \text{Spec Weight (lb/cf)} * \text{Spec Heat Capacity (BTU/lb}^{\circ}\text{F)} * \text{Temp (}^{\circ}\text{F)}}{10^6 \text{ (BTU/Million BTU)}}$$

Where: Q = cooling water flowrate
 Specific Weight of water = 62.4 lb/cf
 Specific Heat capacity of water = 1 BTU/lb*°F
 Temp = Temperature difference (Discharge - Intake)

In the WLA modeling, the temperature difference was calculated using modeled intake and downstream temperatures in the equation above.

Results of Temperature Modeling

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | |
|---|--|-------------------|
| | <i>August - June</i> | <i>July</i> |
| <i>Range of Streamflow (cfs)</i> | | |
| > 3751 | 95,794 | 95,794 |
| 3501 - 3750 | 95,794 | 92,299 |
| 3251 - 3500 | 95,794 | 85,709 |
| 3001 - 3250 | 88,825 | 79,118 |
| 2751 - 3000 | 81,426 | 72,527 |
| 2501 - 2750 | 74,026 | 65,936 |
| 2251 - 2500 | 66,626 | 59,345 |
| 2001 - 2250 | 59,227 | 52,754 |
| 1751 - 2000 | 51,827 | 44,794 |
| 1501 - 1750 | 44,427 | 33,824 |
| 1251 - 1500 | 37,028 | None ² |

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | |
|---|--|-------------------|
| | <i>August - June</i> | <i>July</i> |
| <i>Range of Streamflow (cfs)</i> | | |
| 1157 - 1250 | 34,246 | None ² |
| < 1157 | None ² | None ² |

¹ MBTU = Million British Thermal Units, daily maximum

² For streamflow below 1500 cfs during July, or 1157 cfs from August through June, thermal loading from Plant Hammond is not recommended

To allow for complete mixing of Plant Hammond's cooling water discharge with the receiving stream, the facility's instream temperature compliance point is located ~3000 feet downstream of the discharge near the State Route 100 Bridge (River Mile 269.6). For the heat loads given in the table above, the simulations predict that the maximum instream temperature will remain below 90°F at that location. The results also predict that the maximum temperature increase will remain below 5°F.

Recommended Permit Limits Methodology

Due to potential influence among the various intakes and discharges within close proximity to Plant Hammond, utilizing a measured intake temperature is not recommended as a means to determine permit compliance. The recommended permit limits should be reject heat that is either measured directly or calculated based on power generation.

In addition to the thermal limits contained in this WLA, it is recommended that monitoring of cooling water flowrate, intake temperature, and effluent temperature be included in the permit. Priority pollutant permit limits and aquatic toxicity testing requirements are to be determined by the Wastewater Regulatory Program.

Attachments: Waste Load Allocation Form

National Pollutant Discharge Elimination System Waste Load Allocation Form

Part I: Background Information

WLA Request Type: Reissuance Expansion Relocation New Discharge
 Facility Name: Georgia Power - Plant Hammond County: Floyd WQMU: 1490
 NPDES Permit No.: GA0001457 Expiration Date: Extended Outfall Number: 01A
 Receiving Water: Coosa River River Basin: Coosa 10-Digit HUC: 0315010502
 Discharge Type: Domestic Industrial Both Proportion (D.I): Flow(s) Requested (MGD): 548
 Industrial Contributions Type(s): Once-Through Condenser Cooling Water
 Treatment Process Description:
 Additional Information: (history, special conditions, other facilities): This WLA is for determining thermal limits.
 Requested by: Charles Nezianya Title: Env. Engineer Program: WRP
 Telephone: 404.232.1567 Date: 10 Jun 15

Part II: Receiving Water Information

Receiving Water: Coosa River Designated Use Classification: Fishing, Recreation
 Integrated 305(b)/303(d) List: Yes No Support: Not Support: Criteria: CFB and FCG (PCBs), DO, FC, Temp
 Total Maximum Daily Load: Yes No Parameter(s): CFB, FCG, DO WLA Complies with TMDL: Yes No

Part III: Water Quality Model Review Information

Model Type: Uncalibrated Calibrated Verified Cannot be Modeled Model Length (mi):
 Field Data: None Fair Good Excellent
 Model and Field Data Description: The hydrodynamic water quality model GAEPDRiv1 was used to develop this WLA. The model developed for the Coosa River system included 4 upstream watersheds (Conasauga, Etowah, Coosawattee, Oostanaula) plus the Upper Coosa to the state line.
 Critical Water Temperature (°C): Drainage Area (mi²): 4108 7Q10 streamflow at discharge (cfs): 1162
 7Q10 Yield (cfs/mi²): Velocity (range fps): 1Q10 streamflow at discharge (cfs): 1162
 Effluent Flow Rate (cfs): 848 7Q10 IWC (%): 42 Mean annual streamflow at discharge (cfs): 6800

