GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Summary Page

Name of Facility Graphic Packaging International – Macon Mill

NPDES Permit No. GA0003581

This permit is a reissuance of an existing NPDES permit for Graphic Packaging International – Macon Mill. The facility is an integrated kraft pulp and paper complex that produces unbleached paper board via kraft pulping process. The facility discharges a maximum of 17.28 MGD of river water return and seepage from ash solids handling area commingled with stormwater. This facility discharges to an unnamed tributary to the Ocmulgee River and Rocky Creek in the Ocmulgee River Basin. The permit expired on February 28, 2019 and became administratively extended.

The permit was placed on public notice from April 29, 2021 to May 29, 2021.

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

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

- Removed effluent limit for total residual chlorine, as the non-contact cooling water wastestream has been removed from outfall 001.
- Reduced monitoring frequency for pH and specific conductivity from monthly to quarterly, as this the non-contact cooling water wastestream has been removed from outfall 001.

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

- Added a daily average total suspended solids (TSS) effluent limit of 164 mg/L and a daily maximum limit of 246 mg/L based on the demonstrated performance.
- Added monitoring for total phosphorus based on the *Strategy for addressing Phosphorus in NPDES Permitting* (2011).

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.
☒ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions document(s)

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Revisions to Draft Permit

Name of Facility Graphic Packaging International Inc.-Macon Mill

NPDES Permit No. GA0003581

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.1 The flow discharge monitoring requirement is now displayed in the "mass-based" column rather than the "concentration based" column. This change is clerical only and does not change the monitoring requirement, as the units will remain the same (MGD).

Part I.A.2 The monitoring frequency for flow has been modified from daily to monthly to correct a typographical error.

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 Graphic Packaging International Inc.-Macon Mill

NPDES Permit No. GA0003581

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 1.1 The factsheet did not properly identify the NPDES Permit number. The factsheet has been updated to correctly identify the permit number as GA0003581.

Section 1.10.b The fact sheet that was placed on public notice listed the daily average flow for outfall 002 as 0.000394 MGD. The factsheet has been updated to correctly show the daily average flow as 0.000282 MGD.

The permittee has been made aware of these changes.

Public Comments and EPD Responses on Draft NPDES Permit
Graphic Packaging International Inc. – Permit No. GA0003581

COMMENTS RECEIVED	EPD RESPONSE
Graphic Packaging is part of the food-service and consumer packaging industry with the Macon Mill supplying bleached paperboard for use in those applications. These consumer products are known to incorporate per- and polyfluoroalkyl substances (PFAS). Because the facility uses an industrial process that may result in the discharge of PFAS we urge Georgia EPD to take a close look at the wastewater discharged to Georgia's waters from the Macon Mill. As required by the Clean Water Act (CWA), EPD must require the disclosure of any PFAS in the Facility's discharge. If Graphic Packaging were to discharge PFAS and fail to disclose it in its NPDES permit application, it would violate the CWA. EPD would not have the information it needs to make a fully informed decision to issue the permit and the public would not have adequate information to meaningfully comment on it. The EPA Environmental Appeals Board's decision in *In re: Ketchikan Pulp Company* further emphasized the importance of disclosure,20 and this decision has been adopted by at least one Federal Court of Appeals. In *Piney Run Pres. Ass'n v. Cty. Comm'rs of Carroll Cty., Maryland,* the Fourth Circuit held: The *Ketchikan* decision therefore made clear that a permit holder is in compliance with the [Clean Water Act] even if it discharges pollutants that are not listed in its permit, as long as it only discharges pollutants that have been adequately disclosed to the permitting authority. […] *To the extent that a permit holder discharges a pollutant that it did not disclose, it violates the NPDES permit and the [Clean Water Act]*. EPD must require Graphic Packaging to disclose any discharges of PFAS in the company's permit application.	The Graphic Packaging International Inc. Macon Mill is not a producer of bleached paperboard products. The Macon Mill is an integrated kraft pulp and paper mill that produces coated unbleached linerboard. Additionally, NPDES Permit GA0003581 includes discharges of river water return, seepage from ash handling area, and stormwater. The process wastewater from the pulp and paper manufacturing is sent to a publicly owned treatment works and is covered under a pretreatment permit. Finally, in response to the comments received during the public comment period, EPD reached out to the facility. On June 23, 2021, the facility certified it does not use PFAS in their processing or manufacturing and that the facility does not have reason to believe PFAS would be present in the discharges due to contact with any raw materials, intermediate products, finished products, byproducts, or waste products (see Appendix B of this permit fact sheet for certification statement). Therefore, based on the information provided by the facility, EPD has not identified PFAS as a pollutant of concern for this facility and no effluent limits have been included in the permit

