GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Summary Page

Name of Facility GRP Franklin Renewable Energy Facility, LLC

NPDES Permit No. GA0039292

This permit is a reissuance of an extended NPDES permit for GRP Franklin Renewable Energy Facility, LLC. The facility discharges a maximum of 1.5 MGD of boiler blowdown, boiler feedwater, boiler area drainage, reverse osmosis reject water, steam turbine generator sump area drainage, cooling tower blowdown, and stormwater. This facility discharges to unnamed tributaries to Indian Creek (a tributary to Middle Fork Broad River) in the Savannah River Basin. The permit expired on September 30, 2020 and became administratively extended.

The permit was placed on public notice from December 16, 2020 to March 20, 2021. A Public hearing was held on March 9, 2021.

Please Note the Following Changes to the Proposed NPDES Permit from The Existing Permit

Part I.A.1. – Effluent Limitations and Monitoring Requirements

- ☐ Added total residual chlorine limit of 0.011 mg/L daily maximum after an 18-month compliance schedule based on the *Georgia Total Residual Chlorine (TRC) Strategy* (2010).
- ☐ Added total copper mass-based effluent limits of 0.019 lbs/day daily average, 0.025 lbs/day daily maximum and concentration based effluent limits of 0.009 mg/L daily average and 0.011 mg/L daily maximum after an 18-month compliance schedule based on the reasonable potential analysis.
- ☐ Added total mercury mass-based effluent limits of 0.00003 lbs/day daily average, 0.003 lbs/day daily maximum and concentration based effluent limits of 0.01 µg/L daily average and 1.41 µg/L daily maximum based on the reasonable potential analysis.
- ☐ Added total zinc mass-based effluent limits of 0.325 lbs/day daily average, 0.325 lbs/day daily maximum and concentration based effluent limits of 0.150 mg/L daily average and 0.150 mg/L daily maximum based on the reasonable potential analysis.
- ☐ Added chronic whole effluent toxicity testing requirement, in accordance with EPD's *Whole Effluent Toxicity (WET) Strategy* (2001).

GEORGIA
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ENVIRONMENTAL PROTECTION DIVISION

Summary Page

Part I.A.2. – Effluent Limitations and Monitoring Requirements

- ☐ Moved technology-based limits for cooling tower blowdown from 001 to internal outfall 001A to clarify sampling location.
- ☐ Revised FAC effluent limitation from 0.2 mg/L daily average to 1.0 mg/L daily average. The permittee has demonstrated the need for continuous chlorination of the service water system to maintain FAC between 0.5 mg/L and 1.0 mg/L in accordance with the manufacture's recommendation.
- ☐ Added clarification that Special Conditions apply to internal outfall 001A.

Part I.A.3. – Effluent Limitations and Monitoring Requirements

- ☐ Added a monthly average ammonia limit of 1.1 mg/L in accordance with EPD's *Ammonia Reasonable Potential Analysis Procedure for NPDES Permits* (2017).
- ☐ Added total cadmium mass-based effluent limits of 0.001 lbs/day daily average, 0.003 lbs/day daily maximum and concentration based effluent limits of 0.260 µg/L daily average and 1.35 µg/L daily maximum after an 18-month compliance schedule based on the reasonable potential analysis.
- ☐ Added total chromium mass-based effluent limits of 0.062 lbs/day daily average, 0.090 lbs/day daily maximum and concentration based effluent limits of 0.158 mg/L daily average and 0.230 mg/L daily maximum after an 18-month compliance schedule based on the reasonable potential analysis.
- ☐ Added total selenium mass-based effluent limits of 0.013 lbs/day daily average, 0.020 lbs/day daily maximum and concentration based effluent limits of 0.005 mg/L daily average and 0.008 mg/L daily maximum after an 18-month compliance schedule based on the reasonable potential analysis.
- ☐ Increased instream waste concentration for chronic whole effluent toxicity testing from 51% to 100% based on the reported effluent flow and the 7Q10 of the receiving waterbody.

Standard Conditions & Boilerplate Modifications

The permit boilerplate includes modified language or added language consistent with other NPDES permits.

Final Permit Determinations and Public Comments

☒ Final issued permit did not change from the draft permit placed on public notice.
☒ Public comments were received during public notice period.
☒ Public hearing was held on March 9, 2021.
☐ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions document(s)

Public Comments and EPD Responses on Draft NPDES Permit
GRP Franklin Renewable Energy Facility, LLC – Permit No. GA0039292

Table of Contents

Due to the volume of comments received and the number of topics covered in a comment, EPD has summarized and grouped comments together based on the topic.

Public Comments and EPD Responses on Draft NPDES Permit
GRP Franklin Renewable Energy Facility, LLC – Permit No. GA0039292

COMMENT RECEIVED	EPD RESPONSE
Permit Development	
1. I oppose the permit to dump this energy plant's wastewater out on the ground. I see it as comparable to my asking to run my household sewer out into the back yard, " as long as it runs downhill". There is no measure of impacts of said waste components' release. No description of a strategy for waste components' treatment for safe release. The inclusion of storm water bypasses ordinary state storm water engineering requirements, doesn't it? I can't see how they can avoid some kind of contained treatment prior to release, and if release is not feasible, then removal to a disposal area where water volume receiving the release can dilute contaminants to tolerable levels. 2. They want to dump their untreated wastewater and stormwater into Indian Creek. The waste contains numerous chemicals including chloroform, phosphorus and cyanide. This toxic waste will flow through our local streams, the Watson Mill State Park and the Savannah River Basin.	The draft permit is for the discharge of treated wastewater from the GRP Franklin facility to unnamed tributaries of Indian Creek in the Savannah River Basin. The two permitted outfalls (001 and 002) discharge from ponds designed for treatment and retention. A copy of the facility's wastewater treatment flow diagram can be viewed at: https://geos.epd.georgia.gov/GA/GEOS/Public/EnSuite/Shared/Pages/util/StreamDoc.ashx?id=98111&type=attachment GRP Franklin treats the wastewater via an oil/water separator, pH neutralization and aeration. The facility will also be installing and operating a clarifier to be used as needed for phosphorus control. Additionally, the permit includes an 18th month schedule in order to evaluate sources of copper and total residual chlorine, develop a plan for the reduction of these parameters, and if necessary, design, procure, and install treatment in order to comply with the permitted effluent limitations.
The argument in the permit that effluent limit guidelines do not apply to biomass is not convincing (Fact Sheet page 4). Biomass, put simply, is non-aged fossil fuel or fossil fuel in the making. Industrial effluent limit guidelines should apply to biomass.	At present there are no applicable federal Effluent Limit Guidelines (ELGs) for facilities engaged in the generation of power using an energy source such as biomass. Refer to US EPA's webpage for a list of the category of industries: https://www.epa.gov/eg/industrial-effluent-guidelines. Per EPA's *Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category* [EPA-821-R-15-007], "This rule does not apply to plants that use non-fossil fuel or non-nuclear fuel or other energy sources, such as biomass or solar thermal energy."

COMMENT RECEIVED	EPD RESPONSE
1. Depending on GRP to self test and self report is ridiculous especially months after the discharge occurs. 2. Chemical testing is every 18 months instead of every week instead of every day. GRP should be required to have a 3rd party test their quality.	The National Pollutant Discharge Elimination System (NPDES) Program relies on regular self-monitoring performed by the permitted facility to determine compliance with effluent limitations and/or other regulatory requirements. Part I.B.3. of the draft permit requires that US EPA-approved analytical methods listed at 40 C.F.R. 136 must be used. Part II.A.10. of the draft permit requires that the person in responsible charge of the laboratory performing the analysis 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. Part I.D.1. of the draft permit requires that all monitoring results obtained during a calendar month shall be summarized for each month and reported on the DMR which shall be submitted no later than 11:59 p.m. on the 15th day of the month following the sampling period. Part I.A.1 of the draft permit requires the flow, total suspended solids, total residual chlorine, total copper, total mercury, total phosphorus, temperature, delta temperature and pH to be sampled once per week. Oil and grease and total zinc must be sampled twice per month. The facility is also required to conduct two (2) whole effluent toxicity tests to ensure protection of the narrative instream water quality standard for toxicity.
Where is the environmental impact study?	Federal agencies prepare an Environmental Impact Statement (EIS) if a proposed major federal action is determined to significantly affect the quality of the human environment. As this permit reissuance is not a federal action, an EIS is not required. EPD prepared a draft permit which is protective of human health and the environment in accordance with the

COMMENT RECEIVED	EPD RESPONSE
	applicable federal (40 CFR 122, 125, 127, and 136) and state regulations (GA Water Quality Control Act, Chapter 391-3-6) for NPDES permits.
What chemicals are stored on site? How are the chemicals are stored? What amount of chemicals are discharged into ground water?	In accordance with the Emergency Planning and Community Right-to-Know Act of 1986, the facility submitted the following information regarding the storage of hazardous chemicals stored in quantities over 10,000 lbs and any extremely hazardous substances stored in quantities exceeding the specified total planning quantity (TPQ) or 500 lbs, whichever is less: Ammonia – stored in above ground tank Creosote fiber – outdoor storage pile Green sawdust/wood chips – outdoor storage pile Hydraulic oil – stored in above ground tank Additionally, the facility has a 350-gallon sulfuric acid tank which is in concrete containment, a 270-gallon used oil tank, also in concrete containment, and a 1000-gallon diesel tank which is double walled and under cover. The draft NPDES permit is for the discharge of treated wastewater to surface water (unnamed tributaries of Indian Creek) and does not authorize discharges to groundwater.
Nutrients	
1. Doesn't phosphorous cause toxic algae bloom? It already gets into the water via agriculture do we really need more being dumped into the streams.	The permitted outfalls discharge to tributaries of Indian Creek. There is no numeric water quality standard for phosphorus in Indian Creek or its tributaries.