Part IV: Recommended Permit Limitations and Conditions

Rationale: Same as current Revised New
 Location: Coosa River (Existing)

| Range of Streamflow (cfs) at Mayos Bar | Cooling Water Flow Rate (MGD) | Intake Temperature (°F) | Discharge Temperature (°F) | Heat Load (MBTU/day) ¹ | |
|--|-------------------------------|-------------------------|----------------------------|-----------------------------------|--------|
| | | | | August - June | July |
| >3751 | Monitor | Monitor | Monitor | 95,794 | 95,794 |
| 3501 - 3750 | Monitor | Monitor | Monitor | 95,794 | 92,299 |
| 3251 - 3500 | Monitor | Monitor | Monitor | 95,794 | 85,709 |
| 3001 - 3250 | Monitor | Monitor | Monitor | 88,825 | 79,118 |
| 2751 - 3000 | Monitor | Monitor | Monitor | 81,426 | 72,527 |
| 2501 - 2750 | Monitor | Monitor | Monitor | 74,026 | 66,936 |
| 2251 - 2500 | Monitor | Monitor | Monitor | 66,626 | 59,345 |
| 2001 - 2250 | Monitor | Monitor | Monitor | 59,227 | 52,754 |
| 1751 - 2000 | Monitor | Monitor | Monitor | 51,827 | 44,794 |
| 1501 - 1750 | Monitor | Monitor | Monitor | 44,427 | 33,824 |
| 1251 - 1500 | Monitor | Monitor | Monitor | 37,028 | - |
| 1157 - 1250 | Monitor | Monitor | Monitor | 34,246 | - |

Additional Comments:

¹MBTU = Million British Thermal Units, daily maximum

Priority pollutant permit limits and aquatic toxicity testing requirements are to be determined by WRP.

7Q10 and 1Q10 flows are based on USACE proposed Plan G operations of the ACT basin, as summarized in the May 2015 Record of Decision for Updates to the Master Water Control Manual for the Alabama-Coosa-Tallapoosa River Basin.

Prepared by: Larry Guerra LCG Date: 20.Sep.15 Reviewed by: Josh Welte JW Date: 21.SEP.15

Part V: Program Manager Comments

Elizabeth Booth

Elizabeth Booth

Date: 9/26/15



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: November 9, 2016

To: Jeff Larson

Through: Elizabeth Booth *EB*

From: Josh Welte *JW*
Larry Guerra *LCG*

Subject: Wasteload Allocation Amendment
Georgia Power Company - Plant Hammond
Permit Reissuance GA0001457
Coosa River, Floyd County, WQMU 1490

Introduction

Georgia EPD issued a Wasteload Allocation (WLA) for Georgia Power Company's National Pollutant Discharge Elimination System (NPDES) permit for Plant Hammond in September 2016. That WLA has now been modified based on new information and analysis. This memorandum will supplement the original WLA, summarize the changes made, the reasoning behind them, and other pertinent items.

Background and Relevant Issues

Modeling Approach

The water quality modeling done for this WLA used the EPDRiv1 hydrodynamic water quality model developed for the Coosa River Basin Modeling Project. The model utilized minimum stream flows at Mayo's Bar in accordance with US Army Corps of Engineers Plan G operational strategy developed for the Alabama-Coosa-Tallapoosa River Basin. However, actual gaged Coosa River flows during 2016 have been significantly lower than the monthly Plan G benchmarks. As such, it was determined that additional modeling at flowrates below the originally-assumed low flows was appropriate. The results of this additional modeling, which will serve to replace the corresponding sections of the original table contained in the September 2016 WLA, are illustrated below:

Results of Additional Temperature Modeling

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | | | |
|---|--|-------------------------|-------------|---------------|
| | <i>Range of Streamflow (cfs)</i> | <i>September - June</i> | <i>July</i> | <i>August</i> |
| | 1251 - 1500 | 37,028 | 26,968 | 37,028 |
| | 1001 - 1250 | 29,628 | 18,740 | 28,339 |
| | 751 - 1000 | 22,229 | 10,970 | 18,055 |

¹MBTU = Million British Thermal Units, daily maximum

Analysis of USGS flow data for the last 12 years has indicated that the average daily flow at Mayos Bar has been below the monthly Plan G target flow approximately 19% of the time. It has been below 1000 cfs approximately 2% of the time, and below 750 cfs only once. Therefore, the limitations listed in the table above, coupled with the limitations contained in the original September 2016 WLA, provide protective thermal limits for Plant Hammond's cooling water discharge over the full range of anticipated streamflows.