COMMENTS RECEIVED	EPD RESPONSE
If the Graphic Packaging Macon Facility is discharging PFAS, EPD must impose appropriate conditions, treatment methods, and effluent limits in the NPDES permit. The CWA requires permitting agencies to incorporate technology-based and water quality-based effluent limits on the discharge of pollutants. There are available technology-based limits to reduce the discharge of PFOAs from industrial wastewater.	As mentioned above in our responses and based on the information provided by the facility, PFAS is not believed present in the discharge, and therefore was not identified as a pollutant of concern and no effluent limits have been included in the permit. EPA recently issued its *Effluent Guidelines Program Plan 14* [EPA-821-R-21-001], fulfilling its requirements at Section 304(m) of the CWA to biennially publish a plan for new and revised effluent limitations guidelines. As part of this plan, EPA has indicated its intent to conduct a Multi-industry Detailed Study of industrial PFAS use, treatment and discharges to surface water and POTWs focusing on five point source categories: PFAS manufacturers, pulp and paper manufacturers, textile and carpet manufacturers, airports, and metal finishers. EPA has indicated that further study is required prior to initiating any revised federal rulemaking.
In addition to analyzing technology-based effluent limits, EPD must ensure that Georgia water quality standards will not be violated by the discharge. If there is a "reasonable potential" that water quality standards will be exceeded, EPD must include water quality-based effluent limits in the permit as well. Georgia water quality standards provide: "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." Ga. Comp. R. & Regs. 391-3-6-.03(5)(e).	As stated above in our responses, based on information provided by the facility, PFAS is not believed present in the discharge and therefore was not identified as a pollutant of concern, hence no effluent limits have been included in the permit

COMMENTS RECEIVED	EPD RESPONSE
As discussed above, PFAS are known to harm human health, and they certainly qualify as toxic substances under state law. Hence, should Graphic Packaging's Macon Facility be found to discharge these pollutants to Georgia's waters, appropriate conditions must be imposed to eliminate, or at least minimize these discharges. This process begins with disclosure and monitoring for PFAS, and the instant Permit renewal provides EPD with an opportunity to engage in this important work.	
In Section A.1.. Flow (MGD) is listed as "Report" under the "Mass Based" column in the table. In Section A.2., Flow (MGD) is listed as "Report" under the "Concentration Based" column in the table. For consistency, GPI requests that "Report" for Flow (MGD) monitoring be listed under a consistent column in the tables.	This has been revised in the final permit to list "Flow" under the "Mass Based" column in Section A.1 and A.2.
The draft permit requires Graphic Packaging International Inc. (GPI) to estimate the flow from Outfall 002 on a daily basis using the bucket and stopwatch method. Total phosphorus and total suspended solids would be required to be sampled on a monthly basis. As state in the permit factsheet, the maximum and average daily flowrate from Outfall 002 is 0.000652 MGD and 0.000394 MGD, respectively. GPI believes it is burdensome to estimate the flowrate from Outfall 002 on a daily basis given the relatively small flow through the outfall. GPI request that the flowrate be determined on a monthly basis consistent with the frequency required for the other monitoring of the outfall for total phosphorus and TSS.	The typographic error in the permit has been corrected. The flow monitoring frequency has been corrected to monthly, consistent with the frequencies with the other monitoring parameters.

Public Comments and EPD Responses on Draft NPDES Permit
Graphic Packaging International Inc. – Permit No. GA0003581

COMMENTS RECEIVED	EPD RESPONSE
Page 1 of the fact sheet states the NPDES Permit No. as GA0003185 GPI believes that this is a typographical error and that NPDES Permit No. should be GA0003581.	The typographic error in the permit fact sheet has been corrected.
The fact sheet lists the maximum daily flow as 0.000652 MGD and the average daily flow as 0.000394 MGD. GPI would like to notify EPD that 0.000394 MGD was listed as the 30-day maximum value for flow in Form 2C of the application. 0.000282 MGD was listed as the long-term average flow in Form 2C of the application.	EPD has corrected the permit fact sheet to reflect the average daily flow of 0.000282 MGD.
GPI would also like to notify Georgia EPD that more recent flowrate date has been collected for Outfall 002. The Outfall 002 flowrate data in the original permit application is based off of 2015-2018 monitoring reports. More recent data suggests the daily maximum flow for Outfall 002 is 0.006 MGD. The average flow for 2017-present is approximately 0.000729 MGD.	GPI provided a follow up comment to provide clarification. GPI will not increase flow above that which was previously provided in the permit application without requesting a permit modification, which they would submit as a separate application in the future, as required.

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

Ms. Kathleen Fortney, Environmental Manager
Graphic Packaging International Inc.
100 Graphic Packaging International Way
Macon, Georgia 31206

08/17/2021

RE: Permit Issuance
Graphic Packaging International
NPDES Permit No. GA0003581
Bibb County

Dear Ms. Fortney:

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 Shante Bailey at 470.524.5789 or *Shante.Bailey@dnr.ga.gov*.