COMMENT RECEIVED	EPD RESPONSE
2. The flow in the unnamed tributary is 99% from the facility's outfalls. Unfortunately, Indian Creek itself is not very large having only about three miles of upstream from the discharge point. So, there is very little dilution effect when the waste water flows into the stream. In this regard, I have calculated the flows that would be required in Indian Creek to dilute the phosphorus concentrations to maximum acceptable levels that would be assumed not to stimulate algal growth in bodies of water (0.1 mg/L). And, by the way, there are four lakes downstream of Indian Creek, Clarks Hill Lake, the pool behind Stephens Creek Dam, the pool behind the Augusta Canal Diversion Dam and the pool behind the New Savannah Bluffs Dam. In addition, there are algal blooms occasionally in the Broad River downstream of Indian Creek. In order for the phosphorus to be diluted to acceptable levels if the facility continues to generate it at the rate it has been, the flow in Indian Creek would have to average 10.7 ft^3/sec. Since the 7Q10 for Indian Creek is 0.00337 ft^3/sec, it is likely that Indian Creek reaches a flow of 10.7 ft^3/sec only rarely at the facility's discharge point. And that is to accommodate the current average discharge of phosphorus from the facility. To accommodate the maximal discharge of phosphorus would require a flow of 43.0 ft^3/sec in Indian Creek, a flow I would guess never happens at the facility's discharge point. Phosphorus and ammonia are a continuing problem in the Indian Creek watershed. A monitoring requirement for orthophosphate should be reinstated because phosphorus discharge is a significant problem at this facility and because there have been algal blooms in the Broad River where it is free flowing and because there are impoundments downstream and because there are over one million chickens living in the Indian Creek watershed and contributing to the phosphorus problem.	Where instream or lake numeric water quality standards for phosphorus have not been developed, EPD implements the *Strategy for Addressing Phosphorus in NPDES Permitting (2011*) (Strategy). The strategy requires that routine permit reissuances without expansion require phosphorus monitoring. Phosphorus monitoring has been included in the permit in accordance with the Strategy. Orthophosphate monitoring for outfall 002 has been retained to ensure sufficient data has been collected for this parameter. The previous permit included monitoring for orthophosphate, however, because the facility did not begin reporting discharges until September 2019, a full permit term of data has not yet been collected at this facility. The facility treats the wastewater via an oil/water separator, pH neutralization and aeration. GRP Franklin will also be installing and operating a clarifier to be used as needed for phosphorus control.

COMMENT RECEIVED	EPD RESPONSE
3. To solve the phosphorus, ammonia, and BOD problems, I suggest that GRP create a wetland between its outfalls (001 and 002) and Indian Creek. With appropriate plantings, the plants would absorb the excess phosphorus, ammonia, metals and BOD and could be harvested regularly to remove the excess nutrients and metals from the site. 4. I suggest incorporation of fungi to decompose wastewater toxins of the Madison/Franklin County biomass facilities prior to disposal.	
Permit Compliance	
Both GRP Franklin and GRP Madison power plants have both had environmental permit violations.	This response to comments pertains to the reissuance of NPDES Permit GA0039292 for GRP Franklin. Comments regarding the GRP Madison facility will be addressed separately in the permit record for draft NPDES permit number GA0050283.
1. Water pollution resulting in dead fish, discolored, unusable water has already occurred in Franklin County. 2. The Fact Section of the Draft Permit, Section 3.1, Receiving Waterbody Classification and Information Designated Water Use, says "The designated water use for Indian Creek is fishing". An Enforcement Order EPD-WP-8973 was issued on 9/8/2020 to GRP-Franklin for runoff from the wood chip fuel pile into a tributary of Indian Creek producing significant water quality changes that were potentially lethal to aquatic life and resulted in a fish kill. GRP was fined $48,107. GRP should not be permitted to dump polluted wastewater into Indian Creek.	Comments regarding air pollution control or noise should be reported to the EPD Air Protection Branch Stationary Source Compliance Office at 404-363-7000, as they are outside of the scope of the NPDES permitting process. Per Consent Order EPD-WP-8973, issued by EPD on September 8, 2020, between October 3, 2019 and October 5, 2019, GRP Franklin sprayed water estimated to be 1.14 million gallons on their wood chip fuel pile, which the facility alleged was necessary to suppress active combustion. Consent Order EPD-WP-8973 also indicates that on October 5, 2019 the Wildlife Resources Division (WRD) of the Georgia Department of Natural Resources was notified of a potential fish kill in Indian Creek and on October 5, 2019 a representative of the WRD visited the location of

COMMENT RECEIVED	EPD RESPONSE
3. EPD gave GRP a permit to release wastewater and shortly thereafter they allowed the overflow of waste into Indian Creek causing a massive fish kill. Now they are asking for permission to put untreated waste into Indian Creek. 4. GRP does not have to pay any substantial money or pay any fine to allow for any clean up or the harm done once the water and our lives are destroyed. GRP needs further oversight by the EPD including penalties and stipulations. 5. The chemical odors from the burning are making us sick. 6. We are already receiving a lot of noise, water and air pollution from the plant.	the potential fish kill in Indian Creek and confirmed the presence of a fish kill. On October 9, 2019 the WRD issued the report *Fish Kill Investigation, Indian Creek, Franklin County, Broad River Drainage* stating that a fish-kill event occurred in 4.6 miles of Indian Creek Investigation by significant water quality changes potentially lethal to fish in the creek associated with run-off from a smoldering wood pile at chip fuel pile at the facility. The Notice of Violation (NOV) sent by EPD to GRP Franklin on December 9, 2019 indicated that the runoff from the fire suppression activities entered an unnamed tributary to Indian Creek through two stormwater basins (Basin A and Basin C) on October 5, 2019 through October 6, 2029. Basin A and C are settling basins which discharge through Outfall 001 and 002 respectively. The NOV also indicated that according to the facility, during the incident the skimmers installed in two of the facility's stormwater basins (Basin A and Basin C) were not operating as intended. Consent Order EPD-WP-8973 alleged that runoff on October 5, 2019 from the wood chip fuel pile passed through GRP Franklin's settling basins produced significant water quality changes that were potentially lethal to aquatic life and resulted in a fish kill which interfered with the legitimate use of the water. The Consent Order also alleged permit violations including: the submittal of inaccurate information on the October 2019 discharge monitoring report, the late submittal of a discharge monitoring report, effluent limit violations at outfall 001 and 002 in 2019 and 2020, and the failure to monitor BOD in May 2020. The Consent Order carried a penalty of $48,107 for the documented violations. It also required GRP Franklin to submit a standard operating

COMMENT RECEIVED	EPD RESPONSE
	procedure for monitoring wood pile runoff and a corrective action plan to address the alleged effluent limit violations. GRP Franklin must continue to adhere to the standard operating procedure for monitoring wood pile runoff and the approved corrective action plan. EPD added effluent limitations for total residual chlorine, total copper, total mercury and total zinc to ensure that the wastewater discharge is protective of Georgia's instream water quality standards. Additionally, EPD has added a requirement to complete two whole effluent toxicity tests during the permit term to verify the wastewater discharge does not cause or contribute to a potential violation of the Georgia's narrative instream water quality criteria for toxicity.
1. There is historical evidence with the GA EPD that these facilities should not receive their proposed wastewater permits. 2. I do not support the NPDES Permit. 3. I request that EPD reject the permit application.	EPD is responsible for issuing protective, legal, and enforceable permits in accordance with the applicable regulations. An analysis was conducted on the pollutant data submitted with the permit renewal application along with other supporting documents and appropriate effluent limits and permit conditions have been included to ensure there the discharge, as permitted, will not cause or contribute to an instream water quality violation. The permit has more stringent permit requirements and effluent limits than the previously issued permit, providing a permit that is protective of human health and the environment.
Wastewater Treatment and Alternatives	
1. Both of these GRP facilities were incorrectly engineered and assembled for convenience instead of following proper engineering	The facility is required to install wastewater technology to achieve compliance with the permit. The facility treats the wastewater via an oil/water separator, pH neutralization and aeration. GRP Franklin will

COMMENT RECEIVED	EPD RESPONSE
protocols in their industry, such as having insignificantly sized retention ponds for their large-scale operations. 2. The wastewater treatment method they are using and have applied for with this reissuance permit application is not the best or only option available to GRP. 3. GRP should be required to pretreat and transport their wastewater to a qualified wastewater treatment facility for further treatment prior to discharge. 4. GRP should have invested in a water treatment process before building the power plant. If GRP does not want to invest in water treatment, GRP should continue to transport the dirty water to water treatment plants in the area.	also be installing and operating a clarifier to be used as needed for phosphorus control. Additionally, Part III.B of the permit includes a compliance schedule to evaluate sources of copper and total residual chlorine, develop a plan for the reduction of these parameters, and if necessary design, procure, and install treatment in order to comply with the permitted effluent limitations.
Public Health and Recreation	
1. Please don't allow this permit to move forward as it will literally poison our children, families, and farms, in schools, homes, and businesses which all rely on local drinking water sources. 2. We use the rivers and streams for drinking water and recreation. GRP should not be allowed to dump industrial wastewater containing cyanide, chloroform, phosphorous, ammonia, oil and grease, arsenic, selenium, copper, lead, cadmium, chromium, phosphorous, organic nitrogen, chlorine, ortho-phosphates in any amounts into Indian Creek, then on to the Middle Fork of the Broad River, the Broad River, and the Savannah River Basin.	Comments regarding air pollution control or noise should be reported to the EPD Air Protection Branch Stationary Source Compliance Office at 404-363-7000, as they are outside of the scope of the NPDES permitting process. Indian Creek is designated as “fishing”. Based on EPD’s review, there are no surface water intake structures used for drinking water within 10 miles downstream of the GRP Franklin discharges. Based on information provided by the facility, there are no proposed discharges to groundwater, therefore the requirements of the Safe Drinking Water act are not applicable to the permitted discharges from

COMMENT RECEIVED	EPD RESPONSE
3. The majority of properties in the Broad River drainage use well water. There is a risk of contamination of agriculture, drinking water, and recreation. Why doesn't GRP have the responsibility to monitor well water for my neighbors who live very close downstream on Culpepper road? 4. Many residences rely on wells or water coming from wells. 5. The water should be treated and be as clean as drinking water before discharge. 6. Are harmful chemicals acceptable in drinking water? In water for pets? In water for livestock? 7. This will be an environmental and public health tragedy larger than the Flint Water Crisis. 8. The harmful chemicals and poisons mentioned in the permit are devastating to the quality of the water and the water table in the stream and further downstream. 9. We know the approximately 200,000 gallons of waste water from this plant would contain chloroform, phosphorus and cyanide to name only three hazardous materials dangerous to health. 10. Would it be possible that this waste would contaminate Beaver Dam Lake Reservoir or some of its tributaries such as Long Branch Creek? Will it kill the fish that are living in those streams ? Will it possibly affect all the wildlife that visit those streams to get water to drink? 11. The chemical odors from the burning are making us sick.	this facility and the facility is not required to treat the generated wastewater to the drinking water standards. EPD evaluated the submitted permit application and supporting documentation and proposed a permit with appropriate effluent limitations based on applicable federal (40 CFR 122, 125, 127, and 136) and state regulations (GA Water Quality Control Act, Chapter 391-3-6) and the reasonable potential analysis conducted on the pollutants of concern identified in the permit application. The limitations and conditions in the permit are included to ensure the permit is protective of human health and the environment.

