

## Summary Page

**Name of Facility**     Mount Vernon Mills, Inc.

**NPDES Permit No.**   GA0001422

This permit is a reissuance of an NPDES permit for Mount Vernon Mills, Inc. The facility produces, dyes, and finishes broadwoven fabrics, and discharges a maximum of 3.65 MGD of once through non-contact cooling water for air chillers and ash settling pond wastewater. This facility discharges to the Chattooga River in the Coosa River Basin. The permit expired on September 30, 2020 and became administratively extended.

The permit was placed on public notice from February 28, 2023 to March 30, 2023.

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

#### Part I.A.1. – Effluent Limitations and Monitoring Requirements (Outfall 001)

- Added a daily average flow monitoring requirement in accordance with 40 CFR 122.45(d) and to be consistent with other industrial NPDES permits.
- Added total phosphorus and orthophosphate, as P monitoring based on the *Strategy for Addressing Phosphorus in NPDES Permitting* (2011).
- Removed specific conductance monitoring requirement based on best professional judgment.
- Modified the monitoring frequency for flow and temperature from weekly to monthly based on best professional judgment.

#### Part I.A.2. – Effluent Limitations and Monitoring Requirements (Outfall 002)

- Modified total suspended solids (TSS) concentration-based limits from 30 mg/L daily average and 100 mg/L daily maximum to 29 mg/L daily average and 44 mg/L daily maximum based on TSS demonstrated performance.
- Modified total suspended solids (TSS) mass-based limits from 28.39 kg/day daily average and 94.63 kg/day daily maximum to 60 lbs/day daily average and 92 lbs/day daily maximum based on Outfall 002 permitted flows.
- Added total phosphorus and orthophosphate, as P monitoring based on the *Strategy for Addressing Phosphorus in NPDES Permitting* (2011).

## **Summary Page**

### Part III.C.1 – Special Conditions

- Added 316(b) requirement applicable to cooling water intake structures for existing facilities.
- Removed Paragraph 1 from the previous permit addressing discharges of ash pond wastewater to the City of Trion POTW. The City of Trion operates an industrial pretreatment program and authorizes industrial wastewater discharges to its sewerage system.
- Removed Paragraphs 2 and 3 from the previous permit addressing metals and hardness sampling at Outfall 002. The permittee collected ten (10) data points over the previous permit term and EPD review indicated no reasonable potential to cause or contribute to an instream violation of water quality standards.

### Other

- Outfall 003 from the previous permit has been removed. Once-through fire protection pump testing water is an allowable non-stormwater discharge and will receive coverage under the industrial stormwater general permit (GAR050000).

### **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).

**Revisions to Draft Permit**

**Name of Facility** Mount Vernon Mills, Inc.

**NPDES Permit No.** GA0001422

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 III.E.5 Removed language that stated upon issuance of a coal combustion residual permit, as required under Chapter 391-3-4 Rules for Solid Waste Management, the permittee shall no longer be subject to the requirements of Part III.E of this NPDES permit. The rules and regulations under Chapter 391-3-4 do not apply to manufacturing facilities thus no coal combustion residual permit will be issued for the facility.

The permittee has been made aware of these changes.

**Revisions to Fact Sheet**

**Name of Facility** Mount Vernon Mills, Inc.

**NPDES Permit No.** GA0001422

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 5.4 Added in a discussion of per- and polyfluoroalkyl substances (PFAS) as they pertain to EPA's PFAS Strategic Roadmap, the textile industry as a whole, and the specific operations of Mount Vernon Mills, Inc.

The permittee has been made aware of these changes.

Mr. Ronald Beegle, Corporate Director of Environmental Affairs  
Mount Vernon Mills, Inc.  
P.O. Box 7  
Trion, Georgia 30753

06/26/2023

RE: Permit Issuance  
Mount Vernon Mills, Inc.  
NPDES Permit No. GA0001422  
Chattooga County, Coosa River Basin

Dear Mr. Beegle:

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

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

Environmental Protection Division  
Mountain District Office – Cartersville  
16 Center Road  
Cartersville, Georgia 30121

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 Ian McDowell at 470-604-9483 or [ian.mcdowell@dnr.ga.gov](mailto:ian.mcdowell@dnr.ga.gov).

Sincerely,



Richard E. Dunn  
Director

RED/im

Enclosure(s): Response to Comments, Final Permit, Permit Fact Sheet with Appendices

cc: EPD Mountain District (Cartersville) Compliance Office – Cindy Nix  
([cindy.nix@dnr.ga.gov](mailto:cindy.nix@dnr.ga.gov))  
EPD Watershed Planning and Monitoring Program – Josh Welte (e-mail)  
EPD Watershed Planning and Monitoring Program – Tyler Parsons (e-mail)

**Public Comments and EPD Responses on Draft NPDES Permit  
Mount Vernon Mills, Inc. – Permit No. GA0001422**

COMMENT RECEIVED	EPD RESPONSE
<p><b>EPA Comment:</b> The draft permit for Vernon Mill plant should include requirements for the permittee to characterize PFAS constituents in the ash pond discharge to surface waters. Although the permit also includes the discharge of non-contact cooling water, it is our assumption that non-contact cooling water is unlikely to have detectable levels of PFAS. However, it is likely that ash pond discharges may contain detectable levels of PFAS.</p> <p><b>Background:</b> The draft NPDES permit for the Vernon Mills plant located in Chattooga County, GA was received by EPA via email on March 1, 2023. This facility produces, dyes, and finishes broadwoven fabrics, and discharges a maximum of 3.65 MGD of once through non-contact cooling water for air chillers via outfall 001. Ash settling pond wastewater is discharged via outfall 002. The receiving surface waterbody for both outfalls is the Chattooga River, which is in the Coosa River Basin. The previous permit expired on September 30, 2020, and is administratively continued.</p> <p>The facility has an authorized pretreatment permit issued by GA EPD to send other process waters from the facility to the Trion WWTP, which is upstream of the City of Summerville’s drinking water intake.</p> <p>Results from EPA sampling in November 2019 identified several PFAS constituents in surface waters and sediments in segments of the Chattooga River Watershed downstream of the City of Summerville’s drinking water intake. Although the source of the PFAS was not clearly identified, possible contributing sources include the discharges from the City of Trion WWTP. Based on our current understanding of the treatability, and fate and transport, of PFAS constituents, it is possible that PFAS in process waters from the Vernon Mills facility are being indirectly discharged through the Trion WWTP, as well as being</p>	<p>In September 2021, EPA published the <i>Multi-Industry Per- and Polyfluoroalkyl Substances (PFAS) Study – 2021 Preliminary Report, EPA-821-R-21-004</i> which discussed information and data EPA collected on PFAS manufacture, use, control, and discharge by five point source categories. Since this initial report, EPA has initiated detailed studies of PFAS discharges from textile mills, the results of which are summarized in EPA’s <i>Effluent Guidelines Program Plan 15, EPA-821-R-22-004</i>. Based on the information and data EPA collected as part of these studies, EPA documented that PFAS have been, and continue to be, used by textile mills in the United States as part of their manufacturing processes.</p> <p>Manufacturing operations at the Mount Vernon Mills, Inc. facility in Trion, Georgia consist of production, dyeing, and finishing of broadwoven fabrics (cotton, polyester/cotton, cotton/nylon blends). All process wastewater generated as part of the textile manufacturing operations, however, has historically been discharged to the Town of Trion WPCP (NPDES Permit No. GA0025607) and covered under a separate permit. EPD has approved the Town of Trion’s industrial pretreatment program; as the control authority, the Town of Trion issues industrial user permits to indirect dischargers such as Mount Vernon Mills, Inc. Recently, as part of a proposed consent agreement between Mount Vernon Mills, Inc., the Town of Trion, and the Southern Environmental Law Center, representing the Coosa River Basin Initiative, Mount Vernon Mills, Inc. has agreed to eliminate the use of all PFAS by the end of 2023. While the agreement awaits federal court approval, the company has agreed to divert PFAS-containing industrial wastewater to an offsite treatment rather than send it through the Town of Trion’s treatment plant.</p>