National Pollutant Discharge Elimination System Waste Load Allocation Form

Part I: Background Information

WLA Request Type: Reliance Expansion Relocation New Discharge
 Facility Name: **Georgia Power - Plant Hammond** County: **Floyd** WQAU: **1493**
 NPDES Permit No.: **GA0001437** Expiration Date: **Extended** Outlet Number: **01A**
 Receiving Water: **Cocosa River** River Basin: **Cocosa** 10-Digit HUC: **0315010502**
 Discharge Type: Domestic Industrial Path Proportion (D/I): **Flow(s) Requested (MGD): 548**
 Industrial Contribution Type(s): **Once-Through Condenser Cooling Water**
 Treatment Process Description:
 Additional Information (history, special conditions, other facilities): **This WLA is for determining thermal limits.**
 Requested by: **Charles Nezhlytsa** Title: **Env. Engineer** Program: **WRP**
 Telephone: **404.232.1567** Date: **10 Jun 18**

Part II: Receiving Water Information

Receiving Water: **Cocosa River** Designated Use Classification: **Fishing, Recreation**
 Integrated Nonpoint Source Act: **Yes** **No** Support: **Not Support** Criteria: **CFS and FCG (FCBs), DO, FC, Temp**
 Total Maximum Daily Load: **Yes** **No** Parameter(s): **CFS, FCG, DO** WLA Complies with TMDL: **Yes** **No**

Part III: Water Quality Model Review Information

Model Type: Uncalibrated Calibrated Verified Cannot be Modeled Model Length (mi):
 Field Data: None Fair Good Excellent
 Model and Field Data Description: **The hydrodynamic water quality model GAEPC/AVI was used to develop this WLA. The model developed for the Cocosa River system included 4 upstream watersheds (Donasassa, Etowah, Coosawatie, Oostanaula) plus the upper Cocosa to the state line.**
 Critical Water Temperature (°C): **20.0** Drainage Area (mi²): **4108** TQ10 streamflow at discharge (cfs): **1143**
 TQ10 Flow (cfs): **1143** Velocity (range f/s): **1.0** TQ10 streamflow at discharge (cfs): **1152**
 Effluent Flow Rate (cfs): **548** TQ10 WQC (%): **42** Mean annual streamflow at discharge (cfs): **6900**

Part IV: Recommended Permit Limitations and Conditions

Rationale: Same as current Revised New
 Location: **Cocosa River (Existing)**

| Range of Streamflow (cfs) at Meigs Bar | Cooling Water Flow Rate (MGD) | Intake Temperature (°F) | Discharge Temperature (°F) | Heat Load (MBTU/day) | |
|--|-------------------------------|-------------------------|----------------------------|----------------------|--------|
| | | | | August - June | July |
| >3751 | Monitor | Monitor | Monitor | 95,794 | 95,794 |
| 3401 - 3750 | Monitor | Monitor | Monitor | 95,794 | 92,299 |
| 3151 - 3400 | Monitor | Monitor | Monitor | 95,794 | 88,709 |
| 2901 - 3150 | Monitor | Monitor | Monitor | 93,825 | 79,119 |
| 2751 - 2900 | Monitor | Monitor | Monitor | 91,425 | 71,527 |
| 2501 - 2750 | Monitor | Monitor | Monitor | 74,325 | 63,936 |
| 2351 - 2500 | Monitor | Monitor | Monitor | 66,525 | 59,346 |
| 2201 - 2350 | Monitor | Monitor | Monitor | 59,227 | 52,754 |
| 1751 - 2200 | Monitor | Monitor | Monitor | 51,827 | 44,754 |
| 1501 - 1750 | Monitor | Monitor | Monitor | 44,427 | 35,824 |
| 1251 - 1500 | Monitor | Monitor | Monitor | 37,028 | - |
| 1157 - 1250 | Monitor | Monitor | Monitor | 34,248 | - |

Additional Comments:

*MBTU = Million British Thermal Units, daily maximum

Priority pollutant permit limits and aquatic toxicity testing requirements are to be determined by WRP.

TQ10 and TQ15 flows are based on USACE proposed Plan D operations of the ACT basin, as summarized in the May 2015 Record of Decision for Updates to the Meigs Water Control Manual for the Alabama-Cocosa-Tallapoosa River Basin.

Prepared by: **Larry Guerra** *LCG* Date: **20 Sep 18** Reviewed by: **Josh Wells** *JW* Date: **8/20/18**

Part V: Program Manager Comments

Elizabeth Booth

Elizabeth Booth

Date: **9/20/18**

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334
(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Memorandum

Date: October 7, 2016
To: Josh Welte
Through: Audra Dickson
From: Charles Nezianya
Subject: Waste Load Allocation (WLA) Request
Georgia Power Company Plant Hammond
NPDES Permit No. GA0001457
Floyd County, Coosa River Basin

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 01 | Lat/Long: 34.250556 / -85.345278 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): 264.12 | Maximum (Design) Flow (mgd): 670 |
| Summer Temperature (min & max): 87.98°F | Winter Temperature (min & max): 72.86°F |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- | | | |
|--|--|--|
| <input type="checkbox"/> BOD ₅ | <input type="checkbox"/> NH ₃ | <input type="checkbox"/> DO |
| <input checked="" type="checkbox"/> Total Phosphorus 1 mg/L based on P strategy | <input type="checkbox"/> TRC | <input checked="" type="checkbox"/> Temperature See temp. WLA |