Public Comments and EPD Responses on Draft NPDES Permit
GRP Franklin Renewable Energy Facility, LLC – Permit No. GA0039292

COMMENT RECEIVED	EPD RESPONSE
Request for Additional Time for Comment	
1. In January, two EPD officials, one being Karen Haas' assistant deputy director, told Franklin County Commissioners and the attending public that a public meeting in Franklin County not just post it in the paper since there had been so many problems with the GRP facility. 2. The timing of this announcement to allow citizens to voice their opinions to be ready with research to discuss issues in a public meeting is simply overwhelming as folks are struggling to deal with severe illness, fatigue from overworking, stress with a faltering economy-jobs, dealing with children and schooling, and even the current political chaos at the capital/concerns for overspill in our state. 3. Please allow us another 30 days review as you've granted to Madison County.	The public comment period for the draft permit was open for a total of 87 calendar days. The initial public notice for the draft permit was posted on EPD's website and was sent to subscribers of the EPD Watershed Protection Branch – Permit Related Notices mailing list (mailing list) on December 16, 2020. It was also posted in the Franklin County Citizen Leader on December 17, 2020 and in the Franklin County Courthouse on December 17, 2020. A public hearing was later request and an additional 30 day public notice for the draft permit and public hearing was posted on EPD's website and sent to the mailing list on January 15, 2021. It was posted in the Franklin County Citizen Leader on January 21, 2021 and was posted in the Franklin County Courthouse on January 15, 2021. EPD accepted public comments until March 12, 2021.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Revisions to Draft Permit

Name of Facility GRP Franklin Renewable Energy Facility, LLC

NPDES Permit No. GA0039292

Were there any revisions between the draft proposed NPDES permit placed on public notice and the final proposed NPDES permit? If yes, specify: ☒ Yes ☐ No

Part I.A.3. Added monitoring for orthophosphate, as P.

The permittee has been made aware of these changes

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Revisions to Draft Fact Sheet

Name of Facility GRP Franklin Renewable Energy Facility, LLC

NPDES Permit No. GA0039292

Were there any revisions between the draft proposed NPDES permit fact sheet placed on public notice and the final proposed NPDES permit fact sheet? If yes, specify:

☒ Yes ☐ No

Section 4.4 Added language:

Orthophosphate monitoring has been retained to ensure sufficient data has been collected for this parameter. The previous permit included monitoring for orthophosphate, however, because the facility did not begin reporting discharges until September 2019, a full permit term of data has not yet been collected at this facility.

The permittee has been made aware of these changes

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

Mr. Carey Davis
GRP Franklin Renewable Energy Facility, LLC
2100 Southbridge Parkway, Suite 540
Birmingham, Alabama 35209

09/24/2021

RE: Permit Issuance
GRP Franklin Renewable Energy Facility, LLC
NPDES Permit GA0039292
Franklin County, Savannah River Basin

Dear Mr. Davis:

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

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

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

Please be advised that on and after the effective date indicated in the permit, the permittee must comply with all terms, conditions, and limitations of the permit. If you have questions concerning this correspondence, please contact Whitney Fenwick at 404.656.2795 or *whitney.fenwick@dnr.ga.gov*.

Sincerely,

Richard E. Dunn

RED:wf
Enclosure(s)

CC: EPD Watershed Compliance Program – Shiva Hemati (E-mail)
EPD Watershed Planning and Monitoring Program, Mr. Josh Welte (e-mail)
EPD Watershed Planning and Monitoring Program, Mr. Tyler Parsons (e-mail)

Permit No. GA0039292
Issuance Date: 09/24/2021

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,

GRP Franklin Renewable Energy Facility, LLC
2100 Southbridge Parkway, Suite 540
Birmingham, Alabama 35209

is issued a permit to discharge from a facility located at

GRP Franklin Renewable Energy Facility, LLC
3465 Highway 198
Carnesville, Georgia 30521
Franklin County

to receiving waters

Unnamed tributaries of Indian Creek (a tributary to Middle Fork Broad River) in the Savannah 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 November 25, 2020, 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 October 1, 2021.

This permit and the authorization to discharge shall expire at midnight September 30, 2026.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

Richard E. Dunn, Director
Environmental Protection Division

PART I

A.1.a. Effluent Limitations and Monitoring Requirements

Upon the effective date of the permit and continuing for 18 months, the permittee is authorized to discharge from outfall number 001[1] (34.372774, -83.330938) – Boiler blowdown, boiler feedwater, boiler area drainage, steam turbine generator sump area drainage, reverse osmosis reject water, cooling tower blowdown, and stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements[2]		
	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	Estimation[3]	Final Effluent
Total Suspended Solids			30	45	1/Week	Grab	Final Effluent
Oil & Grease			15	20	2/Month	Grab	Final Effluent
Total Residual Chlorine[4]				Report[5]	1/Week	Grab	Final Effluent
Copper, total	Report[5]	Report[5]	Report[5]	Report[5]	1/Week	Grab	Final Effluent
Mercury, total (µg/L)	0.00003	0.003	0.01	1.41	1/Week	Grab	Final Effluent
Zinc, total	0.325	0.325	0.150	0.150	2/Month	Grab	Final Effluent
Total Phosphorus			Report	Report	1/Month	Grab	Final Effluent
Temperature (°F)			Report	Report	1/Month	Grab	Final Effluent
Delta T (Temperature Differential)[6]			Report	Report	1/Month	Grab	Final Effluent
Chronic Whole Effluent Toxicity[7]			Report	Report	See Footnote 7	Composite	Final Effluent

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

[1] There shall be no discharge of floating solids or visible foam other than trace amounts.

[2] 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.

[3] Flow estimation will be calculated using the formula:

Cooling tower flow + Other process wastewater flow + Stormwater flow

Where stormwater flow estimation is calculated using the formula:

$$\text{Area ft}^2 \times \text{Rainfall (in)} \div 12 \left(\frac{\text{in}}{\text{ft}}\right) \times \text{Runoff Coefficient} \times 7.481 \left(\frac{\text{gallon}}{\text{ft}^3}\right)$$

An alternative method for determining flow rate may be used upon EPD approval.

[4] Total residual chlorine shall be reported as the daily maximum concentration.

[5] See Schedule of Compliance, Part III.B. of this permit.

[6] Temperature differential (delta T) is the difference between the river temperature measurement immediately upstream of the discharge and downstream of the discharge measured value.

The river upstream and downstream temperature measurements shall be taken concurrently on the same day and the same time and reported in accordance with 1.B.2 of this permit.

[7] Chronic WET testing shall be conducted once during the permit term and the results submitted to the EPD in accordance with Part I.D. of this permit. An additional WET test shall be conducted and submitted with the subsequent permit application. 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 test must be run on the same sample 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 99%.

PART I

A.1.b. Effluent Limitations and Monitoring Requirements

Effective 18 months from the effective date of the permit and continuing until the expiration date of the permit, the permittee is authorized to discharge from outfall number 001[1] (34.372774, -83.330938) – Boiler blowdown, boiler feedwater, boiler area drainage, steam turbine generator sump area drainage, reverse osmosis reject water, cooling tower blowdown, and stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements[2]		
	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	Estimation[3]	Final Effluent
Total Suspended Solids			30	45	1/Week	Grab	Final Effluent
Oil & Grease			15	20	2/Month	Grab	Final Effluent
Total Residual Chlorine[4]				0.011	1/Week	Grab	Final Effluent
Copper, total	0.019	0.025	0.009	0.011	1/Week	Grab	Final Effluent
Mercury, total (µg/L)	0.00003	0.003	0.01	1.41	1/Week	Grab	Final Effluent
Zinc, total	0.325	0.325	0.150	0.150	2/Month	Grab	Final Effluent
Total Phosphorus			Report	Report	1/Month	Grab	Final Effluent
Temperature (°F)			Report	Report	1/Month	Grab	Final Effluent
Delta T (Temperature Differential)[5]			Report	Report	1/Month	Grab	Final Effluent
Chronic Whole Effluent Toxicity[6]			Report	Report	See Footnote 6	Composite	Final Effluent

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

[1] There shall be no discharge of floating solids or visible foam other than trace amounts.

[2] 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.

[3] Flow estimation will be calculated using the formula:

Cooling tower flow + Other process wastewater flow + Stormwater flow

Where stormwater flow estimation is calculated using the formula:

$$\text{Area ft}^2 \times \text{Rainfall (in)} \div 12 \left(\frac{\text{in}}{\text{ft}}\right) \times \text{Runoff Coefficient} \times 7.481 \left(\frac{\text{gallon}}{\text{ft}^3}\right)$$

An alternative method for determining flow rate may be used upon EPD approval.

[4] Total residual chlorine shall be reported as the daily maximum concentration.

[5] Temperature differential (delta T) is the difference between the river temperature measurement immediately upstream of the discharge and downstream of the discharge measured value.

The river upstream and downstream temperature measurements shall be taken concurrently on the same day and the same time and reported in accordance with 1.B.2 of this permit.

[6] Chronic WET testing shall be conducted once during the permit term and the results submitted to the EPD in accordance with Part I.D. of this permit. An additional WET test shall be conducted and submitted with the subsequent permit application. 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 test must be run on the same sample 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 99%.

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 001A[1,2] – Cooling tower discharge.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements[3]		
	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	Continuous	See footnote 4
Free Available Chlorine			1.0	1.0	1/Week	Grab	See footnote 4
Chromium, total			0.2	0.2	1/Week	Grab	See footnote 4
Zinc, total			1.0	1.0	1/Week	Grab	See footnote 4

[1] There shall be no discharge of floating solids or visible foam other than trace amounts.

[2] See Part C. Special Conditions of this Permit.

[3] 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.

[4] The sample location shall be at the cooling tower discharge location prior to mixing with any other waste stream.

A.3.a. Effluent Limitations and Monitoring Requirements

Upon the effective date of the permit and continuing for 18 months, the permittee is authorized to discharge from outfall number 002[1] (34.374780, -83.329290) – Stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements[2]		
	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	Estimation[3]	Final Effluent
BOD_5			Report	Report	1/Month	Grab	Final Effluent
Ammonia, as N[4]			1.1	1.65	1/Month	Grab	Final Effluent
Organic Nitrogen[4]			Report	Report	1/Month	Grab	Final Effluent
Nitrate-Nitrite[4]			Report	Report	1/Month	Grab	Final Effluent
Total Kjeldahl Nitrogen[4]			Report	Report	1/Month	Grab	Final Effluent
Total Phosphorus			Report	Report	1/Month	Grab	Final Effluent
Orthophosphate, as P			Report	Report	1/Month	Grab	Final Effluent
Total Suspended Solids			30	45	1/Week	Grab	Final Effluent
Oil & Grease			15	20	2/Month	Grab	Final Effluent
Cadmium, total (µg/L)	Report[6]	Report[6]	Report[6]	Report[6]	1/Week	Grab	Final Effluent
Chromium, total	Report[6]	Report[6]	Report[6]	Report[6]	1/Week	Grab	Final Effluent
Selenium, total	Report[6]	Report[6]	Report[6]	Report[6]	1/Week	Grab	Final Effluent
Chronic Whole Effluent Toxicity[7,8]			Report	Report	See Footnote 7	Composite	Final Effluent

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

[1] There shall be no discharge of floating solids or visible foam other than trace amounts.