Sincerely,

Richard E. Dunn
Director

Enclosure(s)
cc: EPD Watershed Compliance Program, Ms. 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. GA0003581
Issuance Date: 08/17/2021

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,

Graphic Packaging International
100 Graphic Packaging International Way
Macon, Georgia 31206

is issued a permit to discharge from a facility located at

Graphic Packaging International
100 Graphic Packaging International Way
Macon, Georgia 31206
Bibb County

to receiving waters

Ocmulgee River (Outfall 001) and an unnamed tributary to Rocky Creek (Outfall 002) in the Ocmulgee 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 April 06, 2021, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on September 01, 2021.

This permit and the authorization to discharge shall expire at midnight August 31, 2026.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

Richard E. Dunn, Director
Environmental Protection Division

PART I

A.1. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 001[1] (32.768056,-83.601111) – River water return.

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			Monthly	Estimate[3]	Final Effluent
Specific Conductivity			Report	Report	Quarterly	Grab	Final Effluent

[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] The effluent flow is estimated by taking the incoming water flow and subtracting the South basin make-up water (water flow to the mill) in MGD.

A.2. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 002[1] (32.768611,-83.630556) – Seepage from ash handling area commingled with 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			Monthly	Estimate[3]	Final Effluent
Total Phosphorus			Report	Report	Monthly	Grab	Final Effluent
Total Suspended Solids			164	246	Monthly	Grab	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month 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] The effluent flow is estimated by using the bucket and stop watch method.

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, 2025, 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: N/A

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. 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: Shante Bailey (*Shante.Bailey@dnr.ga.gov)*
404-463-2163

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

1.0 FACILITY INFORMATION

1.1 NPDES Permit No.: GA0003581

1.2 Name and Address of Owner/Applicant

Graphic Packaging International, Inc.
100 Graphic Packaging International Way
Macon, Georgia 31206

1.3 Name and Address of Facility

Graphic Packaging International, Inc.
100 Graphic Packaging International Way
Macon, Georgia 31206
(Bibb County)

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

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	32° 46' 05" N (32.76856)	83° 36' 04" W (-83.601111)	Ocmulgee River
002	32° 46' 07" N (32.768611)	83° 37' 50" W (-83.630556)	Unnamed tributary to Rocky Creek

1.5 Production Capacity

Not applicable

1.6 SIC Code & Description

2631 – Paperboard Mills
2611 – Pulp Mills

1.7 Description of Industrial Processes

Graphic Packaging International, is an integrated kraft pulp and paper complex that produces unbleached paper board via kraft pulping process. The process wastewater is pretreated through a system consisting of neutralization followed by primary clarification and biological treatment. The pretreated wastewater is discharged to the Macon Water Authority's Rocky Creek wastewater treatment system.

1.8 Description of the Wastewater Treatment Facility

Outfall	Operation Description	Treatment Description
001	River water return loop	None
002	Seepage from ash solids handling area	None

1.9 Type of Wastewater Discharge

☐ process wastewater ☐ stormwater

☐ domestic wastewater ☐ combined

☒ other (River water return and seepage from ash solids handling area commingled with 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.a Outfall No. 001 – River water return

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	17.28	Not Provided
Biochemical Oxygen Demand,5-day (mg/L)	<5.0	Not Provided
Total Suspended Solids (mg/L)	5.0	Not Provided
Temperature, Winter (°F)	51.5	Not Provided
Temperature, Summer (°F)	Not Provided	Not Provided
Ammonia (mg/L)	<0.1	Not Provided
Total Phosphorus (mg/L)	<0.5	Not Provided

1.10.b Outfall No. 002 – Seepage from ash solids handling area commingled with stormwater

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.000652	0.000282
Biochemical Oxygen Demand,5-day (mg/L)	18.2	14.57
Total Suspended Solids (mg/L)	290	188
Temperature, Winter (°F)	72.32	66.02
Temperature, Summer (°F)	75.2	75.2
Ammonia (mg/L)	0.514	Not Provided
Total Phosphorus (mg/L)	<0.1	Not Provided

2.0 APPLICABLE REGULATIONS

2.1 State Regulations

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

2.2 Federal Regulations

Source	Activity	Applicable Regulation
Industrial	Non-Process Water Discharges	40 CFR 122 40 CFR 125 40 CFR 127 40 CFR 136

2.3 Industrial Effluent Limit Guideline(s)

Code of Federal Regulations, 40 CFR Part 430 The Pulp, Paper, and Paperboard Point Source Category, Subpart C – Unbleached Papergrade Kraft.