Georgia Department of Natural Resources

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(404) 463-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Watershed Planning and Monitoring Program

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

- 7Q10 1088 cfs
- 1Q10 848 cfs
- Mean Annual Stream Flow 6201 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 30 mg/L

Georgia Department of Natural Resources

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Richard E. Dunn, Director

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|--|---|
| Outfall No.: 03 | Lat/Long: 34.249444 / -85.354167 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): Intermittent/Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): Ambient | Winter Temperature (min & max): Ambient |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- BOD₅ NH₃ DO
Ammonia limit not required. LCG
 Total Phosphorus TRC Temperature

Watershed Planning and Monitoring Program

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

- 7Q10 1088 cfs
 1Q10 848 cfs
 Mean Annual Stream Flow 6203 cfs
 Receiving Stream Hardness 37 mg/L
 Upstream TSS 30 mg/L

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334
(404) 483-1511; Fax (404) 656-2453
Richard E. Dunn, Director

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|--|---|
| Outfall No.: 04 | Lat/Long: 34.250278 / -85.371111 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): Intermittent/Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): Ambient | Winter Temperature (min & max): Ambient |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- BOD₅ NH₃ DO
Ammonia limit not required. LCG
- Total Phosphorus TRC Temperature

Watershed Planning and Monitoring Program

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

- 7Q10 1090 cfs
- 1Q10 849 cfs
- Mean Annual Stream Flow 6212 cfs
- Receiving Stream Hardness 37 mg/L
- Upstream TSS 30 mg/L

Georgia Department of Natural Resources

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Richard E. Dunn, Director

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 05 | Lat/Long: 34.249444 / -85.343056 |
| Name of Receiving Waters: Coosa | River Basin: Coosa |
| Average Flow (mgd): 2.2 | Maximum (Design) Flow (mgd): 2.2 |
| Summer Temperature (min & max): 81.32°F | Winter Temperature (min & max): 73.04°F |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- BOD₅ NH₃ DO
Ammonia limit not required. LCG
 Total Phosphorus TRC Temperature

Watershed Planning and Monitoring Program

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

- 7Q10 1087 cfs
 1Q10 847 cfs
 Mean Annual Stream Flow 6197 cfs
 Receiving Stream Hardness 37 mg/L
 Upstream TSS 30 mg/L

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Georgia Department of Natural Resources

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Richard E. Dunn, Director

Wastewater Regulatory Program: Permit Information (for each outfall)

(Duplicate this section for each outfall you need a WLA for)

| | |
|---|---|
| Outfall No.: 10 | Lat/Long: 34.260556 / -85.336389 |
| Name of Receiving Waters: Smith Cabin Creek | River Basin: Coosa |
| Average Flow (mgd): Intermittent /Emergency | Maximum (Design) Flow (mgd): Intermittent/Emergency |
| Summer Temperature (min & max): Ambient | Winter Temperature (min & max): 47.3°F |

Based on a review of the permit application, WRP is requesting a waste load allocation for water quality limits to meet in-stream Water Quality Standards for the following constituents.

- BOD₅ NH₃ DO
Ammonia limit not required. LCG
 Total Phosphorus TRC Temperature

Watershed Planning and Monitoring Program

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

- 7Q10 3.2 cfs
 1Q10 2.9 cfs
 Mean Annual Stream Flow 21 cfs
 Receiving Stream Hardness 37 mg/L
 Upstream TSS 11 mg/L

WLA request for the reissuance of the above referenced facility. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.



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: November 9, 2016

To: Jeff Larson

Through: Elizabeth Booth *EB*

From: Josh Welte *JW*
Larry Guerra *LCG*

Subject: Wasteload Allocation Amendment
Georgia Power Company - Plant Hammond
Permit Reissuance GA0001457
Coosa River, Floyd County, WQMU 1490

Introduction

Georgia EPD issued a Wasteload Allocation (WLA) for Georgia Power Company's National Pollutant Discharge Elimination System (NPDES) permit for Plant Hammond in September 2016. That WLA has now been modified based on new information and analysis. This memorandum will supplement the original WLA, summarize the changes made, the reasoning behind them, and other pertinent items.