[2] 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.

[3] Stormwater flow estimation will be calculated using the formula:

$$\left[\text{Area ft}^2 \times \text{Rainfall (in)} \div 12 \left(\frac{\text{in}}{\text{ft}}\right) \times \text{Runoff Coefficient} \times 7.481 \left(\frac{\text{gallon}}{\text{ft}^3}\right)\right] - 150{,}000 \text{ gallons}$$

An alternative method for determining flow rate may be used upon approval.

[4] Ammonia, as N; total Kjeldahl nitrogen; nitrate/nitrite; and organic nitrogen shall be taken or calculated from the same effluent sample on the same day.

[5] Total phosphorus and orthophosphate, as P shall be analyzed from the same effluent sample on the same day.

[6] See Schedule of Compliance, Part III.B. of this permit.

[7] Within 6 months of the first discharge event, the permittee shall conduct a chronic WET test and shall submit the test result with the following month DMR after the test has been completed in accordance with Part I.D of this permit.

Within 12 months of the first discharge event, the permittee shall conduct a chronic WET test and submit the test result with the following month DMR after the test has been completed 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 test must be run on the same sample 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 100%.

[8] If two WET tests are failed, the permittee will be required to complete a Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) and submit the TIE/TRE to EPD no later than 6 months following the date of the second WET test failure.

A.3.b. Effluent Limitations and Monitoring Requirements

Effective 18 months from the effective date of the permit and continuing until the expiration date of the permit, the permittee is authorized to discharge from outfall number 002[1] (34.374780, -83.329290) – Stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements[2]		
	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	Estimation[3]	Final Effluent
BOD_5			Report	Report	1/Month	Grab	Final Effluent
Ammonia, as N[4]			1.1	1.65	1/Month	Grab	Final Effluent
Organic Nitrogen[4]			Report	Report	1/Month	Grab	Final Effluent
Nitrate-Nitrite[4]			Report	Report	1/Month	Grab	Final Effluent
Total Kjeldahl Nitrogen[4]			Report	Report	1/Month	Grab	Final Effluent
Total Phosphorus			Report[5]	Report[5]	1/Month	Grab	Final Effluent
Orthophosphate, as P			Report[5]	Report[5]	1/Month	Grab	Final Effluent
Total Suspended Solids			30	45	1/Week	Grab	Final Effluent
Oil & Grease			15	20	2/Month	Grab	Final Effluent
Cadmium, total (µg/L)	0.001	0.003	0.260	1.35	1/Week	Grab	Final Effluent
Chromium, total	0.062	0.090	0.158	0.230	1/Week	Grab	Final Effluent
Selenium, total	0.013	0.020	0.005	0.008	1/Week	Grab	Final Effluent
Chronic Whole Effluent Toxicity[6,7]			Report	Report	See Footnote 6	Composite	Final Effluent

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

[1] There shall be no discharge of floating solids or visible foam other than trace amounts.

[2] 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.

[3] Stormwater flow estimation will be calculated using the formula:

$$\left[\text{Area ft}^2 \times \text{Rainfall (in)} \div 12 \left(\frac{\text{in}}{\text{ft}}\right) \times \text{Runoff Coefficient} \times 7.481 \left(\frac{\text{gallon}}{\text{ft}^3}\right)\right] - 150{,}000 \text{ gallons}$$

An alternative method for determining flow rate may be used upon approval.

[4] Ammonia, as N; total Kjeldahl nitrogen; nitrate/nitrite; and organic nitrogen shall be taken or calculated from the same effluent sample on the same day.

[5] Total phosphorus and orthophosphate, as P shall be analyzed from the same effluent sample on the same day.

[6] Within 6 months of the first discharge event, the permittee shall conduct a chronic WET test and shall submit the test result with the following month DMR after the test has been completed in accordance with Part I.D of this permit.

Within 12 months of the first discharge event, the permittee shall conduct a chronic WET test and submit the test result with the following month DMR after the test has been completed 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 test must be run on the same sample 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 100%.

[7] If two WET tests are failed, the permittee will be required to complete a Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) and submit the TIE/TRE to EPD no later than 6 months following the date of the second WET test failure.

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.

D. Reporting Requirements

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.

a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: https://netdmr.epa.gov/netdmr/public/home.htm

b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.

c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15th day of the month following the sampling period.

d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

2. No later than December 21, 2020, the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:

a. Sewer Overflow/Bypass Event Reports;
b. Noncompliance Notification;
c. Other noncompliance; and
d. Bypass

3. Other Reports

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

4. Other Noncompliance

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

5. Signatory Requirements

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

a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:

1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:

i a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or

ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.

b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:

1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;

2. The authorization is made in writing by the person designated under (a) above; and

3. The written authorization is submitted to the Director.

c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.

d. Any person signing any document under (a) or (b) above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PART II

A. Management Requirements

1. Notification of Changes

a. The permittee shall provide EPD at least 90 days advance notice of any planned physical alterations or additions to the permitted facility that meet the following criteria:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b);

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or

3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. The permittee shall give at least 90 days advance notice to EPD of any planned changes to the permitted facility or activity which may result in noncompliance with permit requirements.

c. Following the notice in paragraph a. or b. of this condition the permit may be modified. The permittee shall not make any changes, or conduct any activities, requiring notification in paragraph a. or b. of this condition without approval from EPD.

d. The permittee shall provide at least 30 days advance notice to EPD of:

1. any planned expansion or increase in production capacity; or

2. any planned installation of new equipment or modification of existing processes that could increase the quantity of pollutants discharged or result in the discharge of pollutants that were not being discharged prior to the planned change

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

e. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/L, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/L for acrolein and acrylonitrile, 500 µg/L for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/L antimony.

f. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/L, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/L antimony.

g. Upon the effective date of this permit, the permittee shall submit to EPD an annual certification in June of each year certifying whether or not there has been any change in processes or wastewater characteristics as described in the submitted NPDES permit application that required notification in paragraph a., b., or d. of this condition. The permittee shall also certify annually in June whether the facility has received offsite wastes or wastewater and detail any such occurrences.

2. Noncompliance Notification

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

a. A description of the discharge and cause of noncompliance; and

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

3. Facility Operation

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

4. Adverse Impact

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

5. Bypassing

a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to EPD at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

1. A description of the discharge and cause of noncompliance; and

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

b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by EPD, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

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

submit a sludge management plan to EPD for review and approval. Upon approval, the plan for land application will become a part of the NPDES permit upon modification of the permit.

7. Sludge Monitoring Requirements

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

8. Power Failures

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

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

9. Operator Certification Requirements

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

10. Laboratory Analyst Certification Requirements

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

B. Responsibilities

1. Right of Entry

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

a. To enter upon the permittee's premises where a discharge source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

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

a. The permittee notifies the Director of EPD in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;

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

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

3. Availability of Reports

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

4. Permit Modification

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:

a. The effluent limitations and monitoring specified in Part I.A.1.b. and Part I.A.3.b. are effective on the effective date of this permit, except as specified below.

b. The permittee shall achieve compliance with the total residual chlorine and total copper limitations specified in Part I.A.1.b and the total cadmium, total chromium, and total selenium limitations specified in Part I.A.3.b. of this permit in accordance with the following schedule:

(i) Beginning on the effective date of this permit and continuing for 18 months, the permittee shall start monitoring and reporting for total residual chlorine and total copper in accordance with Part I.A.1.a. of this permit.

(ii) Beginning on the effective date of this permit and continuing for 18 months, the permittee shall start monitoring and reporting for total cadmium, total chromium, and total selenium in accordance with Part I.A.3.a. of this permit.

(iii) Within 18 months of the effective date of this permit, the permittee shall achieve compliance with the total residual chlorine and total copper in specified Part I.A.1.b. of this permit.

(iv) Within 18 months of the effective date of this permit, the permittee shall achieve compliance with the total cadmium, total chromium, and total selenium specified in Part I.A.3.b. of this permit.

c. The permittee shall submit a written progress report to EPD on June 30th and December 31st every year describing the status of achieving compliance with Part I.A.1.b. and Part I.A.3.b. of this permit. The permittee shall submit the report to the EPD assigned Compliance Office.

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

2. Neither free available chlorine (FAC) nor total residual chlorine (TRC) 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 these materials at any one time unless the permittee can demonstrate to and get written authorization from the EPD Director that the units in a particular location cannot operate at or below this level of chlorination. The permittee has demonstrated the need for continuous chlorination of the service water system to maintain FAC between 0.5 mg/L and 1.0 mg/L. This special condition is waived during periods of continuous chlorination of the service water system and the effluent limitation for FAC has been determined to be 1.0 mg/L in accordance with the manufacture's recommendation.

3. The free available chlorine (FAC) average means the average over any individual chlorine or oxidant release period. The FAC maximum is the instantaneous maximum which may occur at any time. Further, the permittee will develop a system for monitoring and recording total time of FAC and TRC discharges. The results shall be reported in a suitably concise form in accordance with the reporting requirements in Part 1.B.2 of this permit.

4. If bromine or a combination of bromine and chlorine is utilized for control of biofouling, limitations for TRC and FAC shall be applicable to TRO (Total Residual Oxidants) and FAO (Free Available Oxidants). There is no difference in test methods between TRC/FAC and TRO/FAO.

5. The permittee shall certify annually that none of the 126 priority pollutants, excluding chromium and zinc, is above detectable limits in outfall 002A (cooling tower blowdown). This certification may be based on manufacturers certifications or engineering calculations. A certification for chromium and/or zinc may be used in lieu of the monitoring required in Part I.A.2.