**Public Comments and EPD Responses on Draft NPDES Permit  
Mount Vernon Mills, Inc. – Permit No. GA0001422**

COMMENT RECEIVED	EPD RESPONSE
<p>directly discharged from the mill’s outfalls 001 and 002.</p> <p>EPA believes the inclusion of a PFAS Characterization Study is appropriate for this permit in order to be proactive in protecting the receiving water bodies from adverse impacts on human health and aquatic life from PFAS compounds.</p> <p>Our request for GA EPA to include these requirements align with EPA’s December 5, 2022 memo entitled, “Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs”.</p>	<p>The wastestreams associated with this proposed permit reissuance for NPDES Permit No. GA0001422 do not include wastewater generated as part of the facility’s textiles manufacturing operations and are not impacted by the proposed consent agreement. Instead, as discussed further below, the wastewater discharged, pursuant to this permit is non-contact cooling water and ash pond wastewater related to the generation of electricity. As a result, PFAS are not expected to be pollutants of concern.</p> <p>The textile mill operates a steam plant to generate steam for textile processes by combusting either natural gas or coal in four boilers. In accordance with the facility’s air permit, each boiler is equipped with a venturi scrubber system which must be operated to control particulate matter and acid gases (HCl and HF) while burning coal. The venturi scrubber systems discharge to the facility’s two onsite ash ponds. The two ash ponds were constructed specifically to receive wastewater associated with the venturi scrubber systems and both historically and currently do not receive any process wastewater associated with the textile manufacturing process. Ash pond wastewater is piped directly from the ash ponds to the Chattooga River without commingling with any other facility wastestreams.</p> <p>Although the regulations for steam electric power generating point source dischargers at 40 CFR Part 423 do not apply to the discharges from this facility because generation of electricity is not the predominant source of revenue or principal reason for operation, the wastewater characterization from this outfall most closely resembles the characterization discussed in <i>Supplemental Technical Development Document for Revisions to the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, EPA-821-R-20-001</i> (August 2020) and the more recent</p>

**Public Comments and EPD Responses on Draft NPDES Permit  
Mount Vernon Mills, Inc. – Permit No. GA0001422**

COMMENT RECEIVED	EPD RESPONSE
	<p><i>Technical Development Document for Proposed Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, EPA-821-R-23-005</i> (February 2023). Neither of these guidance documents provided by EPA identify PFAS as a pollutant of concern in scrubber wastewater. Further, steam electric was not identified as an industry category known or suspected to discharge PFAS in EPA’s <i>PFAS Strategic Roadmap: EPA’s Commitments to Action 2021-2024</i> (October 2021)</p> <p>EPD therefore does not believe that PFAS are pollutants of concern in the discharge from Outfall 002.</p> <p>EPD further notes that at this time there is no US EPA-approved analytical method for sampling for PFAS in effluent or for instream sampling. In August 2021 EPA posted an initial draft of Method 1633, <i>Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS, EPA-821-D-21-001</i>. This draft analytical method is being developed by EPA for use in sampling of, <i>inter alia</i>, effluent and surface water. A second draft was posted June 2022, and a third draft in December 2022. EPA has announced plans for a fourth draft anticipated for early 2023. As noted in the initial draft, the method “is not required for Clean Water Act compliance monitoring until it has been proposed and promulgated through rulemaking.”</p> <p>Once an analytical method is approved by EPA and monitoring begins, information from in-stream sampling may be used to develop in-stream water quality standards for PFAS parameters. EPD may also reopen NPDES discharge permits and revisit its approved pretreatment programs to incorporate additional requirements as well.</p>





# 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,

Mount Vernon Mills, Inc.  
P.O. Box 7  
Trion, Georgia 30753

is issued a permit to discharge from a facility located at

91 Fourth Street, One Plaza Circle  
Trion, Georgia 30753  
Chattooga County

to receiving waters

Chattooga River (Outfalls 001 and 002) in the Coosa River Basin

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

This permit is issued in reliance upon the permit application signed on March 17, 2020, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on July 01, 2023.

This permit and the authorization to discharge shall expire at midnight June 30, 2028.



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<sup>1</sup> (34.545497, -85.311955) – Once through non-contact cooling water for air chillers.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements <sup>2</sup>		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	Report	Report			1/Month	Estimation <sup>3</sup>	Final Effluent
Total Phosphorus <sup>4</sup>			Report	Report	1/Month	Grab	Final Effluent
Orthophosphate, as P <sup>4</sup>			Report	Report	1/Month	Grab	Final Effluent
Temperature (°F)			Report	Report	1/Month	Instantaneous	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.

- <sup>1</sup> There shall be no discharge of floating solids or visible foam other than trace amounts.
- <sup>2</sup> All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- <sup>3</sup> Flow shall be calculated by determining the depth of water (head) flowing out of the pipe and using the pipe characteristics to calculate flow rate. The calculation shall be documented and retained on site. An alternative method for determining flow-rate may be used upon EPD approval.
- <sup>4</sup> Total phosphorus and orthophosphate, as P must be analyzed from the same sample on the same day.

**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<sup>1</sup> (34.544975, -85.310016) – Ash settling pond wastewater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements <sup>2</sup>		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	0.250	0.250			2/Month	Instantaneous	Final Effluent
TSS	60	92	29	44	2/Month	Grab	Final Effluent
Total Phosphorus <sup>3</sup>			Report	Report	1/Month	Grab	Final Effluent
Orthophosphate, as P <sup>3</sup>			Report	Report	1/Month	Grab	Final Effluent

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

- <sup>1</sup> There shall be no discharge of floating solids or visible foam other than trace amounts.
- <sup>2</sup> All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- <sup>3</sup> Total phosphorus and orthophosphate, as P must be analyzed from the same sample on the same day.

**B. Monitoring**

**1. Representative Sampling**

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

**2. Sampling Period**

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

**3. Monitoring Procedures**

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

**4. Detection Limits**

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

**5. Recording of Results**

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

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates and times the analyses were performed, and the person(s) performing the analyses;
- c. The analytical techniques or methods used;
- d. The results of all required analyses.

**6. Additional Monitoring by Permittee**

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

**7. Records Retention**

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

**8. Penalties**

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

**C. Definitions**

1. The "daily average" mass means the total discharge by mass during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
2. The "daily maximum" mass means the total discharge by mass during any calendar day.
3. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
4. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
5. A "calendar day" is defined as any consecutive 24-hour period.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Severe property damage" means substantial physical damage to property, damage to treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
8. "EPD" as used herein means the Environmental Protection Division of the Department of Natural Resources.
9. "State Act" as used herein means the Georgia Water Quality Control Act (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 2).
10. "Rules" as used herein means the Georgia Rules and Regulations for Water Quality Control.
11. "Cooling water intake structure" means the total physical structure and any associated constructed waterways used to withdraw cooling water from water of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from waters of the United States up to, and including the intake pumps.
12. "Design Intake Flow (DIF)" means the value assigned during the cooling water intake structure design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody. The facility's DIF may be adjusted to reflect permanent changes to the maximum capabilities of the cooling water intake system to withdraw cooling water, including pumps permanently removed from service, flow limit devices, and physical limitations of piping. DIF does not include values associated with emergency and fire suppression capacity or redundant pumps.

13. A “Biweekly” monitoring frequency is defined as once every two weeks.
14. “Entrainment” means any life stages of fish and shellfish in the intake water flow entering and passing through a cooling water intake structure and into a cooling water system, including the condenser or heat exchanger. Due to the lack of screening technologies employed by the facility, organisms which would have been collected on a sieve with a maximum opening distance of 0.56 inches, are counted as part of the entrainment numbers for the biological monitoring.