Background and Relevant Issues

Modeling Approach

The water quality modeling done for this WLA used the EPDRiv1 hydrodynamic water quality model developed for the Coosa River Basin Modeling Project. The model utilized minimum stream flows at Mayo's Bar in accordance with US Army Corps of Engineers Plan G operational strategy developed for the Alabama-Coosa-Tallapoosa River Basin. However, actual gaged Coosa River flows during 2016 have been significantly lower than the monthly Plan G benchmarks. As such, it was determined that additional modeling at flowrates below the originally-assumed low flows was appropriate. The results of this additional modeling, which will serve to replace the corresponding sections of the original table contained in the September 2016 WLA, are illustrated below:

Results of Additional Temperature Modeling

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | | |
|---|--|-------------------------|-------------|
| | <i>Range of Streamflow (cfs)</i> | <i>September - June</i> | <i>July</i> |
| 1251 - 1500 | 37,028 | 26,968 | 37,028 |
| 1001 - 1250 | 29,628 | 18,740 | 28,339 |
| 751 - 1000 | 22,229 | 10,970 | 18,055 |

¹ MBTU = Million British Thermal Units, daily maximum

Analysis of USGS flow data for the last 12 years has indicated that the average daily flow at Mayos Bar has been below the monthly Plan G target flow approximately 19% of the time. It has been below 1000 cfs approximately 2% of the time, and below 750 cfs only once. Therefore, the limitations listed in the table above, coupled with the limitations contained in the original September 2016 WLA, provide protective thermal limits for Plant Hammond's cooling water discharge over the full range of anticipated streamflows.



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: Jeff Larson

Through: Elizabeth Booth *gab*

From: Josh Welte *JW*
 Larry Guerra *LCG*

Subject: Wasteload Allocation Amendment
 Georgia Power Company - Plant Hammond
 Permit Reissuance GA0001457
 Coosa River, Floyd County, WQMU 1490

Introduction

Georgia EPD issued Wasteload Allocations (WLA) for Georgia Power Company's National Pollutant Discharge Elimination System (NPDES) permit for Plant Hammond in September and November 2016. These WLAs have been amended to include new information and analysis as outlined below. This memorandum will supplement the original WLAs.