The discharge from Outfalls 001 and 002 are nonprocess wastewater, therefore the regulations at 40 CFR 430, Subpart C – Unbleached Papergrade Kraft is not applicable.

3.0 WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of use classifications, numeric and or narrative water quality criteria and an 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 Ocmulgee River and Rocky 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	328	298	Data unavailable[1]	2586	Data unavailable[2]
002	0.01	0.01	Data unavailable[1]	0.4	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

The Ocmulgee River (Walnut Creek to Tobesofkee Creek) is listed as supporting the designated use. Per the 2018 305(b)/303(d) list, the unnamed tributary to Rocky Creek in the Ocmulgee River basin is not listed, therefoe, it is considered to be supporting the designated use of fishing.

Reach Name/ID	Reach Location/County	River Basin/ Use	Assessment/ Data Provider	Cause/ Source	Size/Unit	Category/ Priority	Notes
Ocmulgee River	Walnut Creek to Tobesofkee Creek	Ocmulgee	Supporting		11	1	TMDL completed FCG(PCBs) 2007.
GAR030701031614	Bibb	Fishing	1		Miles		

3.4 Total Maximum Daily Load (TMDL)

In 2007, a TMDL was developed for PCB's in the Ocmulgee River Basin. There are no permitted point source dischargers with existing allocations for PCBs. There are, however, several point sources, as well as permitted stormwater discharges in this watershed. The TMDL for the Ocmulgee River is $1x10^{-3}$ kg/day. Based on effluent data for both outfalls, it was determined that PCBs are not a pollutant of concern, and no limits for PCB have been included.

In 2007, a TMDL was developed for fecal coliform in the Rocky Creek area of the Ocmulgee River Basin. The TMDL for Rocky Creek is $8.22x10^{11}$ counts /day. Based on effluent data for both outfalls it was determined that fecal coliform is not a pollutant of concern, and no limits for fecal coliform have been included.

3.5 Wasteload Allocation Date

October 15, 2018

See Appendix A of the Fact Sheet

4.0 EFFLUENT LIMITS AND PERMIT CONDITIONS

4.1 Reasonable Potential Analysis (RP)

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

biomonitoring data and other pertinent information in EPD's files will be considered in accordance with the review procedures specified in the Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedance in the numeric or narrative criteria.

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

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

4.2 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.

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

4.3 Applicable Water Quality and Technology Based Effluent Limitations

Water Quality Based Effluent Limits (WQBELs)

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

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

The term *pollutant* is defined in CWA section 502(6) and § 122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and § 401.16 (BOD_5, TSS, fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

Applicable Technology Based Effluent Limits (TBELs)

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

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

4.4 Conventional Pollutants

Pollutants of Concern	Outfall ID	Basis
pH	002	WQBEL The instream waste concentration is 9.17%. When the instream waste concentration is less than 50%, there is no reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore a limit of 6.0 s.u. to 9.0 s.u has been retained.
		TBEL There is no applicable federal technology based effluent limit.
5-Day Biochemical Oxygen Demand	002	WQBEL The dissolved oxygen sag (DOSAG) modeling results in the Wasteload Allocation dated October 15, 2018 did not indicate the need for a BOD_5 limit. The monitoring requirement for BOD_5 has been removed.
		TBEL There is no applicable federal technology based effluent limit.
Total Suspended Solids	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.
		TBEL EPD utilized 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. 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). EPD evaluated the demonstrated performance of the facility from January 2017 to October 2020. The long term mean and standard deviation of the data set is used in an online calculation sheet derived from Engineering Statistics Handbook by NIST/Sematech, to determine tolerance intervals for a normal distribution. This calculation gives us an upper one-sided tolerance interval based on a 95th.

	This upper one-sided tolerance interval is the daily average limit. To determine the daily maximum, in accordance with EPA guidance we multiple the monthly average limit by 1.5. The calculated 95th% of the daily averages is 164 mg/L, hence the daily average was determined to be 164 mg/L The daily maximum is calculated by multiplying the daily average concentration limit by 1.5 and determined to be 246 mg/L.

4.5 Nonconventional Pollutants

Pollutants of Concern	Outfall ID	Basis
Specific Conductance	001	WQBEL Georgia does not have Water Quality Standards for specific conductance. Conductivity is however a useful indicator of a wastewater treatment system's performance as it indicates the presence of inorganic dissolved solids such as nitrate, sulfate, phosphate, sodium, magnesium, iron, aluminum, etc. which are present in the discharge. Furthermore, conductivity is a useful indicator of changes in a water system as streams tend to have a relatively constant range of conductivity and significant changes of conductivity may be indicative of a potential change in facility operations or a change in the wastewater treatment system. Effluent monitoring has been retained from the previous permit for continued characterization of the effluent and receiving waters.
		TBEL There is no applicable federal technology based effluent limit.