#### 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. CWA Section 316(b) Annual Reports;
  - b. Sewer Overflow/Bypass Event Reports;
  - c. Noncompliance Notification;
  - d. Other noncompliance; and
  - e. Bypass
3. **Other Reports**

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

**4. Other Noncompliance**

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

**5. Signatory Requirements**

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

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



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

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

## PART II

### A. Management Requirements

#### 1. Notification of Changes

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

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

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

## **2. Noncompliance Notification**

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

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

## **3. Facility Operation**

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

**4. Adverse Impact**

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

**5. Bypassing**

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

**6. Sludge Disposal Requirements**

Sludge shall be disposed of in accordance with the regulations and guidelines established by EPD, the Federal Clean Water Act, and the Resource Conservation and Recovery Act (RCRA). Prior to disposal of sludge by any method other than co-disposal in a permitted 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. Special Requirements**

##### **1. § 316(b) of the Clean Water Act (CWA) & Cooling Water Intake Structures**

- a. Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.
- b. The permittee shall operate the cooling water intake structure to ensure a maximum through-screen velocity of 0.5 feet per second is not exceeded. The maximum velocity must be achieved under all conditions, including during minimum ambient source water elevations and during periods of maximum head loss across the screens or other devices during normal operation of the intake structure. Due to the absence of an intake screen, the maximum through-screen velocity is defined as the intake velocity perpendicular to the opening of the intake. The permittee must monitor the through-screen velocity at a minimum frequency of daily. In lieu of through-screen velocity monitoring, the permittee may calculate the through-screen velocity using water flow, water depth, and the intake open area and document the calculations in accordance with Part I.D of the permit.
- c. The permittee shall utilize a combination of operational measures and biological monitoring to meet site-specific BTA standards for entrainment and to ensure operation of the cooling water intake structure minimizes adverse environmental impact. The permittee must comply with the following site-specific requirements:

- (i) The design intake flow (DIF) for the cooling water intake structure shall not exceed 3.4 MGD;
  - (ii) During the period of November through March, the cooling water intake structure shall utilize only the air compressor pumps, except where unseasonably warm weather conditions necessitate the use of the chiller pump (P2). Where use of the chiller pump is necessary, the pump shall be operated in a manner that minimizes the duration of use and quantity of water withdrawn to the maximum extent possible. The permittee shall additionally document the weather and operational conditions which required the use of the chiller pump. The permittee shall submit this information as an attachment to the DMR in accordance with Part I.D of the permit;
  - (iii) The permittee must monitor intake flows at a minimum frequency of daily; and
  - (iv) The permittee shall conduct biological monitoring for entrainment in accordance with Part III.C.1.d and Part III.C.1.e of this permit.
- d. Prior to the commencement of biological monitoring, the permittee shall develop a biological sampling plan and submit the plan to EPD for review and approval no later than three months after the effective date of the permit. At a minimum, the plan should:
- (i) Identify an entrainment sampling location which is representative of the intake water flow entering and passing through the cooling water intake structure and into the cooling water system;
  - (ii) Require the use of a 0.500 mm or less plankton net for sample collection;
  - (iii) Require a minimum of one daytime sample (defined as occurring between one hour after local sunrise and one hour before local sunset) and one nighttime sample (defined as occurring one hour after local sunset and one hour before local sunrise) for each 24-hour sampling period;
  - (iv) Require collection of a minimum sample volume of 100 m<sup>3</sup> for each sample;
  - (v) Require a record of the duration of each sample collection;
  - (vi) Identify a procedure to sort and identify collected organisms to the lowest distinguishable taxon; and
  - (vii) Identify quality control/quality assurance measures for the collection and identification of organisms

- e. Following EPD approval of the biological sampling plan, the permittee must monitor for entrainment of the commercial, recreational, and forage base fish and shellfish species identified in the *Source Water Baseline Biological Characterization* submitted with the application. Biological monitoring shall commence in September of 2023 and is required for a period of two years at the frequencies identified below. The results of the biological monitoring must be reported in accordance with Part I.D of this permit:
- (i) **During the months of March – August:** The permittee must collect samples at least biweekly, when the cooling water intake structure is in operation, to monitor entrainment rates (simple enumeration) over a 24-hour period for each species identified in the *Source Water Baseline Biological Characterization* submitted with the application.
  - (ii) **During the months of September – February:** The permittee must collect samples at least monthly, when the cooling water intake structure is in operation, to monitor entrainment rates (simple enumeration) over a 24-hour period for each species identified in the *Source Water Baseline Biological Characterization* submitted with the application.
  - (iii) In addition to the reporting of entrainment rates via simple enumeration, the permittee must calculate and report the mean density of each taxon for each 24-hour period and estimate entrainment based on the volume of water withdrawn by the cooling water intake structure for each 7-day or monthly period; whichever is applicable based on the required monitoring frequency.
  - (iv) EPD may modify the permit to establish additional control measures should biological monitoring for entrainment indicate the presence of the state and federally-threatened fine-lined pocketbook mussel.
- f. The permittee must either conduct visual inspections or employ remote monitoring devices on a weekly basis during the period in which the cooling water intake structure is in operation. Such inspections must ensure that any technologies operated to comply with 40 CFR 125.94 (impingement mortality and entrainment BTA standards) are maintained and operated to function as designed. The permittee must prepare an inspection report documenting the inspection or monitoring and the inspection report shall be submitted as an attachment to the DMR in accordance with Part I.D of the permit. The inspection report shall contain the following minimum elements:
- (i) Date, time, and location of the inspection or remote monitoring;
  - (ii) Water withdrawal rate during the time of the inspection;
  - (iii) Equipment/Technology identified as needing maintenance, repair or replacement, if any;

- (iv) Visual confirmation that the bar screen is cleared of debris and that the intake pipe and headrace overflow sluice are unobstructed;
  - (v) Name(s) and signature(s) of the inspector(s)
- g. The permittee shall submit an annual certification statement signed by the responsible corporate officer certifying either; no substantial operational changes have occurred at the facility that impact cooling water withdrawals or operation of the cooling water intake structures; or that substantial modifications have occurred. The certification statement should be submitted as an attachment to the DMR due June 15<sup>th</sup>.
  - 1. If the information contained in the previous year's annual certification is still pertinent, the permittee may simply state as such in a letter to the Director and the letter shall constitute the annual certification.
  - 2. If substantially modified operation of any unit has occurred at the facility that impacts cooling water withdrawals or operation of the cooling water intake structures, the permittee shall provide a summary of those changes in the report. In addition, revisions to the information required at 40 CFR 122.21(r) must be submitted with the next permit application.
- h. The permittee shall retain records of all submissions related to the permit application and permit conditions outlined in Part III.C.I of this permit until the subsequent permit has been issued.
- i. The permittee may in subsequent permit applications, request to reduce the information required in the 40 CFR 122.21(r) permit application studies, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. The permittee must submit its request for reduced cooling water intake structure and waterbody application information to the Director at least two years and six months prior to the expiration of its NPDES permit. The permittee's request must identify each element in this subsection that it determines has not substantially changed since the previous permit application and the basis for the determination.

**D. Biomonitoring and Toxicity Reduction Requirements**

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

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

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

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

**E. Coal Ash Pond Impoundment Integrity**

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

1. Operation and Maintenance
  - a. The following impoundments that are used to hold or treat wastewater and associated waste materials shall be operated and maintained to prevent the discharge of pollutants to waters of the United States, except as authorized under this permit, as follows:
    - (i) Ash Pond 1
    - (ii) Ash Pond 2

When practicable, piezometers or other appropriate instrumentation shall be installed as a means of assessing impoundment integrity.