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.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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

Technical Contact: Whitney Fenwick (*Whitney.Fenwick@dnr.ga.gov)*
404-6565-2795

Draft permit:

- ☐ First issuance
- ☐ Reissuance with no or minor modifications from previous permit
- ☒ Reissuance with substantial modifications from previous permit
- ☐ Modification of existing permit
- ☒ Requires EPA review
- ☒ Designated as a major facility

1 FACILITY INFORMATION

1.1. NPDES Permit No.: GA0039292

1.2. Name and Address of Owner/Applicant

GRP Franklin Renewable Energy Facility, LLC
2100 Southbridge Parkway, Suite 540
Birmingham, Alabama 35209

1.3. Name and Address of Facility

GRP Franklin Renewable Energy Facility, LLC
3465 Highway 198
Carnesville, Georgia 30521
Franklin County

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

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	34.372774	-83.330938	Unnamed tributary to Indian Creek
002	34.374780	-83.329290	Unnamed tributary to Indian Creek

1.5. Production Capacity

Not applicable

1.6. SIC Code & Description

4911 – Electric Services

1.7. Description of Industrial Processes

GRP Franklin Renewable Energy Facility, LLC is a 65-MegaWatt facility. The plant consists of a fiber dryer, spreader stroker vibrating water cooled grate boiler/steam generator, and one steam turbine generator (STG). The project includes a flue gas Air Quality Control System (AQCS) consisting of a Selective Catalytic Reducer (SCR) NOx/CO emissions control systems, Mechanical Dust Collector (Multi-Cyclone), and Electrostatic Precipitator. The facility burns wood biomass (wood debris).

1.8. Description of the Wastewater Treatment Facility

Outfall	Operation Description	Treatment Description
001	Boiler area (blowdown, feedwater, area drains)	Oil/water separator, pH neutralization and aeration
	Steam turbine generator sump area drains	
	Reverse osmosis reject water	pH neutralization and aeration
	Cooling tower blowdown	
	Stormwater	Sedimentation, pH neutralization, and aeration
002	Stormwater	pH neutralization and aeration

1.9. Type of Wastewater Discharge

☒ process wastewater ☒ stormwater

☐ domestic wastewater ☒ combined

☒ other (boiler blowdown, boiler feedwater, boiler area drainage, steam turbine generator sump area drainage, reverse osmosis reject water, cooling tower blowdown, and stormwater.

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)

1.10.1. Outfall No. 001 - Boiler blowdown, boiler feedwater, boiler area drainage, steam turbine generator sump area drainage, reverse osmosis reject water, cooling tower blowdown, and stormwater.

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.2615	0.2558
Biochemical Oxygen Demand,$_{5\text{-day}}$ (mg/L)	32.58	32.58
Total Suspended Solids (mg/L)	48.7	21.46
Temperature, Winter (°F)	62.96	62.96
Temperature, Summer (°F)	66.92	66.92
Ammonia (mg/L)	0.289	0.289
Total Phosphorus (mg/L)	7.529	2.4

1.10.2. Outfall No. 002 – Stormwater

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.3052	0.1076
Biochemical Oxygen Demand,$_{5\text{-day}}$ (mg/L)	244.3	51.90
Total Suspended Solids (mg/L)	96	37.73
Temperature, Winter (°F)	62.96	62.96
Temperature, Summer (°F)	66.92	66.92
Ammonia (mg/L)	8.6	0.96
Total Phosphorus (mg/L)	2.67	0.753

2 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
Industrial (Non POTW)	Non-Process Water Discharges	40 CFR 122 40 CFR 125 40 CFR 127 40 CFR 136
	Process Water Discharges	40 CFR 122 40 CFR 125 40 CFR 127 40 CFR 136

2.3 Industrial Effluent Limit Guideline(s)

Not applicable

The effluent limit guidelines (ELGs) at 40 CFR 423 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. The ELGs do not apply to plants that use non-fossil fuel or non-nuclear fuel or other energy sources, such as biomass.

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 antidegradation 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

Designated Water Use: The designated water use for the unnamed tributary to Indian Creek is fishing.

[391-3-6-.03(6)]

Fishing

(i) 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.

(ii) pH: Within the range of 6.0 - 8.5.

(iii) Bacteria:

1. 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. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

2. For waters designated as shellfish growing areas by the Georgia DNR Coastal Resources Division, the requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program. The requirements are found in National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2007 Revision (or most recent version), Interstate Shellfish Sanitation Conference, U.S. Food and Drug Administration.

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

3.2 Ambient Information

Outfall ID	7Q10 (cfs)	1Q10 (cfs)	Hardness (mg/L as $CaCO_3$)	Annual Average Flow (cfs)	Upstream Total Suspended Solids (mg/L)
001, 002	0.00337	0.00248	Data unavailable[1]	Data unavailable	Data unavailable[2]

[1] For the Reasonable Potential Analysis calculations, EPD used 20 mg/l as a conservative value.
[2] For the Reasonable Potential Analysis calculations, EPD used 10 mg/l as a conservative value.

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

Unnamed tributary to Indian Creek is not listed. Indian Creek is a tributary to Middle Fork Broad River. Middle Fork Broad River is listed as not supporting the designated use, due to fecal coliform.

Middle Fork Broad River	Nancy town Creek to Hunters Creek	Savannah	Not Supporting	FC	13	4a	TMDL completed FC 2005.
GAR030601040102	Banks, Franklin	Fishing	10	NP	Miles		

3.4 Total Maximum Daily Load (TMDL)

A TMDL was developed for 32 stream segments in the Savannah River Basin for fecal coliform in 2005. Fecal coliform is not a pollutant of concern from this facility, therefore limits for fecal coliform have not been included in the permit.

3.5 Wasteload Allocation Date

See Appendix A of the Fact Sheet

4 PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

4.1 Water Quality Based Effluent Limitations (WQBELs) & Technology Based Effluent Limits (TBELS)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed pollutants in a discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality criteria or standards. By analyzing the effect of a pollutant in the 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 or protect downstream users. 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 water quality standards are met in the receiving water and the designated use and downstream uses are protected. On the basis of the requirements of 40 C.F.R §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.

TBELs 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 State. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and WQBELs. The NPDES regulations at 40 C.F.R. §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 requires permit writers to 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 (ELGS), the permit writer must identify any needed TBELS and utilize best professional judgment to establish TBELS 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.

4.2 Reasonable Potential Analysis (RPA)

EPA regulations at 40 C.F.R. §122.44(d)(1)(i) state, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will *cause*, have the *reasonable potential to cause*, or *contribute* to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality." [emphasis added]

EPA regulations at 40 C.F.R. §122.44(d)(1)(ii) require 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 criterion 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 has reasonable potential procedures, based upon the specific category of pollutants and/or specific pollutant of concern. 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 GA Rules and Regulations for Water Quality Control, Chapter 391-3-6 in the evaluation of a permit application and in the evaluation of the reasonable potential for a discharge to cause an exceedance in the numeric or narrative criteria.

The term "pollutant" is defined in CWA section 502(6) and 40 C.F.R. §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 40 C.F.R.§401.16 (five day-biochemical oxygen demand (BOD_5), total suspended solids (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, but not limited to, chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

EPD evaluates the data provided in the application and supporting documents. If a pollutant is listed in the following sections of this fact sheet below, the permit writer determined the pollutant is a pollutant of concern and there may be a reasonable potential to cause or contribute to an instream violation of the Georgia water quality standards. If a pollutant is not listed below, EPD determined 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 Georgia water quality standards. An example may be if the applicant reported "not detect" or "below detection limit".

Upon identification of a pollutant of concern by the permit writer, in accordance with 40 C.F.R. §122.44(d)(1)(ii), the permit writer must then perform a reasonable potential analysis using a procedure which has accounted for any combination of the following criteria: existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water to determine if the pollutant and its discharge has the reasonable potential to cause, or contribute to an in-stream excursion above the allowable ambient concentration of a state narrative or numeric criteria within the state's water quality standard for an individual pollutant.

In accordance with 40 C.F.R. §122.44(d)(1)(iii), if the permit writer has determined, using a reasonable potential procedure the pollutant of concern in the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a state numeric or narrative criteria within a state water quality

standard for an individual pollutant, the permit must contain effluent limits for that pollutant. If the permit writer has determined there is insufficient data, the permit writer might also consider monitoring requirements to collect the additional data related to the presence or absence of a specific pollutant to provide information for further analyses for the development of appropriate numeric or narrative standard .

The conventional, nonconventional, and toxic pollutants listed in the following sections have been identified by the permit writer as pollutants of concern and the permit writer has determined through current practices and procedures one of the following: no additional monitoring or numeric and/or narrative effluent limits are needed; additional monitoring is required; or numeric and/or narrative effluent limits are necessary to protect the receiving water body and its downstream users and those limits have been included in the permit.

The monitoring and sampling locations are prescribed in the permit and determined by the permit writer after considering, at a minimum, the following: type of discharge, specific pollutant, discharge frequency, location of the discharge, receiving waterbody, downstream users, etc.

The sample type, grab vs. composite, is prescribed in the permit and determined by the permit writer after considering, at a minimum, the analytical method required in 40 C.F.R. §136, the type of pollutant, retention time, etc. Grab samples are required for the analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including *E. coli*), or volatile organics.

4.3 Whole Effluent Toxicity

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.

Chronic whole effluent toxicity testing was conducted on June 16, 2020 on the effluent from outfall 002. The test results indicated no statistically significant impact to the survival or and no statistically significant impact to growth or survival at any of the concentrations tested. The NOEC for both tests was 100%.

Chronic whole effluent testing of both outfalls has been included in the permit, in accordance with Georgia EPD's *Whole Effluent Toxicity (WET) Strategy* (2001), which requires that NPDES Major facilities conduct 2 WET tests within the permit term.

If toxicity is suspected in the effluent, EPD may require the permittee to perform acute or chronic whole effluent toxicity testing.

4.4 Conventional Pollutants

Pollutants of Concern	Outfall ID	Basis
pH	001, 002	WQBEL The instream waste concentration is 99%. When the instream waste concentration is greater than 50%, there is 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.
		TBEL There is no applicable federal technology based effluent limit.
5-Day Biochemical Oxygen Demand	002	WQBEL Based on the data submitted with the permit application, 5-day biochemical oxygen demand has been identified as a pollutant of concern. Monitoring for BOD_5 has been retained in the permit.
		TBEL There is no applicable federal technology based effluent limit.
Total Suspended Solids	001, 002	WQBEL Georgia has a narrative Water Quality Standard for total suspended solids. A narrative permit condition stating, "there shall be no floating solids or visible foam other than in trace amounts" has been added. In accordance with anti-backsliding regulations at 40 C.F.R. 122.44(l), the limits of 30 mg/L daily average and 45 mg/L daily maximum daily maximum have been retained from the previous permit.
		TBEL The limits are based on EPD's best professional judgment, on a case by case basis in accordance with 40 C.F.R. § 125.3(c). Due to the similarities between the discharge from this facility and low volume wastes from steam electric facilities which utilize fossil-type fuels or nuclear fuels in 40 C.F.R. § 423.15(a)(3), a limit of 30.0 mg/L is used for the daily average and 100.0 mg/L for the daily maximum. The more stringent limits included in the previous permit have been retained per the anti-backsliding regulations at 40 C.F.R. 122.44(l).