Ammonia	001	WQBEL Based on the data submitted in the application, ammonia is reported to be below the detection limit, therefore, there is no reasonable potential to cause or contribute to an instream toxicity violation of the Georgia Water Quality Standard for ammonia.
		TBEL There is no applicable federal technology based effluent limit.
	002	WQBEL Based on the data submitted in the application, there is no reasonable potential to cause or contribute to an instream toxicity violation of the Georgia Water Quality Standard for ammonia.
		TBEL There is no applicable federal technology based effluent limit.
Total Phosphorus	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.
Total Residual Chlorine	001	WQBEL The non-contact cooling wastestream has been removed from the outfall 001 discharge. Based on the data submitted in the application TRC has not been identified as a pollutant of concern and effluent limits have been removed from outfall 001. See section 5.3 of this fact sheet for a discussion of anti-backsliding.
		TBEL There is no applicable federal technology based effluent limit.
	002	WQBEL Based on the data submitted in the application TRC has not been identified as a pollutant of concern and effluent limits and monitoring are not required for outfall 002.
		TBEL There is no applicable federal technology based effluent limit.

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

Pollutants of Concern	Outfall ID	Basis
Iron	001	WQBEL Georgia does not have Water Quality Standards for iron. Therefore, effluent limits and monitoring are not required for outfall 001.
		TBEL There is no applicable federal technology based effluent limit.
	002	WQBEL Based on the data submitted in the application iron has not been identified as a pollutant of concern and effluent limits and monitoring are not required for outfall 002.
		TBEL There is no applicable federal technology based effluent limit.

4.7 Calculations for Water Quality Based Effluent Limits

4.7.a Instream Waste Concentration (IWC)

Outfall 001

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

$$IWC = \frac{17280000\ \text{(gal/day)}}{(17280000\ \text{(gal/day)} + 211{,}950{,}464\ \text{(gal/day)})}$$

$$IWC = 0.0754$$

$$IWC = 7.54\%$$

Outfall 002

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

$$IWC = \frac{652\ \text{(gal/day)}}{(652\ \text{(gal/day)} + 6462\ \text{(gal/day)})}$$

$$IWC = 0.0917$$

IWC = 9.17%

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.

4.8.a Total Suspended Solids

Tolerance Intervals for the Normal Distribution

If I measured a sample of	**198**	items,		
and got a mean of	**49.80**			
and a standard deviation of	**51.41**			
then I can be	**99.0%**	certain		
that	**95.0%**	of the population		
will be contained…				
within the interval from:	-64.53245	to	164.1324	(a Two-sided Tolerance Interval)
below the value:	148.7389			(an Upper One-sided Tolerance Interval)
above the value:	-49.13894			(a Lower One-sided Tolerance Interval)

Daily Average	148.7	Upper One-Sided Tolerance Interval
Daily Maximum	223.1	Daily Average * 1.5

You can ignore the following intermediate quantities used in the calculation:

z(1-p):	1.644854	
z(1-g):	2.326348	
a:	0.986264	
b:	2.678211	
k1:	1.924508	
df:	197	1.959964
z((1-p)/2):	1.959964	
Excel's ChiSq(g,n-1):	153.7823	
Robust ChiSq(g,n-1):	153.7823	
k2:	2.223934	

Daily Average =164 (mg/L)

Daily Maximum = 1.5 x Daily Average

Daily Maximum = 1.5 x 164 (mg/L)

Daily Maximum = 246 (mg/L)