- b. Within 90 days of the effective date of this permit, the permittee shall submit a report that identifies and shows the location of all pipes, utilities or other penetrations through or beneath the impoundment(s). A Georgia-registered professional engineer must certify in the report what, if any, pipes, utilities, and penetrations exist and their condition. The report must address these penetrations and provide an inspection frequency and method of evaluation for them.

## 2. Inspections

- a. Inspections of dams, dikes and toe areas for erosion shall, at a minimum, include observations of:
  - (i) Cracks or bulges;
  - (ii) Subsidence;
  - (iii) Wet or soft soil;
  - (iv) Changes in geometry;
  - (v) Elevation of the impounded water and freeboard, depth of sediment and slurry;
  - (vi) Changes in vegetation such as being overly lush;
  - (vii) Obstructive vegetation and trees;
  - (viii) Animal burrows;
  - (ix) Changes to liners (if applicable);
  - (x) Spillway integrity; and
  - (xi) Any other changes which may indicate a potential compromise to impoundment integrity.
- b. All impoundments shall be inspected at least **weekly** by qualified personnel with knowledge and training in impoundment integrity.
- c. All impoundments shall be inspected annually by a State-registered professional engineer or professional geologist with knowledge and training in impoundment integrity.
- d. The findings of each inspection shall be documented in a written inspection report and the personnel conducting the inspection will certify that the inspection occurred.
- e. The certified inspection report shall be submitted to EPD annually on June 30<sup>th</sup>.

## 3. Corrective Measures

- a. For Category I structures or structures regulated under the Safe Dams Act, the permittee shall coordinate with EPD (EPD's Safe Dams Unit, EPD assigned Compliance Office, and EPD's Emergency Response Contact) and the permittee's Engineer of Record **immediately (within 24 hours)** after discovering any changes that may be signs of an imminent impoundment failure, or potentially significant

compromise to the structural integrity of the impoundment; such as, but not limited to, significant increases in seepage or seepage carrying sediment, or as the formation of large cracks, slumping, or new wet areas not related to recent precipitation.

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

#### 4. Reporting and Recordkeeping Requirements

- a. **Within 5 days** of discovering conditions that indicate a potentially significant compromise to the structural integrity of the impoundment, the permittee must notify EPD (EPD's Safe Dams Unit and EPD assigned Compliance Office) in writing, describing the findings of the inspection, corrective actions taken, and expected outcomes.
- b. The permittee shall maintain records of all impoundment inspection and maintenance activities, including corrective actions made in response to inspections and all other activities undertaken to repair or maintain the impoundments referenced in this permit. All records shall be retained, and made available to State or Federal inspectors upon request.
- c. The permittee shall submit an **annual report** to EPD by June 30<sup>th</sup>, summarizing findings of all monitoring activities, inspections and corrective measures pertaining to the structural integrity, operation and maintenance of all impoundments referenced in this permit.
- d. All pertinent impoundment permits, design, construction, operation, and maintenance information, including but not limited to: plans, geotechnical and structural integrity studies, copies of permits, associated documentation of certifications by all qualified personnel, State-registered professional engineers, professional geologists, and regulatory approvals, shall be retained and made available to State or Federal inspectors upon request.
- e. The permittee shall maintain the applicable certification and training records of the personnel that conducted the inspections required under this Section.





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:** Ian McDowell (*ian.mcdowell@dnr.ga.gov*)  
470-604-9483

**Draft permit:**

<input type="checkbox"/>	First issuance
<input type="checkbox"/>	Reissuance with no or minor modifications from previous permit
<input checked="" type="checkbox"/>	Reissuance with substantial modifications from previous permit
<input type="checkbox"/>	Modification of existing permit
<input checked="" type="checkbox"/>	Requires EPA review
<input type="checkbox"/>	Designated as a major facility

## 1.0 FACILITY INFORMATION

1.1 **NPDES Permit No.:** GA0001422

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

Mount Vernon Mills, Inc.  
P.O. Box 7  
Trion, Georgia 30753

### 1.3 **Name and Address of Facility**

Mount Vernon Mills, Inc.  
91 Fourth Street, One Plaza Circle  
Trion, Georgia 30753  
(Chattooga County)

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

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	34° 32' 43.78" N (34.545497)	85° 18' 43.03" W (-85.311955)	Chattooga River
002	34° 32' 41.91" N (34.544975)	85° 18' 36.05" W (-85.310016)	Chattooga River

**1.5 Production Capacity**

Not applicable, See Section 2.3 of the Fact Sheet.

**1.6 SIC Code & Description**

**2211** – Broadwoven Fabric Mills, Cotton

**2261** – Finishers of Broadwoven Fabrics of Cotton

**2262** – Finishers of Broadwoven Fabrics of Manmade Fiber and Silk

**1.7 Description of Industrial Processes**

Producer of broadwoven fabrics. Dyeing & finishing of broadwoven fabrics of cotton and polyester/cotton or cotton/nylon blends.

**1.8 Description of the Wastewater Treatment Facility**

Outfall	Operation Description	Treatment Description
001	Once through noncontact cooling water for air chillers	Discharge to surface water
002	Ash settling pond wastewater	Sedimentation (settling), discharge to surface water

**1.9 Type of Wastewater Discharge**

- |   |                                     |
|---|-------------------------------------|
| <input checked="" type="checkbox"/> process wastewater  | <input type="checkbox"/> stormwater |
| <input type="checkbox"/> domestic wastewater  | <input type="checkbox"/> combined   |
| <input checked="" type="checkbox"/> other (once through non-contact cooling water for air chillers) |                                     |

FACT SHEET

---

**1.10 Characterization of Effluent Discharge as Reported by Applicant**  
(Please refer to the application for additional analysis)

**1.10.1** Outfall No. 001 - Once through non-contact cooling water for air chillers

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD) <sup>1</sup>	7.2	3.9
Biochemical Oxygen Demand, <sub>5-day</sub> (mg/L)	ND	N/A
Total Suspended Solids (mg/L)	ND	N/A
Temperature, Winter (°F)	80.0	78.8
Temperature, Summer (°F)	86.0	82.4
Ammonia (mg/L)	ND	N/A
Total Phosphorus (mg/L)	Believed Absent	N/A

<sup>1</sup>Discharge flows have since been reduced as a result of the retirement of yarn operations in Fall 2019.

**1.10.2** Outfall No. 002 - Ash settling pond wastewater

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD)	0.250	0.140
Biochemical Oxygen Demand, <sub>5-day</sub> (mg/L)	3.1	N/A
Total Suspended Solids (mg/L)	21	8.7
Temperature, Winter (°F)	55.4	N/A
Temperature, Summer (°F)	82.4	N/A
Ammonia (mg/L)	ND	N/A
Total Phosphorus (mg/L)	Believed Absent	N/A

**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-POTW)	Non-Process Water Discharges	40 CFR 122	
		40 CFR 125	
		40 CFR 127	
		40 CFR 136	
	Process Water Discharges	40 CFR 122	
		40 CFR 125	
		40 CFR 127	
		40 CFR 136	
		CWA 316(b) Cooling	40 CFR 122
		Water Intake Structures	40 CFR 125

**2.3 Industrial Effluent Limit Guideline(s)**

Code of Federal Regulations, 40 CFR Part 410  
Subpart D - Woven Fabric Finishing Subcategory

The provisions of this subpart are applicable to process wastewater discharges resulting from woven fabric finishing; therefore, its requirements do not apply to the discharges from outfalls 001 and 002. The facility’s process wastewater covered under 40 CFR 410 discharges to the Town of Trion WPCP (NPDES Permit No. GA0025607), which has an approved Industrial Pretreatment Program.