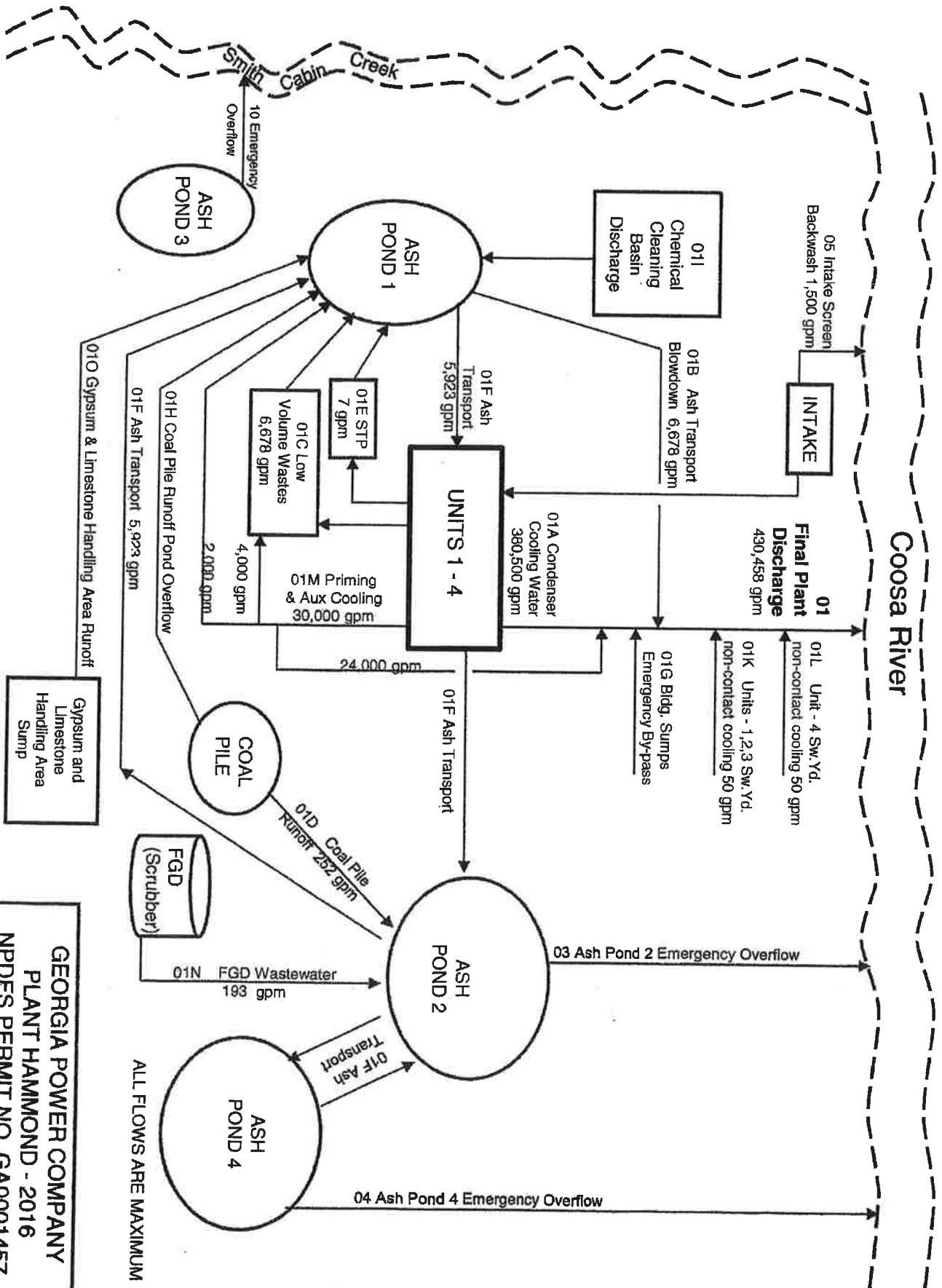
Background and Relevant Issues

Results of Additional Temperature Modeling

| <u>Flow at Mayos Bar USGS Gage 02397000</u> | <u>Recommended Thermal Limits (MBTU/day)¹</u> | | |
|---|--|-------------|---------------|
| <i>Range of Streamflow (cfs)</i> | <i>September - June</i> | <i>July</i> | <i>August</i> |
| 501 - 750 | 15,404 | 2,742 | 10,696 |

¹ MBTU = Million British Thermal Units, daily maximum

Appendix C – Process Flow Line Diagram



GEORGIA POWER COMPANY
 PLANT HAMMOND - 2016
 NPDES PERMIT NO. GA0001457

ALL FLOWS ARE MAXIMUM

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

Reasonable Potential Analysis for Freshwater

Permit Name: Plant Hammond - Outfall 01
NPDES Permit No.: GA0001457

Stream Data:

| | | |
|----------------------------|-------------|--------------------|
| Receiving stream Hardness: | 37 | mg/L |
| Upstream TSS: | 30 | mg/L |
| 7Q10: | 1,088.00 | ft ³ /s |
| | 703,143,936 | gal/day |
| 1Q10: | 848.00 | ft ³ /s |
| | 548,038,656 | gal/day |

Effluent Data:

| | | |
|--------------------------|-------------|---------|
| Flow: | 264,120,000 | gal/day |
| TSS: | 34.00 | mg/L |
| Instream TSS: | 31.09 | mg/L |
| Acute Dilution factor: | 3.07 | |
| Chronic Dilution factor: | 3.66 | |

Water Quality Criteria:

| | | |
|--------------------------------------|---------------|--------------------|
| Mean annual streamflow at discharge: | 6,201.00 | ft ³ /s |
| | 4,007,532,672 | gal/day |
| Dilution factor: | 16.173 | |
| IWC | 27.30588727 | |

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

Acute Water Quality Criteria (WQC_{Acute})

| Metal | K _{PD} | α | f _D | Maximum effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Acute} (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 | 0.77 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.00 | 252.38 | 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 | 5.27 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 2.3 | 0.11 | 21.55 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.00 | 1.40 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.0 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.22 | 12.2 | 0.9 | 50.47 | 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_{Chronic})

| Metal | K _{PD} | α | f _D | Average effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Chronic} (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 | 0.12 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.0 | 32.83 | 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 | 3.83 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 2.3 | 0.1 | 0.84 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.0 | 0.012 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.00 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.22 | 12.2 | 0.7 | 50.88 | no |
| Selenium | NA | NA | NA | 0.0 | 0.0 | 5.00 | no |

$$f_D = \frac{1}{1 + K_{PD} \times TSS_{Instream} (mg/L)^{1.10} \times 10^{-6}}$$

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

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

Total Recoverable Effluent Limit

| Metal | C _S (μg/L) | Chronic C _T (μg/L) | Chronic C _T (Kg/day) | Acute C _T (μg/L) | Acute C _T (Kg/day) |
|--------------|-----------------------|-------------------------------|---------------------------------|-----------------------------|-------------------------------|
| | | 30-Day Avg | 30-Day Avg | Daily Max | 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 | -- | -- |

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

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

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

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

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) 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: Plant Hammond - Outfall 03
NPDES Permit No. GA0001467

Stream Data:

Receiving stream Hardness: **37** mg/L
Upstream TSS: **30** mg/L
7Q10: **1,088.00** ft³/s
703,143,936 gal/day
1Q10: **848.00** ft³/s
548,038,656 gal/day

Effluent Data:

Flow: **22,000,000** gal/day
TSS: **43.90** mg/L
Instream TSS: 30.42 mg/L
Acute Dilution factor: 25.91
Chronic Dilution factor: 32.96

Water Quality Criteria:

Mean annual streamflow at discharge: **6,203.00** ft³/s
4,008,825,216 gal/day
Dilution factor: 183.219
IWC: 3.033880435