Date	TSS (mg/L)	Date	TSS (mg/L)	Date	TSS (mg/L)	Date	TSS (mg/L)	Date	TSS (mg/L)
1/10/2017	61.0	10/10/2017	17.0	7/24/2018	48.0	5/21/2019	10.0	3/3/2020	23.0
1/17/2017	20.0	10/17/2017	60.0	8/7/2018	54.0	5/28/2019	71.0	3/10/2020	10.0
1/24/2017	32.0	10/24/2017	16.0	8/14/2018	8.0	6/4/2019	16.0	3/17/2020	80.0
1/31/2017	12.0	11/7/2017	39.0	8/21/2018	50.0	6/11/2019	46.0	3/24/2020	463.0
2/7/2017	51.0	11/14/2017	114.0	8/28/2018	19.0	6/18/2019	5.0	4/7/2020	16.0
2/14/2017	193.3	11/21/2017	152.0	9/4/2018	79.0	6/25/2019	43.0	4/14/2020	25.0
2/21/2017	26.0	11/28/2017	68.0	9/11/2018	64.0	7/2/2019	15.0	4/22/2020	126.0
2/28/2017	17.3	12/5/2017	51.0	9/18/2018	89.0	7/9/2019	80.0	4/28/2020	23.0
3/7/2017	281.0	12/12/2017	47.0	9/25/2018	6.0	7/16/2019	13.0	4/29/2020	65.0
3/14/2017	12.0	12/19/2017	38.0	10/2/2018	171.0	7/23/2019	58.0	5/5/2020	17.0
3/21/2017	89.0	12/27/2017	14.0	10/9/2018	39.0	7/30/2019	33.0	5/12/2020	18.0
3/28/2017	29.0	1/2/2018	22.0	10/16/2018	15.0	8/6/2019	92.0	5/19/2020	31.0
4/4/2017	63.0	1/9/2018	20.0	10/23/2018	21.0	8/13/2019	18.0	5/26/2020	42.0
4/12/2017	12.0	1/17/2018	46.0	10/30/2018	10.0	8/20/2019	108.0	6/2/2020	17.0
4/18/2017	28.0	1/23/2018	86.0	11/6/2018	8.0	8/27/2019	27.0	6/9/2020	39.0
4/25/2017	41.0	1/30/2018	44.0	11/13/2018	77.0	9/3/2019	84.0	6/16/2020	18.0
5/2/2017	72.0	2/6/2018	54.0	11/20/2018	42.0	9/10/2019	110.0	6/23/2020	65.0
5/9/2017	73.0	2/13/2018	24.0	11/27/2018	63.0	9/17/2019	77.0	6/30/2020	73.0
5/16/2017	99.0	2/20/2018	46.0	12/4/2018	11.0	9/24/2019	28.0	7/7/2020	53.0
5/23/2017	8.0	2/27/2018	10.0	12/11/2018	52.0	10/1/2019	63.0	7/14/2020	83.0
5/30/2017	47.0	3/6/2018	49.0	12/18/2018	9.0	10/8/2019	34.0	7/21/2020	48.0
6/6/2017	77.0	3/13/2018	33.0	12/25/2018	49.0	10/15/2019	44.0	7/28/2020	38.0
6/13/2017	34.0	3/20/2018	37.0	1/1/2019	25.0	10/22/2019	14.0	8/4/2020	72.0
6/19/2017	12.0	3/27/2018	4.0	1/8/2019	87.0	10/29/2019	57.0	8/11/2020	47.0
6/20/2017	14.0	4/3/2018	32.0	1/15/2019	11.0	11/6/2019	19.0	8/18/2020	30.0
6/21/2017	6.0	4/10/2018	33.0	1/22/2019	79.0	11/12/2019	51.0	8/25/2020	76.0
6/27/2017	85.0	4/17/2018	61.0	2/5/2019	84.0	11/19/2019	21.0	9/1/2020	94.0
7/4/2017	31.0	4/24/2018	50.0	2/12/2019	27.0	11/26/2019	39.0	9/7/2020	54.0
7/11/2017	2.0	5/1/2018	59.0	2/19/2019	68.0	12/3/2019	53.0	9/14/2020	11.0
7/25/2017	39.0	5/8/2018	24.0	2/26/2019	9.0	12/10/2019	41.0	9/16/2020	13.0
8/1/2017	87.0	5/15/2018	118.0	3/5/2019	49.0	12/17/2019	13.0	9/23/2020	12.0
8/8/2017	51.0	5/22/2018	13.0	3/12/2019	18.0	12/24/2019	24.0	9/29/2020	12.0
8/15/2017	23.0	5/29/2018	21.0	3/20/2019	33.0	12/31/2019	40.0	10/6/2020	66.0
8/22/2017	70.0	6/5/2018	4.0	3/26/2019	11.0	1/7/2020	49.0	10/13/2020	56.0
8/29/2017	64.0	6/12/2018	41.0	4/2/2019	22.0	1/14/2020	10.0	10/19/2020	30.0
9/5/2017	299.0	6/19/2018	14.0	4/9/2019	14.0	1/21/2020	126.0	10/27/2020	32.0
9/12/2017	99.0	6/26/2018	37.0	4/16/2019	47.0	1/28/2020	34.0	**Average**	**49.8**
9/19/2017	199.0	7/3/2018	18.0	4/23/2019	16.5	2/4/2020	53.0	**Std Dev.**	**51.4**
9/26/2017	156.0	7/10/2018	55.0	4/30/2019	16.0	2/11/2020	16.0		
10/3/2017	58.0	7/17/2018	15.0	5/7/2019	37.0	2/18/2020	42.0		
				5/14/2019	59.0	2/25/2020	46.0		

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 002

Parameter	WQBELs	TBELs	Explanation
Total Suspended Solids (mg/L)	Narrative	164/246	TBEL – BPJ
pH (s.u.)	6.0 – 9.0	None	WQBEL

5.0 OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Compliance Schedules

The permittee shall attain compliance with all limits on the effective date of the permit.