**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 designated use classifications, numeric and or narrative water quality criteria and an antidegradation policy. The designated use classification system identifies the designated 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 designated use for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses. Section 391-3-6-.3(5) of the GA Water Quality Control Act provide General Criteria for All Waters, commonly referred to as the narrative water quality standards, and Specific Criteria for Specific Designated Uses. In addition to the General Criteria the Specific Criteria in Section 3.1 below are deemed necessary for this waterbody and shall be required for the specific designated uses.

### 3.1 Receiving Waterbody Classification and Information

Designated Water Use: The designated water use for the Chattooga River (Cane Creek, Trion to Henry Branch) is fishing.

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

##### Fishing

Propagation of Fish, Shellfish, Game and Other Aquatic Life; primary contact recreation in and on the water for the months of May – October, secondary contact recreation in and on the water for the months of November – April; or for any other use requiring water of a lower quality.

(i) Bacteria:

1. Estuarine waters:

For the months of May through October, when primary water contact recreation activities are expected to occur, culturable enterococci not to exceed a geometric mean of 35 counts 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. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL the same 30-day interval.

For the months of November through April, culturable enterococci not to exceed a geometric mean of 74 counts 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. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 273 counts per 100 mL in the same 30-day interval.

2. All other fishing waters:

For the months of May through October, when primary water contact recreation activities are expected to occur, culturable E. coli not to exceed a geometric mean of 126 counts 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. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval.

For the months of November through April, culturable E. coli not to exceed a geometric mean of 265 counts 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. There shall be no greater than a ten percent excursion

## FACT SHEET

---

frequency of an E. coli statistical threshold value (STV) of 861 counts per 100 mL in the same 30-day interval.

3. 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.
4. 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.
  - (ii) 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.
  - (iii) pH: Within the range of 6.0 - 8.5.
  - (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

### 3.2 Ambient Information

Outfall ID	7Q10 (cfs)	1Q10 (cfs)	Hardness (mg/L as CaCO <sub>3</sub> )	Annual Average Flow (cfs)	Upstream Total Suspended Solids (mg/L)
001	48	37	96 <sup>1</sup>	287	Data unavailable <sup>2</sup>
002	48	37	96 <sup>1</sup>	287	Data unavailable <sup>2</sup>

<sup>1</sup> For the Reasonable Potential Analysis calculations, EPD used 96 mg/l based on the average hardness collected in the southern limestone/dolomite valleys & low rolling hills ecoregion (67f) from 1998-2020.

<sup>2</sup> For the Reasonable Potential Analysis calculations, EPD used 10 mg/l as a conservative value.

---

FACT SHEET

---

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

Chattooga River (Cane Creek, Trion to Henry Branch) is listed as not supporting the designated use.

2022 Integrated 305(b)/303(d) List - Streams

Reach Name/ID	Reach Location/County	River Basin/ Use	Assessment/ Data Provider	Cause/ Source	Size/Unit	Category/ Priority	Notes
Chattooga River	Cane Creek, Trion to Henry Branch	Coosa	Not Supporting	FC	7	4a	TMDL completed FC 2004.
GAR031501050608	Chattooga	Fishing	1,40	NP	Miles		

**3.4 Total Maximum Daily Load (TMDL)**

A TMDL was developed for fecal coliform in the Coosa River Basin in 2004. The TMDL requires all facilities with the potential for the occurrence of fecal coliform in their discharge be given end-of-pipe limits equivalent to the water quality standard of 200 counts/100 mL. In accordance with EPD’s *Bacteria Equivalency Strategy for Using the Optimal Indicator Organisms for WQS and NPDES Permitting, September 2022* (Bacteria Strategy) the TMDL was amended to replace fecal coliform bacteria with *e. coli*. Mount Vernon Mills, Inc. does not have the reasonable potential to have fecal coliform or *e. coli* in the discharge and was not listed in this TMDL.

A TMDL was developed for nutrient enrichment in Lake Weiss in Alabama in 2008. The TMDL requires Georgia to reduce total phosphorus loading by 30% in the Coosa River and Chattooga River at the State Line. Mount Vernon Mills, Inc. was not listed in this TMDL and has not been assigned a specific wasteload allocation.

**3.5 Wasteload Allocation Date**

May 20, 2020

See Appendix A of the Fact Sheet

**4.0 PERMIT CONDITIONS AND EFFLUENT LIMITATIONS**

**4.1 Water Quality Based Effluent Limitations (WQBELs) & Technology Based Effluent Limitations (TBELs)**

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed pollutants in a discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality criteria or standards. By analyzing the effect of a pollutant in the discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards or protect downstream users. In such cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation’s

waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (fishable/swimmable).

WQBELs are designed to protect water quality by ensuring water quality standards are met in the receiving water and the designated use and downstream uses are protected. On the basis of the requirements of 40 C.F.R. §125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

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

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

#### **4.2 Reasonable Potential Analysis (RPA)**

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

EPA regulations at 40 C.F.R. §122.44(d)(1)(ii) require States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criterion within a state water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia has reasonable potential procedures, based upon the specific category of pollutants and/or specific pollutant of concern. Chemical specific and biomonitoring data and other pertinent information in EPD’s files will be considered in accordance with the review procedures specified in the GA Rules and Regulations for Water Quality Control, Chapter 391-3-6 in the evaluation of a permit application and in the evaluation of the reasonable potential for a discharge to cause an exceedance in the numeric or narrative criteria.

The term “pollutant” is defined in CWA section 502(6) and 40 C.F.R. §122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and



## FACT SHEET

---

40 C.F.R. §401.16 (five day-biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as, but not limited to, chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

EPD evaluates the data provided in the application and supporting documents. If a pollutant is listed in the following sections of this fact sheet below, the permit writer determined the pollutant is a pollutant of concern and there may be a reasonable potential to cause or contribute to an instream violation of the Georgia water quality standards. If a pollutant is not listed below, EPD determined the pollutant is not a pollutant of concern or has determined, based on the data provided in the application, there is no reasonable potential to cause or contribute to an instream violation of the Georgia water quality standards. An example may be if the applicant reported “not detect” or “below detection limit”.

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

In accordance with 40 C.F.R. §122.44(d)(1)(iii), if the permit writer has determined, using a reasonable potential procedure the pollutant of concern in the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a state numeric or narrative criteria within a state water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant. If the permit writer has determined there is insufficient data, the permit writer might also consider monitoring requirements to collect the additional data related to the presence or absence of a specific pollutant to provide information for further analyses for the development of appropriate numeric or narrative standard .

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

The monitoring and sampling locations are prescribed in the permit and determined by the permit writer after considering, at a minimum, the following: type of discharge, specific

---

FACT SHEET

---

pollutant, discharge frequency, location of the discharge, receiving waterbody, downstream users, etc.

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

#### 4.3 Whole Effluent Toxicity

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

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

#### 4.4 Conventional Pollutants

Pollutants of Concern	Outfall ID	Basis
pH	001	<u>WQBEL</u> The instream waste concentration is 9.9%. When the instream waste concentration is less than 50%, there is no reasonable potential to cause or contribute to a violation of the instream Georgia Water Quality Standard for pH; therefore, a limit of no less than 6.0 s.u. and no greater than 9.0 s.u. has been added to the permit.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.
	002	<u>WQBEL</u> The instream waste concentration is 0.80%. When the instream waste concentration is less than 50%, there is no reasonable potential to cause or contribute to a violation of the instream Georgia Water Quality Standard for pH; therefore, a limit of no less than 6.0 s.u. and no greater than 9.0 s.u. has been added to the permit.
		<u>TBEL</u> There is no applicable federal technology based effluent limit.

FACT SHEET

---

Total Suspended Solids	001	<u>WQBEL</u> 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 to the permit.
------------------------	-----	---

---

TBEL  
There is no applicable federal technology based effluent limit.

---

	002	<u>WQBEL</u> 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 to the permit.
--	-----	---

---

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 May 2016 to February 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 the 95<sup>th</sup> percentile. This upper one-sided tolerance interval is the daily average limit. To determine the daily maximum, in accordance with EPA guidance, we multiply the daily average limit by 1.5.