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

Acute Water Quality Criteria (WQC_{Acute})

| Metal | K _{PO} | α | f _D | Maximum effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Acute} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-----------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.45 | 9.8 | 0.17 | 340.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.281 | 1.2 | 0.01 | 0.77 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.00 | 252.38 | 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 | 5.27 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 3.4 | 0.02 | 21.55 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.00 | 1.40 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.32 | 54.5 | 0.7 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 1.5 | 50.47 | 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_{Chronic})

| Metal | K _{PO} | α | f _D | Average effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Chronic} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-------------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.45 | 9.8 | 0.1 | 150.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.000 | 0.0 | 0.0 | 0.12 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.0 | 32.83 | 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 | 0.0 | 0.0 | 3.83 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 3.4 | 0.0 | 0.84 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.0 | 0.012 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.32 | 54.50 | 0.5 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 1.2 | 50.88 | no |
| Selenium | NA | NA | NA | 33.8 | 1.0 | 5.00 | no |

$$f_D = \frac{i}{1 + K_{PO} \times TSS_{\text{Instream}} \text{ (mg/L)}^{1.40} \times 10^{-6}}$$

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

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

Total Recoverable Effluent Limit

| Metal | C _S (μg/L) | Chronic C _T (μg/L) 30-Day Avg | Chronic C _T (Kg/day) 30-Day Avg | Acute C _T (μg/L) Daily Max | Acute C _T (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 | -- | -- |

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

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

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

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

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) 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: Plant Hammond - Outfall 04
NPDES Permit No. GA0001457

Stream Data:

| | | |
|----------------------------|-------------|--------------------|
| Receiving stream Hardness: | 37 | mg/L |
| Upstream TSS: | 30 | mg/L |
| 7Q10: | 1,090.00 | ft ³ /s |
| | 704,436,480 | gal/day |
| 1Q10: | 849.00 | ft ³ /s |
| | 548,684,928 | gal/day |

Effluent Data:

| | | |
|--------------------------|------------|---------|
| Flow | 22,000,000 | gal/day |
| TSS | 43.90 | mg/L |
| Instream TSS: | 30.42 | mg/L |
| Acute Dilution factor: | 25.94 | |
| Chronic Dilution factor: | 33.02 | |

Water Quality Criteria:

| | | |
|--------------------------------------|---------------|--------------------|
| Mean annual streamflow at discharge: | 6,212.00 | ft ³ /s |
| | 4,014,641,664 | gal/day |
| Dilution factor: | 183.484 | |
| IWC | 3.02848227 | |

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

Acute Water Quality Criteria (WQC_{Acute})

| Metal | K _{PO} | α | f _D | Maximum effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Acute} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-----------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.45 | 9.8 | 0.17 | 340.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.281 | 1.2 | 0.01 | 0.77 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.00 | 252.38 | 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 | 5.27 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 3.4 | 0.02 | 21.55 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.00 | 1.40 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.0 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 1.5 | 50.47 | 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_{Chronic})

| Metal | K _{PO} | α | f _D | Average effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Chronic} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-------------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.45 | 9.8 | 0.1 | 150.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.281 | 1.2 | 0.0 | 0.12 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.0 | 32.83 | 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 | 3.83 | no |
| Lead | 2.80.E+06 | -0.800 | 0.15 | 3.4 | 0.0 | 0.84 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.0 | 0.012 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.00 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 1.2 | 50.88 | no |
| Selenium | NA | NA | NA | 33.8 | 1.0 | 5.00 | no |

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{instream} (mg/L)^{1.19} \times 10^{-6}}$$

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

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

Total Recoverable Effluent Limit

| Metal | C _S (μg/L) | Chronic C _T | Chronic C _T | Acute C _T | Acute C _T |
|--------------|-----------------------|------------------------|------------------------|----------------------|----------------------|
| | | (μg/L) | (Kg/day) | (μg/L) | (Kg/day) |
| | | 30-Day Avg | 30-Day Avg | Daily Max | 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 | -- | -- |

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

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

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

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

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) 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: Plant Hammond - Outfall 05
NPDES Permit No. GA0001457

Stream Data:

| | | |
|----------------------------|-------------|--------------------|
| Receiving stream Hardness: | 37 | mg/L |
| Upstream TSS: | 30 | mg/L |
| 7Q10: | 1,087.00 | ft ³ /s |
| | 702,497,664 | gal/day |
| 1Q10: | 847.00 | ft ³ /s |
| | 547,392,384 | gal/day |

Effluent Data:

| | | |
|--------------------------|-----------|---------|
| Flow | 2,160,000 | gal/day |
| TSS | 14.00 | mg/L |
| Instream TSS: | 29.95 | mg/L |
| Acute Dilution factor: | 254.42 | |
| Chronic Dilution factor: | 326.23 | |