Oil & Grease	001, 002	WQBEL Georgia has a narrative Water Quality Standard for oil and grease. TBEL The limits are based on EPD's best professional judgment, on a case by case basis in accordance with 40 C.F.R. § 125.3(c). Due to the similarities between the discharge from this facility and low volume wastes from steam electric facilities which utilize fossil-type fuels or nuclear fuels in 40 C.F.R. § 423.15(a)(3), a limit of 15 mg/L is used for the daily average and 20 mg/L for the daily maximum.

4.5 Nonconventional Pollutants

Pollutants of Concern	Outfall ID	Basis
Temperature	001	WQBEL Temperature has been identified as a pollutant of concern due to the discharge from outfall 001 containing cooling tower blowdown. Temperature monitoring of the effluent and in the receiving stream has been retained from the previous permit. TBEL There is no applicable federal technology based effluent limit.
Ammonia	001	WQBEL The reasonable potential analysis shows a predicted instream ammonia concentration of 29% of the instream toxicity criteria. Per the Ammonia Reasonable Potential Analysis Procedure for NPDES Permits, if less than 10 data points are available to calculate the permittee's in-stream concentration and if the permittee's calculated in-stream concentration is less than 50% of the applicable site-specific in-stream ammonia criteria, then ammonia will be considered not to be present at levels of and EPD will not require additional monitoring or include a numeric effluent limit for ammonia in the permit. TBEL There is no applicable federal technology based effluent limit.

Ammonia	002	WQBEL The reasonable potential analysis shows a predicted instream ammonia concentration of 936% of the instream toxicity criteria. Per the Ammonia Reasonable Potential Analysis Procedure for NPDES Permits, if less than 10 data points are available to calculate the permittee's in-stream concentration and if the permittee's calculated in-stream concentration is greater than 50% of the applicable site-specific in-stream ammonia criteria, then ammonia will be considered to be present at levels of and EPD will include a numeric effluent limit for ammonia in the permit. Effluent limits of 1.1 mg/L daily average and 1.65 mg/L daily maximum have been added to the permit. The daily maximum was determined by multiplying the daily average by 1.5. Refer to Appendix C of the Fact Sheet for reasonable potential evaluations.
		TBEL There is no applicable federal technology based effluent limit.
Total Kjeldahl Nitrogen, Organic Nitrogen, Nitrate/Nitrite	002	WQBEL Per "*Georgia's Plan for the Adoption of Water Quality Standards for Nutrients*" (2013) as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for total Kjeldahl nitrogen, organic nitrogen, and nitrate/nitrite and to develop these models.
		TBEL There is no applicable federal technology based effluent limit.
Total Phosphorus	001, 002	WQBEL Per the *Strategy for Addressing Phosphorus in NPDES Permitting* (2011) all routine permit reissuances must include phosphorus monitoring.
		TBEL There is no applicable federal technology based effluent limit.

Orthophosphate, as P	002	WQBEL Orthophosphate monitoring has been retained to ensure sufficient data has been collected for this parameter. The previous permit included monitoring for orthophosphate, however, because the facility did not begin reporting discharges until September 2019, a full permit term of data has not yet been collected at this facility. TBEL There is no applicable federal technology based effluent limit.
Total Residual Chlorine	001	WQBEL Total residual chlorine has been identified as a pollutant of concern due to the data provided in the permit application. In 2010, EPD developed a TRC strategy to ensure that chlorinated effluents do not result in toxic or potentially toxic concentrations of TRC in the receiving stream after dilution. The strategy is consistent with Georgia's narrative water quality standard in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.03(5) which requires that "all waters shall be free from toxic, corrosive, acidic and caustic substances discharged from municipalities, industries or other sources, such as nonpoint sources, in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life". Per the strategy, a daily maximum TRC limit of 0.011 mg/L has been determined using the US EPA's chronic TRC criterion of 11 µg/L in the receiving stream after dilution. An 18-month compliance schedule to achieve the effluent limits has been included for outfall no. 001. TBEL There is no applicable federal technology based effluent limit.

Free Available Chlorine	001A	WQBEL Georgia does not have Water Quality Standards applicable to internal outfalls. TBEL The limits are based on EPD's best professional judgment, on a case by case basis in accordance with 40 C.F.R. §125.3(c). Due to the similarities between the discharge from this facility and cooling tower blowdown from steam electric facilities which utilize fossil-type fuels or nuclear fuels in 40 C.F.R. § 423.15(a)(10)(i), a limit of 0.2 mg/L is used for the daily average and 0.5 mg/L for the daily maximum. 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 permittee can demonstrate to and receive written authorization from the EPD Director that the units in a particular location cannot operate at or below this level of chlorination. The permittee has demonstrated the need for continuous chlorination of the service water system to maintain FAC between 0.5 mg/L and 1.0 mg/L. This special condition is waived during periods of continuous chlorination of the service water system and the effluent limitation for FAC has been determined to be 1.0 mg/L in accordance with the manufacture's recommendation.

4.6 Toxics & Manmade Organic Compounds (126 priority pollutants and metals)

Pollutants of Concern	Outfall ID	Basis
Cadmium, total	002	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than the acute instream standard and greater than 50% of the chronic instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, cadmium is considered a pollutant of concern and effluent limits of 0.001 lbs/day and 0.003 lbs/day, daily

		average and daily maximum; respectively, and 0.260 µg/L and 1.35 µg/L, daily average and daily maximum; respectively, have been added to this permit. An 18-month compliance schedule to achieve the effluent limits has been included for outfall no. 002.
		TBEL There is no applicable federal technology based effluent limit.
Chromium, total	001A	WQBEL Georgia does not have Water Quality Standards applicable to internal outfalls.
		TBEL The limits are based on EPD's best professional judgment, on a case by case basis in accordance with 40 C.F.R. § 125.3(c). Due to the similarities between the discharge from this facility and cooling tower blowdown from steam electric facilities which utilize fossil-type fuels or nuclear fuels in 40 C.F.R. § 423.15(a)(10)(i), a limit of 0.2 mg/L is used for the daily average and 0.2 mg/L for the daily maximum.
	002	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than 50% of the chronic instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, chromium is considered a pollutant of concern and effluent limits of 0.062 lbs/day and 0.090 lbs/day, daily average and daily maximum; respectively, and 0.158 mg/L and 0.230 mg/L, daily average and daily maximum; respectively, have been added to this permit. An 18-month compliance schedule to achieve the effluent limits has been included for outfall no. 002.
		TBEL There is no applicable federal technology based effluent limit.

Copper, total	001	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than the acute instream standard and greater than 50% of the chronic instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, copper is considered a pollutant of concern and effluent limits of 0.019 lbs/day and 0.025 lbs/day, daily average and daily maximum; respectively, and 0.009 mg/L and 0.011 mg/L, daily average and daily maximum; respectively, have been added to this permit. An 18-month compliance schedule to achieve the effluent limits has been included for outfall no. 002.
		TBEL There is no applicable federal technology based effluent limit.
	002	WQBEL The permit application indicated copper was believed absent in the effluent from outfall 002.
		TBEL There is no applicable federal technology based effluent limit.

Mercury, total	001	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than 50% of the chronic instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, mercury is considered a pollutant of concern and effluent limits of 0.00003 lbs/day and 0.003 lbs/day, daily average and daily maximum; respectively, and 0.01 µg/L and 1.41 µg/L, daily average and daily maximum; respectively, have been added to this permit.
		TBEL There is no applicable federal technology based effluent limit.
Selenium, total	002	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than 50% of the chronic instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, selenium is considered a pollutant of concern and effluent limits of 0.013 lbs/day and 0.020 lbs/day, daily average and daily maximum; respectively, and 0.005 mg/L and 0.008 mg/L, daily average and daily maximum; respectively, have been added to this permit. An 18-month compliance schedule to achieve the effluent limits has been included for outfall no. 002.
		TBEL There is no applicable federal technology based effluent limit.

Zinc, total	001	WQBEL This parameter was evaluated in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control and its instream concentration was found to be greater than the acute instream water quality standard. Refer to Appendix B of the Fact Sheet for reasonable potential evaluations. In accordance with the EPD reasonable potential procedures for toxics, zinc is considered a pollutant of concern and effluent limits of 0.325 lbs/day and 0.325 lbs/day, daily average and daily maximum; respectively, and 0.150 mg/L and 0.150 mg/L, daily average and daily maximum; respectively, have been added to this permit.
		TBEL There is no applicable federal technology based effluent limit.
	001A	WQBEL Georgia does not have Water Quality Standards applicable to internal outfalls.
		TBEL The limits are based on EPD's best professional judgment, on a case by case basis in accordance with 40 C.F.R. § 125.3(c). Due to the similarities between the discharge from this facility and cooling tower blowdown from steam electric facilities which utilize fossil-type fuels or nuclear fuels in 40 C.F.R. § 423.15(a)(10)(i), a limit of 1.0 mg/L is used for the daily average and 1.0 mg/L for the daily maximum.

4.7 Calculations for Water Quality Based Effluent Limits

4.7.1 Instream Waste Concentration (IWC)

Outfall 001

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

IWC = $\frac{\text{261,500 (gal/day)}}{\text{(261,500 (gal/day) + 2,178 (gal/day))}}$

IWC = 99%

Outfall 002

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

IWC = $\frac{\text{305,200 (gal/day)}}{\text{(305,200 (gal/day) + 2,178 (gal/day))}}$

IWC = 99%

4.7.2 Ammonia Toxicity Analysis

The chronic criterion based on *Villosa iris* (rainbow mussel) is determined as follows:

$$CCC = 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times 2.126 \times 10^{0.028 \times (20-MAX(T,7))} \text{ mg/L}$$

Where:
- pH : pH of receiving stream and discharge
- T : Temperature of receiving stream
- CCC : Chronic Continuous Concentration

The ammonia effluent limit (monthly average) is then calculated as follows:

$$[NH_3]_{Effluent} = \frac{\left(Q_{Effluent}\ (ft^3/sec) + 30Q3\ (ft^3/sec)\right) \times CCC\ (mg/L) - 30Q3\ (ft^3/sec) \times [NH_3]_{Stream\ Background}\ (mg/L)}{Q_{Effluent}\ (ft^3/sec)}$$

Refer to Appendix C for detailed calculations.