The calculated 95<sup>th</sup> percentile is 28.8 mg/L, hence the daily average was determined to be 29 mg/L. The daily maximum was calculated by multiplying the daily average by 1.5, which result is 43.5 mg/L.

A limitation of 29 mg/L daily average and 44 mg/L daily maximum has been added to the permit. Mass-based effluent limitations of 60 lbs/day daily average and 92 lbs/day daily maximum have been derived from the concentration-based effluent limitations and included in the permit. The daily

FACT SHEET

average and daily maximum mass-based effluent limitations were translated based on Outfall 002 permitted flows.

**4.5 Nonconventional Pollutants**

Pollutants of Concern	Outfall ID	Basis
Temperature	001	<p><u>WQBEL</u> Per the State of Georgia Water Quality Standards, GA. Comp. R. &amp; Regs. 391-3-6-.03 paragraph 6(a)(v), temperature in the receiving stream shall not exceed 90 °F. Furthermore, at no time is the temperature of the receiving water to be increased more than 5 °F above intake temperature.</p> <p>Due to the contributions from once through non-contact water for air chillers at Outfall 001, monitoring for temperature has been retained from the previous permit.</p>
		<p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Specific Conductance	001	<p><u>WQBEL</u> Georgia does not have Water Quality Standards for specific conductance.</p> <p>Monitoring for specific conductance has been removed based on best professional judgment.</p>
		<p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Ammonia, Total Kjeldahl Nitrogen, Organic Nitrogen, Nitrate/Nitrite, Total Nitrogen	001, 002	<p><u>WQBEL</u> Discharges of total nitrogen directly to or within the watershed upstream from waterbodies with total nitrogen water quality standards must undergo an analysis to determine if the discharge has the reasonable potential to cause or contribute to instream water quality standard violations.</p> <p>Based on the data submitted in the application which indicated non-detect and believed absent, there is no reasonable potential to cause or contribute to an instream violation of Georgia Water Quality Standards. No effluent limitations or monitoring have been included for total nitrogen or the following nitrogen containing constituents: ammonia, organic nitrogen, total Kjeldahl nitrogen, and nitrate/nitrite.</p>

FACT SHEET

---

---

TBEL

There is no applicable federal technology based effluent limit.

---

Total Phosphorus, Orthophosphate, as P

001, 002

WQBEL

Total phosphorus measures all forms of phosphorus in a sample (orthophosphate, condensed phosphate, and organic phosphate). Orthophosphate, or reactive phosphorus is the amount of phosphorus available to chemically or biologically react.

Discharges of total phosphorus directly to or within the watershed upstream from waterbodies with total phosphorus water quality standards must undergo an analysis to determine if the discharge of the pollutants has the reasonable potential to cause or contribute to an instream violation of the water quality standard.

A TMDL was developed for nutrient enrichment in Lake Weiss in Alabama in 2008. The TMDL requires Georgia to reduce total phosphorus loading by 30% in the Coosa River and Chattooga River at the State Line.

Monitoring has been included in the permit for total phosphorus and orthophosphate to characterize loadings to the Chattooga River and in accordance with EPD's *Strategy for Addressing Phosphorus in NPDES Permitting* (2011).

---

TBEL

There is no applicable federal technology based effluent limit.

---

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

<b>Pollutants of Concern</b>	<b>Outfall ID</b>	<b>Basis</b>
Zinc, Total	001	<u>WQBEL</u> Based on a zinc concentration of 0.025 mg/L submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to an instream violation of the Georgia Water Quality Standard for zinc. Neither monitoring nor effluent limitations have been included in the permit.

---

TBEL

There is no applicable federal technology based effluent limit.

---

---

FACT SHEET

---

---

Copper, Total	001, 002	<u>WQBEL</u> Based on the data submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to an instream violation of the Georgia Water Quality Standard for copper. Neither monitoring nor effluent limitations have been included in the permit.
---------------	----------	---

---

TBEL  
There is no applicable federal technology based effluent limit.

---

Arsenic, Total	002	<u>WQBEL</u> Based on an arsenic concentration of 0.075 mg/L submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to an instream violation of the Georgia Water Quality Standard for arsenic. Neither monitoring nor effluent limitations have been included in the permit.
----------------	-----	--

---

TBEL  
There is no applicable federal technology based effluent limit.

---

Selenium, Total	002	<u>WQBEL</u> Based on a selenium concentration of 0.043 mg/L submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to an instream violation of the Georgia Water Quality Standard for selenium. Neither monitoring nor effluent limitations have been included in the permit.
-----------------	-----	---

---

TBEL  
There is no applicable federal technology based effluent limit.

---

**4.7 Calculations for Water Quality Based Effluent Limits**

**4.7.1 Instream Waste Concentration (IWC)**

**Outfall 001**

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

$$\text{IWC} = \frac{3,400,000 \text{ (gal/day)}}{(3,400,000 \text{ (gal/day)} + 31,021,056 \text{ (gal/day)})}$$

$$\text{IWC} = 9.9\%$$

**Outfall 002**

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

$$\text{IWC} = \frac{250,000 \text{ (gal/day)}}{(250,000 \text{ (gal/day)} + 31,021,056 \text{ (gal/day)})}$$

$$\text{IWC} = 0.80\%$$

**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.

---

FACT SHEET

---

#### 4.8.1 Total Suspended Solids

Reported TSS data for Outfall 002

Year	Month	Outfall 002
		TSS
2020	February	21.0
2020	January	20.0
2019	December	7.0
2019	November	9.0
2019	October	4.0
2019	April	9.0
2019	March	17.0
2019	February	8.0
2019	January	7.0
2018	December	5.0
2018	November	5.0
2018	October	5.0
2018	September	4.0
2018	August	9.0
2018	July	14.0
2018	June	7.0
2018	May	9.0
2018	April	17.0
2018	March	27.0
2018	February	17.0
2018	January	9.0
2017	December	7.0
2017	November	11.0
2017	July	13.0
2017	June	27.0
2017	May	14.0
2017	April	22.0
2017	March	22.0
2017	February	24.0
2017	January	16.0
2016	December	14.0
2016	November	22.0
2016	October	6.0
2016	September	11.0
2016	August	13.0
2016	July	15.0
2016	June	8.0
2016	May	19.0



**TSS Tolerance Intervals for Outfall 002**

If I measured a sample of	<b>38</b>	items,	
and got a mean of	<b>13.0</b>		
and a standard deviation of	<b>6.597</b>		
then I can be	<b>99.0%</b>	certain	
that	<b>95.0%</b>	of the population	
will be contained...			
<b>within</b> the interval from:	-4.83539	to	30.83539
			(a Two-sided Tolerance Interval)
<b>below</b> the value:	28.79627		(an Upper One-sided Tolerance Interval)
<b>above</b> the value:	-2.79627		(a Lower One-sided Tolerance Interval)

Daily Average: 29 (mg/L)  
 Daily Maximum = 1.5 x Daily Average  
 Daily Maximum = 1.5 x 29 (mg/L)  
 Daily Maximum = 44 (mg/L)

**4.9 Comparison & Summary of Water Quality vs. Technology Based Effluent Limits**

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

**Outfall 001:**

Parameter	WQBELs	TBELs	Explanation
pH (s.u.)	6.0 – 9.0	None	WBEL – WQS

**Outfall 002:**

Parameter	WQBELs	TBELs	Explanation
pH (s.u.)	6.0 – 9.0	None	WQBEL – WQS
Total Suspended Solids	Narrative	29/44 (mg/L) 60/92 (lbs/day)	TBEL – Demonstrated Performance

## **5.0 OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS**

### **5.1 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.

### **5.2 Compliance Schedules**

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

### **5.3 316(b) of Clean Water Act (CWA) Determination**

40 CFR 125 – Subpart J establishes CWA section 316(b) requirements that apply to cooling water intake structures at existing facilities. The cooling water intake structure at Mount Vernon Mills, Inc. is subject to the requirements of this subpart. The cooling water intake structure is defined as the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from water of the United States up to, and including the intake pumps. The diversion canal and headrace identified in the application submittal are considered constructed waterways and included as part of the cooling water intake structure for the purposes of this rule.