Water Quality Criteria:

| | | |
|--------------------------------------|---------------|--------------------|
| Mean annual streamflow at discharge: | 6,197.00 | ft ³ /s |
| | 4,004,947,584 | gal/day |
| Dilution factor: | 1855.142 | |
| IWC | 0.306531825 | |

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

Acute Water Quality Criteria (WQC_{Acute})

| Metal | K _{PO} | α | f _D | Maximum effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Acute} (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 | 0.77 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.00 | 252.38 | 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 | 5.27 | no |
| Lead | 2.80.E+06 | -0.800 | 0.00 | 0.0 | 0.00 | 21.55 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.00 | 1.40 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.0 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.00 | 0.0 | 0.0 | 50.47 | 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_{Chronic})

| Metal | K _{PO} | α | f _D | Average effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Chronic} (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 | 0.12 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.0 | 32.83 | 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 | 3.83 | no |
| Lead | 2.80.E+06 | -0.800 | 0.00 | 0.0 | 0.0 | 0.84 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.0 | 0.012 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.00 | 0.00 | 0.0 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.00 | 0.0 | 0.0 | 50.88 | 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 _S (μg/L) | Chronic C _T | Chronic C _T | Acute C _T | Acute C _T |
|--------------|-----------------------|------------------------|------------------------|----------------------|-----------------------|
| | | (μg/L) 30-Day Avg | (Kg/day) 30-Day Avg | (μg/L) Daily Max | (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 | -- | -- |

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

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

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

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

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) 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: Plant Hammond - Outfall 10
NPDES Permit No. GA0001457

Stream Data:

| | | |
|----------------------------|-----------|--------------------|
| Receiving stream Hardness: | 37 | mg/L |
| Upstream TSS: | 11 | mg/L |
| 7Q10: | 3.20 | ft ³ /s |
| | 2,068,070 | gal/day |
| 1Q10: | 2.90 | ft ³ /s |
| | 1,874,189 | gal/day |

Effluent Data:

| | | |
|--------------------------|-----------|---------|
| Flow | 2,160,000 | gal/day |
| TSS | 43.90 | mg/L |
| Instream TSS: | 27.81 | mg/L |
| Acute Dilution factor: | 1.87 | |
| Chronic Dilution factor: | 1.96 | |

Water Quality Criteria:

| | | |
|--------------------------------------|-------------|--------------------|
| Mean annual streamflow at discharge: | 22.00 | ft ³ /s |
| | 14,217,984 | gal/day |
| Dilution factor: | 7.582 | |
| IWC | 51.08713422 | |

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

Acute Water Quality Criteria (WQC_{Acute})

| Metal | K _{PO} | α | f _D | Maximum effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Acute} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-----------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.46 | 9.8 | 2.40 | 340.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.279 | 1.2 | 0.18 | 0.77 | no |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.00 | 252.38 | 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 | 5.27 | no |
| Lead | 2.80.E+06 | -0.800 | 0.16 | 3.4 | 0.28 | 21.55 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.00 | 1.40 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.33 | 54.5 | 9.6 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 21.3 | 50.47 | no |

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

Chronic Water Quality Criteria (WQC_{Chronic})

| Metal | K _{PO} | α | f _D | Average effluent C _T (μg/L) | Instream C _D (μg/L) | WQC _{Chronic} (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-------------------------------|----------------|
| Arsenic | 4.80.E+05 | -0.729 | 0.46 | 9.8 | 2.3 | 150.00 | no |
| Cadmium | 4.00.E+06 | -1.131 | 0.279 | 1.2 | 0.2 | 0.12 | yes |
| Chromium III | 3.36.E+06 | -0.930 | 0.00 | 0.0 | 0.0 | 32.83 | 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 | 3.83 | no |
| Lead | 2.80.E+06 | -0.800 | 0.16 | 3.4 | 0.3 | 0.84 | no |
| Mercury | 2.91.E+06 | -1.136 | 0.35 | 0.0 | 0.0 | 0.012 | no |
| Nickel | 4.90.E+05 | -0.572 | 0.33 | 54.50 | 9.2 | 201.91 | no |
| Zinc | 1.25.E+06 | -0.704 | 0.23 | 173.0 | 20.3 | 50.88 | no |
| Selenium | NA | NA | NA | 33.8 | 17.3 | 5.00 | yes |

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{instream} (mg/L)^{1.14} \times 10^{-6}}$$

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

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

Total Recoverable Effluent Limit

| Metal | C _S (μg/L) | Chronic C _T (μg/L) 30-Day Avg | Chronic C _T (Kg/day) 30-Day Avg | Acute C _T (μg/L) Daily Max | Acute C _T (Kg/day) Daily Max |
|--------------|-----------------------|--|--|---------------------------------------|---|
| Arsenic | 0.0 | N/A | N/A | N/A | N/A |
| Cadmium | 0.0 | 0.87 | 0.007 | 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 | 9.79 | 0.080 | -- | -- |

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

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

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

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

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) 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.