5.2 316(b) of Clean Water Act (CWA) Determination

The permitee has indicated that they no longer withdraw water exclusively for cooling purposes. They began implementing a river water loop elimination project in 2017 that was completed in November 2020 which eliminated the need for water withdrawn entirely for cooling purposes. Water will continue to be withdrawn for use in process areas; however, none of the water withdrawn will be used solely for cooling purposes. Any water used for cooling will also be used in process areas at the facility. EPD has determined the facility is no longer subject to the US EPA's 316(b) Cooling Water Intake Rule.

5.3 Anti-Backsliding

The limits in this permit are in compliance with the 40 C.F.R. 122.44(l), which requires a reissued permit to be as stringent as the previous permit. 40 C.F.R. 122.44(l)(2)(i)(B)(1) states, permit limits may be less stringent if "Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit reissuance". The non-contact cooling water wastestream from outfall 001 has been removed. Outfall 001 will only discharge river water return flows. Total residual chlorine is no longer a pollutant of concern from outfall 001, and the effluent limitations for total residual chlorine have been removed.

6.0 REPORTING

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

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

6.1 E-Reporting

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

7.0 REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

8.0 PERMIT EXPIRATION

The permit will expire five years from the effective date.

9.0 PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

9.1 Comment Period

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

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

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

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
Reasonable Potential Analysis

Reasonable Potential Analysis for Freshwater

Permit Name Graphic Packaging International Inc (outfall 001)
NPDES Permit No. GA0003581

Stream Data:

Receiving stream Hardness:	20	mg/L
Upstream TSS:	10	mg/L
7Q10:	328.00	ft^3/s
	211,977,216	gal/day
1Q10:	298.00	ft^3/s
	192,589,056	gal/day

Effluent Data:

Flow	17,280,000	gal/day
TSS	5.00	mg/L
Instream TSS:	9.62	mg/L
Acute Dilution factor:	12.15	
Chronic Dilution factor:	13.27	

Water Quality Criteria:

Mean annual streamflow at discharge:	2,586.00	ft^3/s
	1,671,259,392	gal/day
Dilution factor:	97.716	
IWC	7.537385432	

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

Acute Water Quality Criteria (WQC_{Acute})

Metal	K_{PD}	α	f_D	Maximum effluent C_T (µg/L)	Instream C_D (µg/L)	WQC_{Acute} (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.00	0.00	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	0.00	0.00	0.00	152.49	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.00	16.00	no
Copper	1.04.E+06	-0.744	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	0.29	54.80	1.31	29.97	no

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

Chronic Water Quality Criteria ($WQC_{Chronic}$)

Metal	K_{PD}	α	f_D	Average effluent C_T (µg/L)	Instream C_D (µg/L)	$WQC_{Chronic}$ (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.00	0.00	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	0.00	0.00	0.00	19.84	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.00	11.00	no
Copper	1.04.E+06	-0.744	0.35	13.40	0.35	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	0.29	54.80	1.20	30.21	no
Selenium	NA	NA	NA	0.00	0.00	5.00	no

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

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

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

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	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	--	--

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

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

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

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

NOTES:

(1) Chronic and acute total recoverable metal effluent concentration (C_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.

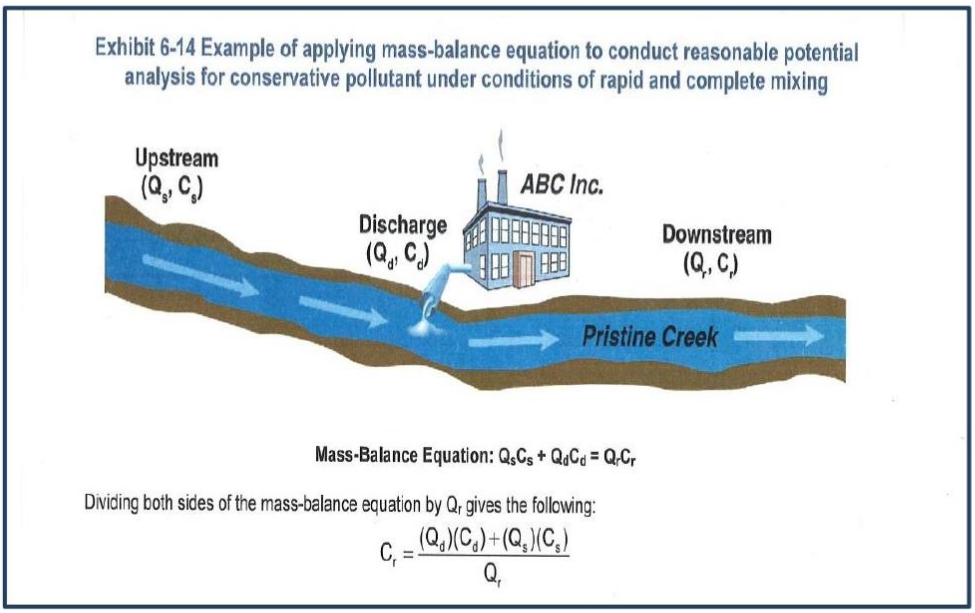
*If the calculated instream concentration is less than 50% of the instream water quality criteria, then the constinuent will be considered not to be present at levels of concern in the effluent and it will not be included in the permit.