The 316(b) regulations require best technology available (BTA) standards for impingement mortality and entrainment. The facility has indicated that they intend to comply with impingement mortality BTA standard at 40 CFR 125.94(c)(3) which requires that the facility must operate a cooling water intake structure that has a maximum through-screen intake velocity of 0.5 feet per second. The intake structure utilizes a bar screen but does not have any screens/sieves with a maximum distance in the opening of less than or equal to 0.56 inches which distinguishes between “impingeable” and “entrainable” organisms. For the purposes of compliance with the BTA standard for impingement mortality, the maximum actual through screen velocity is calculated perpendicular to the opening of the intake pipe during minimum ambient source water surface elevations. Additionally, the facility will be required to monitor through-screen velocity at a minimum frequency of daily. In lieu of through-screen velocity monitoring at the intake pipe, the facility may calculate the through-screen velocity using water flow, water depth and the screen (*intake pipe*) open areas.

The Director must establish BTA standards for entrainment for each intake on a site-specific basis. These standards must reflect the Director’s determination of the maximum reduction in entrainment warranted after consideration of the relevant factors as specified in 40 CFR 125.98. EPD’s entrainment BTA determination includes a combination of operational measures and biological monitoring to ensure that operation of the cooling water intake structure minimizes adverse environmental impact. The permitted design intake flow (DIF) for the cooling water intake structure will be limited to 3.4 MGD. The DIF limit applies credit for the retirement of yarn operations at the facility and limits the proportion of the source water body withdrawn on a mean annual flow basis to 1.83%. Additionally, during the months of November through March, the cooling water intake structure will utilize only

## FACT SHEET

---

the air compressor pumps, except where unseasonably warm weather conditions necessitate the use of the chiller pump (P2). The use of air coolers and the three air compressor pumps during the winter months provides credit for seasonal flow reductions. Daily intake flow monitoring has been included in the permit to demonstrate compliance with these requirements. Additionally, in accordance with 40 CFR 125.96(a)&(b), the Director may establish monitoring requirements for impingement mortality and entrainment. Biological monitoring has been included as a condition of the BTA determination to demonstrate that the reduction of entrainment at the CWIS is maximized and adverse environmental impact is minimized. The facility will be required to monitor entrainment of the commercial, recreational, and forage base fish and shellfish species identified in the *Source Water Baseline Biological Characterization* submitted with the application. The permittee must collect samples at least biweekly to monitor entrainment rates (simple enumeration) for each species over a 24-hour period during the primary period of reproduction, larval recruitment, and peak abundance identified in the *Source Water Baseline Biological Characterization* (March – August) when the cooling water intake structure is in operation. During the months of September – February the permittee must collect samples at least monthly to monitor entrainment rates (simple enumeration) for each species over a 24-hour period. The permittee will also be required to report the mean density of each taxon and estimated entrainment based on the results of the biological sampling. Due to the lack of screening technologies employed by the facility, “impingeable organisms”, which would have been collected on a sieve with a maximum opening distance of 0.56 inches, are counted as part of the entrainment numbers. Biological monitoring is required at the frequencies identified for two (2) years.

Prior to the commencement of biological monitoring, the permittee will be required to develop a biological sampling plan and submit the plan to EPD for review and approval no later than three months after the effective date of the permit. The permit conditions outline minimum elements that the plan must contain.

The Director must provide a written explanation of the proposed entrainment determination in the fact sheet or statement of basis for the proposed permit under 40 CFR 124.7 or 124.8. The written explanation must describe why the Director has rejected any entrainment control technologies or measures that perform better than the selected technologies or measures, and must reflect consideration of all reasonable attempts to mitigate any adverse impacts of otherwise available better performing entrainment technologies. (40 CFR 125.98(f)) The site specific entrainment BTA determination **must** be based on the 5 factors listed at 40 CFR 125.98(f)(2). The weight given to each factor is within the Director’s discretion based upon the circumstances of the facility. Additionally, the Director **may** consider the 6 other factors listed at 40 CFR 125.98(f)(3) when making a BTA determination for entrainment. EPD has assigned weight to each of the factors based on the following rationale:

Numbers & Types of organisms entrained, including, specifically, the numbers and species (or lowest taxonomic classification possible) of Federally-listed, threatened and endangered species, and designated critical habitat (e.g., prey base)

Following closure of yarn operations at the Mount Vernon Mills, Inc. facility, the design intake flow (DIF) of the facility was reduced to 3.4 MGD. Additionally, during the winter months, the facility is able to utilize three air compressor pumps to further reduce the intake

flow to 0.51 MGD. With a DIF of 3.4 MGD, the CWIS withdraws 1.83% of the source water annual mean flow. During the winter months the percentage of source water annual mean flow withdrawn can drop to as little as 0.28%. EPA considers the calculated percentage of source water body withdrawn to be equivalent to the percentage of the source waterbody's entrainable organisms withdrawn by the CWIS. The 316(b) regulations for existing facilities do not define an acceptable percentage of source waterbody withdrawn but this information can be inferred from the 316(b) regulations for new facilities. For freshwater rivers or streams, new facilities must withdraw no greater than 5% of the source waterbody mean annual stream flow. EPA found these proportional flow limitations to represent limitations on capacity and location that are technically available and economically practicable for the industry as a whole. The Clean Water Act at 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. Design and construction warrant additional evaluation as they relate to entrainment reduction technologies and operational measures, but the location and capacity of the CWIS at Mount Vernon Mills, Inc. reflects BTA based on the proportional flow.

The number and types of organisms entrained was heavily weighted in EPD's BTA determination as the reduction of entrainment remains one of the primary enforcement mechanisms of EPA's Clean Water Act 316(b) regulations for minimizing adverse environmental impact.

In addition to the numbers and types of organisms entrained, the Director should specifically consider measures needed to protect federally-listed threatened and endangered species and designated critical habitat. The fine-lined pocketbook mussel (*hamiota altilis*) is federally-listed as "threatened" and was noted as potentially present within the study area as part of the source water baseline biological characterization. The study area is not however located within critical habitat for this mussel. The fine-lined pocketbook mussel is typically found in sand, gravel, and gravel-cobble substrates without heavy silt deposits. Such habitat is expected to be present further upstream, away from the low-head dam and diversion canal and the fine-lined pocketbook mussel is not expected to be directly impacted by impingement and entrainment. Additionally, the fine-lined pocketbook mussel's preferred host species (black bass) appears to have low relative abundance within the source water limiting the probability of indirect impingement and entrainment. Finally, the permit application was transmitted to the appropriate field office of the U.S. Fish and Wildlife Service and specific recommendations were not provided regarding protection of the fine-lined pocketbook mussel, thus protection of the threatened mussel was not specifically considered as part of the BTA entrainment determination. EPD may establish additional control measures at a later date should biological monitoring indicate the entrainment of the fine-lined pocketbook mussel.

#### Impact of changes in particulate emissions or other pollutants associated with entrainment technologies

The 316(b) regulations discuss the impact of changes in particulate emissions primarily in the context of the energy penalty incurred by steam-electric power generating facilities due to reduced turbine efficiency associated with retrofitting from once-through cooling to

---

## FACT SHEET

---

recirculating wet cooling towers. The operation of the CWIS at Mt. Vernon Mills, Inc. is utilized to control temperature and humidity of the facility's weaving operations. While the operation of a wet cooling tower may result in auxiliary power requirements for the facility, the corresponding increase in electricity generation will not have a substantial impact on particulate emissions as may occur in power plants. Additionally, Chattooga County is an attainment area for the National Ambient Air Quality Standards (NAAQs), thus this factor has been assigned no weight when evaluating entrainment reduction technologies.