Daily Maximum = 1.5 x Daily Average (mg/L)
Daily Maximum = 1.5 x 1.1 (mg/L)
Daily Maximum = 1.65 (mg/L)

4.7.3 Metals

See the calculations for applicable metals in Appendix B of Fact Sheet. A sample calculation is included below.

Outfall 001: Copper

Mass Based Limits

Daily Average Loading = Chronic C_T

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

Daily Average: 0.019 (lbs/day)

Daily Maximum Loading = Acute C_T

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

Daily Maximum = 0.025 (lbs/day)

Concentration Based Limits

Daily Average Concentration = Chronic C_T

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

Daily Average = 8.70 (µg/L)
Daily Average (mg/L) = 0.001 x Daily Average (µg/L)
Daily Average (mg/L) = 0.001 x 8.70 (µg/L)
Daily Average: 0.009 (mg/L)

Daily Maximum Concentration = Acute C_T

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

Daily Maximum = 11.31 (µg/L)
Daily Maximum (mg/L) = 0.001 x Daily Maximum (µg/L)
Daily Maximum (mg/L) = 0.001 x 11.31 (µg/L)
Daily Maximum = 0.011 (mg/L)

4.7.4 Total Residual Chlorine

Outfall 001

Daily Maximum Concentration:

$$[TRC]_{Effluent} = \frac{[Q_{Effluent}\ (ft^3/sec) + 7Q10\ (ft^3/sec)] \times [TRC]_{Stream}\ (mg/L)}{Q_{Effluent}\ (ft^3/sec)}$$

$$[TRC]_{Effluent} = \frac{(0.404 + 0.00337) \times 0.011}{0.404}$$

$$[TRC]_{Effluent} = 0.011 \text{ mg/L}$$

4.8 Technology Based Effluent Limitation Calculations

There are several ways to calculate TBELs when developing case-by-case limitations. EPD can use an approach consistent with the statistical approach EPA has used to develop effluent guidelines or they can utilize several other mathematically and statistically accepted approaches depending on characteristics of the data. In general, EPD utilizes EPA's "NPDES Permit Writer Manual," September 2010, Section 5.2.3, "Case-by-Case TBELs for Industrial Dischargers" and EPA's "Technical Support Document for Water Quality Based Toxic Control," March 1991, Section 5.2, "Basis Principles of Effluent Variability," as guidance to develop limits.

If applicable, when there is no federal technology based effluent limit EPD evaluates the effluent data, operating records and discharge monitoring reports to calculate the long-term average for the parameter. The long-term average is then used to derive the effluent limits.

EPD recognizes there are several ways to calculate technology-based limits and, when applicable, may deviate from the general practice.

4.9 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 001:

Parameter	WQBELs	TBELs	Explanation
p.H. (s.u.)	6.0 – 8.5	None	WQBEL – RPA
Total suspended solids (mg/L)	30/45	30/100	TBEL
Oil and grease (mg/L)	Narrative	15/20	TBEL
Total residual chlorine (mg/L)	0.011 daily max	None	WQBEL – TRC Strategy
Copper, total (mg/L)	0.019/0.025	None	WQBEL – RPA
Copper, total (mg/L)	0.009/0.011	None	WQBEL – RPA
Mercury, total (µg/L)	0.00003/0.003	None	WQBEL – RPA
Mercury, total (µg/L)	0.01/1.41	None	WQBEL – RPA
Zinc, total (mg/L)	0.325/0.325	None	WQBEL – RPA
Zinc, total (mg/L)	0.150/0.150	None	WQBEL – RPA

Outfall 001A:

Parameter	WQBELs	TBELs	Explanation
Free available chlorine (mg/L)	None	1.0/1.0	TBEL
Chromium (mg/L)	None	0.2/0.2	TBEL
Zinc (mg/L)	None	1.0/1.0	TBEL

Outfall 002:

Parameter	WQBELs	TBELs	Explanation
p.H. (s.u.)	6.0 – 8.5	None	WQBEL – RPA
Total suspended solids (mg/L)	30/45	30/100	TBEL
Oil and grease (mg/L)	Narrative	15/20	TBEL
Cadmium, total (µg/L)	0.001/0.003	None	WQBEL – RPA
Cadmium, total (µg/L)	0.260/1.35	None	WQBEL – RPA
Chromium, total (mg/L)	0.062/0.090	None	WQBEL – RPA
Chromium, total (mg/L)	0.158/0.230	None	WQBEL – RPA
Copper, total (mg/L)	0.025/0.033	None	WQBEL – RPA
Copper, total (mg/L)	0.010/0.013	None	WQBEL – RPA
Selenium, total (mg/L)	0.013/0.020	None	WQBEL – RPA
Selenium, total (mg/L)	0.005/0.008	None	WQBEL – RPA

5 OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Special Conditions

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

2. Neither free available chlorine (FAC) nor total residual chlorine (TRC) 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 these materials at any one time unless the permittee can demonstrate to and get written authorization from the EPD Director that the units in a particular location cannot operate at or below this level of chlorination. The permittee has demonstrated the need for continuous chlorination of the service water system to maintain FAC between 0.5 mg/L and 1.0 mg/L. This special condition is waived during periods of continuous chlorination of the service water system and the effluent limitation for FAC has been determined to be 1.0 mg/L in accordance with the manufacture's recommendation.

3. The free available chlorine (FAC) average means the average over any individual chlorine or oxidant release period. The FAC maximum is the instantaneous maximum which may occur at any time. Further, the permittee will develop a system for monitoring and recording total time of FAC and TRC discharges. The results shall be reported in a suitably concise form in accordance with the reporting requirements in Part 1.B.2 of this permit.

4. If bromine or a combination of bromine and chlorine is utilized for control of biofouling, limitations for TRC and FAC shall be applicable to TRO (Total Residual Oxidants) and FAO (Free Available Oxidants). There is no difference in test methods between TRC/FAC and TRO/FAO.

5. The permittee shall certify annually that none of the 126 priority pollutants, excluding chromium and zinc, is above detectable limits in outfall 002A (cooling tower blowdown). This certification may be based on manufacturers certifications or engineering calculations. A certification for chromium and/or zinc may be used in lieu of the monitoring required in Part I.A.2.

5.2 Compliance Schedules

An 18-month compliance schedule has been included for total residual chlorine and total copper from outfall 001 and for total cadmium, total chromium, and total selenium from outfall 002.

5.3 Anti-Backsliding

The previous permit required that "neither free available chlorine (FAC) nor total residual chlorine (TRC) 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 these materials at any one time unless the

permittee can demonstrate to and get written authorization from the EPD Director that the units in a particular location cannot operate at or below this level of chlorination." The permittee has demonstrated the need for continuous chlorination of the service water system to maintain FAC between 0.5 mg/L and 1.0 mg/L. The special condition is waived during periods of continuous chlorination of the service water system and the effluent limitation for FAC has been determined to be 1.0 mg/L in accordance with the manufacture's recommendation.

6 REPORTING

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

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

6.1 E-Reporting

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

7 REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

8 PERMIT EXPIRATION

The permit will expire five years from the effective date.

9 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 and on EPD's website accessible through the publicly available Georgia EPD Online System (GEOS) at: https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx. 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.

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:

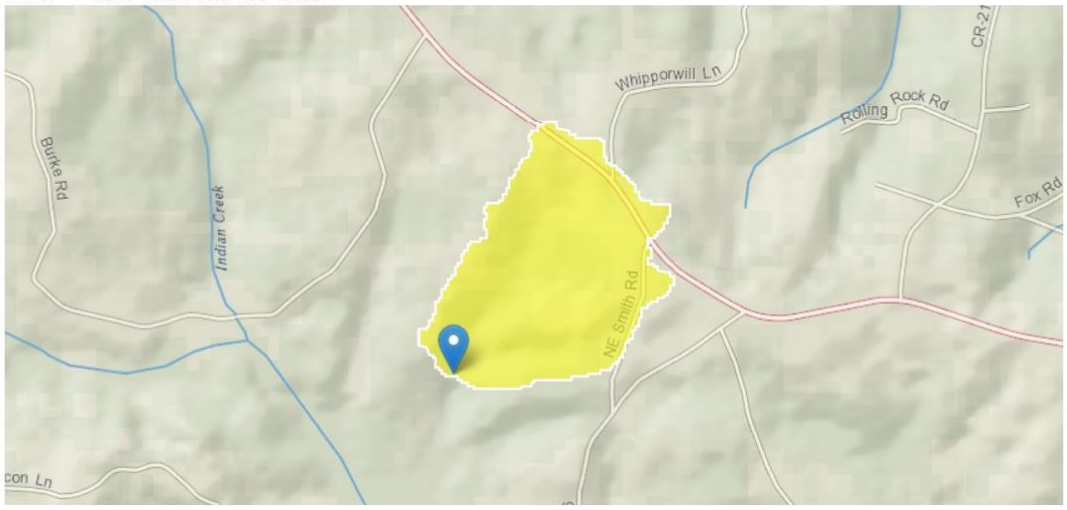
1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which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

APPENDIX A

Wasteload Allocation

Trib to Indian Creek

Region ID: GA
Workspace ID: GA20201009140850714000
Clicked Point (Latitude, Longitude): 34.37203, -83.33126
Time: 2020-10-09 10:09:08 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.16	square miles
PRECPRIS00	Basin average mean annual precipitation for 1971 to 2000 from PRISM	53.1	inches
RRMEAN	Relief ratio defined as (ELEV-MINBELEV)/(ELEVMAX-MINBELEV)	0.521	dimensionless

Annual Flow Statistics Parameters[N Georgia mean flow 2017 5001]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.16	square miles	1.67	576
PRECPRIS00	Mean Annual Precip PRISM 1971 2000	53.1	inches	47.6	81.6

Annual Flow Statistics Disclaimers[N Georgia mean flow 2017 5001]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Annual Flow Statistics Flow Report[N Georgia mean flow 2017 5001]

Statistic	Value	Unit

Statistic	Value	Unit
Mean Annual Flow	0.198	ft^3/s

Annual Flow Statistics Citations

Gotvald, A.J.,2017, Methods for estimating selected low-flow frequency statistics and mean annual flow for ungaged locations on streams in North Georgia: U.S. Geological Survey Scientific Investigations Report 2017–5001, 25 p. (https://doi.org/10.3133/sir20175001)

Low-Flow Statistics Parameters[N Georgia low flow 2017 5001]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.16	square miles	1.67	576
PRECPRIS00	Mean Annual Precip PRISM 1971 2000	53.1	inches	47.6	81.6
RRMEAN	Relief Ratio Mean	0.521	dimensionless	0.146	0.607

Low-Flow Statistics Disclaimers[N Georgia low flow 2017 5001]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[N Georgia low flow 2017 5001]