*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

Ammonia Reasonable Potential Analysis

General Information			
Facility	Graphic Packaging International		outfall 001
Permit #	GA0003581		
Staff	Shante Bailey		
Date	19.Apr.21		
Upstream Conditions			**Basis**
Flow, Q_s	2586.00	cfs	QStream 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	17.280	MGD	effluent flow rate
Flow, Q_d	26.73	cfs	effluent flow rate
Concentration, C_d	0.09	mg/L	concentration
IWC	1.0	%	instream waste concentration
Predicted Downstream			**Basis**
Flow, Q_r	2612.73	cfs	calculated combined flow
Concentration, C_r	0.13	mg/L	calculated instream concentration
Applicable Criteria	0.70	mg/L	instream toxicity criteria as determined by WPMP
Ratio	19	%	predicted instream concentration as % of criteria
RP	**No**		is there reasonable potential to exceed criteria?
Action	**None**		what is appropriate permitting action?



Reasonable Potential Analysis for Freshwater

Permit Name Graphic Packaging International Inc (outfall 002)
NPDES Permit No. GA0003581

Stream Data:

Receiving stream Hardness:	20	mg/L
Upstream TSS:	10	mg/L
7Q10:	0.01	ft^3/s
	6,463	gal/day
1Q10:	0.01	ft^3/s
	6,463	gal/day

Effluent Data:

Flow	652	gal/day
TSS	290.00	mg/L
Instream TSS:	35.66	mg/L
Acute Dilution factor:	10.91	
Chronic Dilution factor:	10.91	

Water Quality Criteria:

Mean annual streamflow at discharge:	0.40	ft^3/s
	258,509	gal/day
Dilution factor:	397.486	
IWC	9.16409922	

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

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	0.00	0.00	0.00	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	0.00	0.00	0.00	152.49	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.00	16.00	no
Copper	1.04.E+06	-0.744	0.00	0.00	0.00	2.95	no
Lead	2.80.E+06	-0.800	0.15	6.00	0.08	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	0.22	54.40	1.08	29.97	no

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

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	0.00	0.00	0.00	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	0.00	0.00	0.00	19.84	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.00	11.00	no
Copper	1.04.E+06	-0.744	0.00	0.00	0.00	2.26	no
Lead	2.80.E+06	-0.800	0.15	6.00	0.08	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	0.22	54.40	1.08	30.21	no
Selenium	NA	NA	NA	0.00	0.00	5.00	no

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

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

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

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	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	--	--

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

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

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

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

NOTES:

(1) Chronic and acute total recoverable metal effluent concentration (C_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.

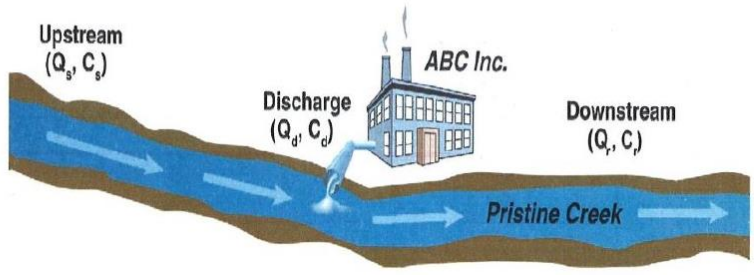
*If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that continuent will be placed in the permit.

End of report

Ammonia Reasonable Potential Analysis

General Information			
Facility	Graphic Packaging International		outfall 002
Permit #	GA0003581		
Staff	Shante Bailey		
Date	19.Apr.21		
Upstream Conditions			**Basis**
Flow, Q_s	0.04	cfs	QStream 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	0.007	MGD	effluent flow rate
Flow, Q_d	0.0101	cfs	effluent flow rate
Concentration, C_d	0.51	mg/L	concentration
IWC	20.1	%	instream waste concentration
Predicted Downstream			**Basis**
Flow, Q_r	0.05	cfs	calculated combined flow
Concentration, C_r	0.21	mg/L	calculated instream concentration
Applicable Criteria	1.30	mg/L	instream toxicity criteria as determined by WPMP
Ratio	16	%	predicted instream concentration as % of criteria
RP	**No**		is there reasonable potential to exceed criteria?
Action	**None**		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:

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

Appendix B
PFAS Certification Statement