Statistic	Value	Unit
1 Day 10 Year Low Flow	0.00248	ft^3/s
7 Day 10 Year Low Flow	0.00337	ft^3/s

Low-Flow Statistics Citations

Gotvald, A.J.,2017, Methods for estimating selected low-flow frequency statistics and mean annual flow for ungaged locations on streams in North Georgia: U.S. Geological Survey Scientific Investigations Report 2017–5001, 25 p. (https://doi.org/10.3133/sir20175001)

Application Version: 4.4.0

APPENDIX B

Reasonable Potential Analysis

Reasonable Potential Analysis for Freshwater

Permit Name: GRP Franklin

NPDES Permit No. GA0039292 Outfall 001

Stream Data:

Receiving stream Hardness:	20	mg/L
Upstream TSS:	10	mg/L
7Q10:	0.00337	ft^3/s
	2,178	gal/day
1Q10:	0.00248	ft^3/s
	1,603	gal/day

Effluent Data:

Flow	261,500	gal/day
TSS	48.70	mg/L
Instream TSS:	48.38	mg/L
Acute Dilution factor:	1.01	
Chronic Dilution factor:	1.01	

Water Quality Criteria:

Mean annual streamflow at discharge:	0.00	ft^3/s
	0	gal/day
Dilution factor:	1.000	
IWC	99.17401635	

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

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	0.42	6.30	2.64	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.00	0.00	0.42	no
Chromium III	3.36.E+06	-0.930	0.19	5.40	0.99	152.49	no
Chromium VI	3.36.E+06	-0.930	0.19	5.40	0.99	16.00	no
Copper	1.04.E+06	-0.744	0.26	25.00	6.52	2.95	yes
Lead	2.80.E+06	-0.800	0.00	0.00	0.00	10.79	no
Mercury	NA	NA	NA	0.2000	0.1988	1.40	no
Nickel	4.90.E+05	-0.572	0.28	5.00	1.39	119.99	no
Zinc	1.25.E+06	-0.704	0.20	110.00	22.11	29.97	yes

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

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	0.42	6.30	2.63	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.00	0.00	0.08	no
Chromium III	3.36.E+06	-0.930	0.19	4.04	0.74	19.84	no
Chromium VI	3.36.E+06	-0.930	0.19	4.04	0.74	11.00	no
Copper	1.04.E+06	-0.744	0.26	19.30	5.02	2.26	yes
Lead	2.80.E+06	-0.800	0.00	0.00	0.00	0.42	no
Mercury	NA	NA	NA	0.2000	0.1983	0.012	yes
Nickel	4.90.E+05	-0.572	0.28	4.50	1.25	13.33	no
Zinc	1.25.E+06	-0.704	0.20	46.30	9.29	30.21	no
Selenium	NA	NA	NA	0.00	0.00	5.00	no

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

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

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

Total Recoverable Effluent Limit

Metal	C_S (µg/L)	Chronic C_T (µg/L) 30-Day Avg	Chronic C_T (lbs/day) 30-Day Avg	Acute C_T (µg/L) Daily Max	Acute C_T (lbs/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	8.70	0.019	11.31	0.025
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	0.01	0.00003	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	149.05	0.325
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 constinuent 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 constinuent will be placed in the permit.

End of report

Reasonable Potential Analysis for Freshwater

Permit Name: GRP Franklin
NPDES Permit No. GA0039292 Outfall 002

Stream Data:

Receiving stream Hardness:	20	mg/L
Upstream TSS:	10	mg/L
7Q10:	0.00337	ft^3/s
	2,178	gal/day
1Q10:	0.00248	ft^3/s
	1,603	gal/day

Effluent Data:

Flow	305,200	gal/day
TSS	96.00	mg/L
Instream TSS:	95.39	mg/L
Acute Dilution factor:	1.01	
Chronic Dilution factor:	1.01	

Water Quality Criteria:

Mean annual streamflow at discharge:	0.00	ft^3/s
	0	gal/day
Dilution factor:	1.000	
IWC	99.29144666	

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

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	0.38	60.20	22.57	340.00	no
Cadmium	4.00.E+06	-1.131	0.312	2.00	0.62	0.42	yes
Chromium III	3.36.E+06	-0.930	0.18	86.70	15.36	152.49	no
Chromium VI	3.36.E+06	-0.930	0.18	86.70	15.36	16.00	yes
Copper	1.04.E+06	-0.744	0.00	0.00	0.00	2.95	no
Lead	2.80.E+06	-0.800	0.00	0.00	0.00	10.79	no
Mercury	NA	NA	NA	0.0000	0.0000	1.40	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.00	119.99	no
Zinc	1.25.E+06	-0.704	0.00	0.00	0.00	29.97	no

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

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	0.38	60.20	22.52	150.00	no
Cadmium	4.00.E+06	-1.131	0.312	2.00	0.62	0.08	yes
Chromium III	3.36.E+06	-0.930	0.18	86.70	15.33	19.84	yes
Chromium VI	3.36.E+06	-0.930	0.18	86.70	15.33	11.00	yes
Copper	1.04.E+06	-0.744	0.00	0.00	0.00	2.26	no
Lead	2.80.E+06	-0.800	0.00	0.00	0.00	0.42	no
Mercury	NA	NA	NA	0.0000	0.0000	0.012	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.00	13.33	no
Zinc	1.25.E+06	-0.704	0.00	0.00	0.00	30.21	no
Selenium	NA	NA	NA	5.58	5.54	5.00	yes

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

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

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

Total Recoverable Effluent Limit

Metal	C_s (µg/L)	Chronic C_T (µg/L) 30-Day Avg	Chronic C_T (lbs/day) 30-Day Avg	Acute C_T (µg/L) Daily Max	Acute C_T (lbs/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	0.26	0.001	1.35	0.003
Chromium III	0.0	112.16	0.285	N/A	N/A
Chromium VI	0.0	62.20	0.158	90.30	0.230
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	5.04	0.013	--	--

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

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

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

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

NOTES:

(1) Chronic and acute total recoverable metal effluent concentration (C_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 constinuent 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 constinuent will be placed in the permit.

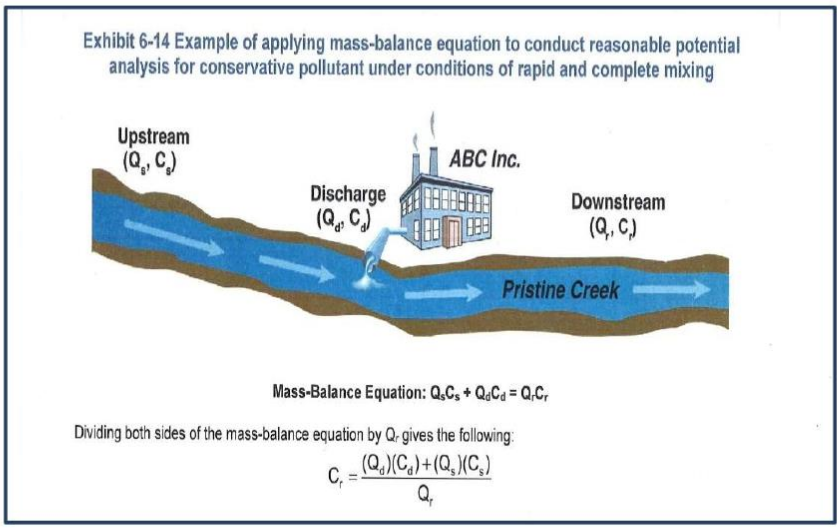
End of report

APPENDIX C

Ammonia Reasonable Potential Analysis

Ammonia Reasonable Potential Analysis

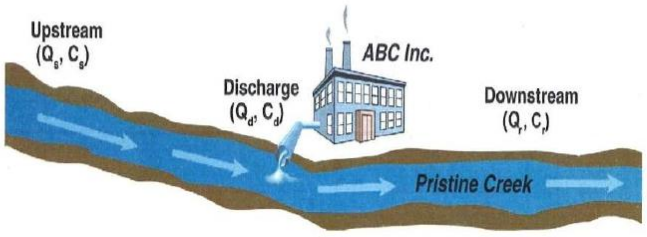
General Information		
Facility	GRP Franklin Outfall 001	
Permit #	GA0039292	
Staff	W. Fenwick	
Date	2020	
Upstream Conditions		**Basis**
Flow, Q_s	0.01 cfs	7Q10 as determined by WPMP
Concentration, C_s	0.13 mg/L	background concentration generally ~0.13 mg/L or as specified by WPMP
Discharge Characteristics		**Basis**
Flow, Q_d	0.262 MGD	effluent flow rate
Flow, Q_d	0.40 cfs	effluent flow rate
Concentration, C_d	0.26 mg/L	concentration
IWC	97.6 %	instream waste concentration
Predicted Downstream		**Basis**
Flow, Q_r	0.41 cfs	calculated combined flow
Concentration, C_r	0.26 mg/L	calculated instream concentration
Applicable Criteria	0.90 mg/L	instream toxicity criteria as determined by WPMP
Ratio	29 %	predicted instream concentration as % of criteria
RP	**No**	is there reasonable potential to exceed criteria?
Action	**None**	what is appropriate permitting action?



Ammonia Reasonable Potential Analysis

General Information		
Facility	GRP Franklin Outfall 002	
Permit #	GA0039292	
Staff	W. Fenwick	
Date	2020	
Upstream Conditions		**Basis**
Flow, Q_s	0.01 cfs	7Q10 as determined by WPMP
Concentration, C_s	0.13 mg/L	background concentration generally ~0.13 mg/L or as specified by WPMP
Discharge Characteristics		**Basis**
Flow, Q_d	0.305 MGD	effluent flow rate
Flow, Q_d	0.47 cfs	effluent flow rate
Concentration, C_d	8.60 mg/L	concentration
IWC	97.9 %	instream waste concentration
Predicted Downstream		**Basis**
Flow, Q_r	0.48 cfs	calculated combined flow
Concentration, C_r	8.42 mg/L	calculated instream concentration
Applicable Criteria	0.90 mg/L	instream toxicity criteria as determined by WPMP
Ratio	936 %	predicted instream concentration as % of criteria
RP	**Yes**	is there reasonable potential to exceed criteria?
Action	**Limit**	what is appropriate permitting action?

Exhibit 6-14 Example of applying mass-balance equation to conduct reasonable potential analysis for conservative pollutant under conditions of rapid and complete mixing



Mass-Balance Equation: $Q_sC_s + Q_dC_d = Q_rC_r$

Dividing both sides of the mass-balance equation by Q_r gives the following:

$$C_r = \frac{(Q_d)(C_d)+(Q_s)(C_s)}{Q_r}$$