### Land availability inasmuch as it relates to the feasibility of entrainment technology

The permittee has not provided evidence that land availability may be of concern as it relates to the feasibility of entrainment technologies (e.g., cooling towers). Additionally, public tax parcel information shows areas of undeveloped land contained within the property boundaries that could be evaluated when determining the feasibility of installing certain entrainment technologies. EPD has therefore assigned no weight to this factor when evaluating entrainment reduction technologies.

### Remaining useful plant life

The site-specific entrainment BTA determination must take into account the remaining useful plant life. EPA acknowledged that remaining useful plant life may impact the entrainment determination where the plant life is considerably shorter than the useful life of an entrainment technology. Additionally, EPA indicated that due to a combination of concerns over feasibility/availability, air emissions, and remaining useful life of the facility, closed-cycle recirculating systems were rejected as the basis for national impingement and/or entrainment controls. The Mount Vernon Mills, Inc. facility has operated at its current location for over 150 years and the remaining useful plant life was evaluated as part of the entrainment determination. No specific decommissioning date was identified with which to compare the useful life of the facility against the useful life of entrainment technologies. As such, EPD cannot afford significant weight as part of the site-specific entrainment BTA determination. The remaining useful plant life is however tied to its economic viability when compared to retrofit, operating, and other costs. EPD has provided consideration how retrofit costs for entrainment technologies may impact decisions regarding the remaining useful plant life.

### Quantified and qualitative social benefits and costs of available entrainment technologies when such information on both benefits and costs is of sufficient rigor to make a decision

While the Director must consider benefit and cost information, the Director will also determine if this information is of sufficient rigor to make a decision on entrainment controls on the basis of the information. The application provides a cursory examination of the social benefits/costs of the installation of closed-cycle cooling, but the information is not of sufficient rigor to make a decision regarding closed-cycle cooling, nor does it address other available entrainment reduction technologies. EPD has therefore assigned no weight to the quantified and qualitative social benefits and costs as part of its site-specific entrainment BTA determination.

---

## FACT SHEET

---

In addition to the 40 CFR 125.98(f)(2) factors discussed above, the Director may consider the factors listed in 40 CFR 125.98(f)(3) to the extent the applicant submitted information on these factors. The impact of these factors related to the entrainment determination is discussed below:

### Entrainment impacts on the waterbody

There are not sufficient records available within the study area to determine the site-specific entrainment impacts on the waterbody from the operation of the cooling water intake structure. This factor was not considered.

### Thermal discharge impacts

The Mt. Vernon Mills NPDES permit includes effluent temperature monitoring for its once-through non-contact cooling water discharge. Available data has not indicated the need for a mixing zone or limits to meet the Georgia Water Quality Standards requiring temperature in the receiving water not to exceed 90 °F and not to be increased more than 5 °F above intake temperature. Credit for thermal reductions have therefore not been considered as part of the entrainment determination; however, entrainment reduction technologies were evaluated to ensure that they did not increase thermal loading.

### Credit for reductions in flow associated with the retirement of units occurring within the ten years preceding October 14, 2014

While this factor is worded to specifically apply credit for the retirement of unit occurring within the ten years preceding the 2014 cooling water intake structure regulations, EPA expects flow reductions due to unit closures could be reasonably included as part of a facility's impingement mortality and entrainment reductions strategy. The facility retired all yarn operations in the Fall of 2019 and removed all associated equipment. Prior to the retirement of yarn operations, the facility utilized three large chiller pumps and three air compressor pumps which provided a total design intake flow (DIF) of 7.7 MGD. Following retirement of the process unit, the facility utilizes only one large chiller pump and three air compressor pumps which provide a total DIF of 3.4 MGD. It is difficult to determine an annualized flow reduction due to the facility's seasonal flow reductions, but the retirement represents a 56% DIF flow reduction for the summer months. Credit for the associated entrainment reductions has been assigned as part of the site-specific BTA determination.

### Impacts on the reliability of energy delivery within the immediate area

This factor is not applicable to Mt. Vernon Mills which is a manufacturing facility, not a power-generating facility.

### Impacts on water consumption

Entrainment reduction technologies such as closed-cycle cooling can increase water consumption due to evaporation. In areas affected by water scarcity, water consumption may be an important factor in an entrainment determination. There are no such water consumption

---

## FACT SHEET

---

concerns in the vicinity of the facility and considerations for water consumption have not been included in the entrainment determination. Additionally, due to the small proportion of the source waterbody withdrawn, significant evaporative losses downstream of the once-through cooling water discharge are not expected.

### Availability of process water, gray water, waste water, reclaimed water, or other waters of appropriate quantity and quality for reuse as cooling water

The facility does not currently use process water, gray water, wastewater, or reclaimed waters for reuse as cooling water. Process wastewater and non-process ash pond wastewater is discharged to the City of Trion's WPCP which operates an approved industrial pretreatment program. Given the characteristics of these wastewaters, and the readily available method of indirect discharge for the process wastewater, EPD has determined it would not be appropriate to reuse process wastewater or ash pond wastewater as cooling water. Additionally, intermittent fire pump protection test water and stormwater is not available at a sufficient quantity for reuse as cooling water.

The factors described above were used to evaluate available entrainment reduction technologies. Generally, entrainment reduction is achieved through flow reductions, with limited success from screening technologies. In evaluating flow reductions, EPD considered closed-cycle cooling systems, unit retirements, seasonal flow reductions, water reuse, and variable speed pumps/variable frequency drives as available entrainment reduction technologies. Additionally, substratum intakes and fine mesh screens have been evaluated as non-flow-based entrainment reduction technologies. Where applicable, EPD has provided explanation of why any entrainment control technologies or measures that perform better than the selected technologies/measures have been rejected.

### Closed-cycle cooling systems

EPA concluded that closed-cycle recirculating systems based on wet cooling towers are the most effective technology for reducing entrainment. Flow reductions and the equivalent entrainment reduction for wet cooling towers is assumed to be 97.5%. Closed-cycle cooling was not considered BTA on a national scale largely due to the impact of three factors: land availability, increased air emissions, and remaining useful life of the facility. As mentioned previously, land availability and air emissions are not of concern for this site. The primary concern associated with closed-cycle cooling at the facility relates to the remaining useful plant life. Although there is no set decommissioning date for the facility, basic costing information indicated an estimated retrofit cost of \$3.08 million and EPD expects that requiring closed-cycle cooling as BTA would negatively impact the remaining useful plant life. Considering the number and types of organisms currently entrained based on the proportion of the source water body withdrawn and the impact of installing a closed-cycle cooling system on the remaining useful plant life, EPD has rejected closed-cycle cooling as entrainment BTA. A closed-cycle cooling system would exceed the level of entrainment reduction warranted after consideration of the factors relevant for determining the best technology available for minimizing adverse impact at the facility.

### Substratum Intakes

EPA evaluated substratum intakes as a potential technology which would provide 100% reduction in impingement and entrainment. While effective in addressing entrainment, use of substratum intakes is not well demonstrated for design intake flows greater than 1 MGD. Additional concerns regarding the implementation of substratum intakes are the uncertainties regarding suitable soil characteristics in the area of the intake, required area for the well field, and initial capital costs. EPD has determined that substratum intakes are not an appropriate BTA standard for this facility.

### Variable Speed Pumps/Variable Frequency Drives (VSP/VFD)

The use of VFDs allows the flow through the intake pumps to be controlled over a range of flow volumes, thus allowing the flow volume to be tailored to the plant operating conditions. As such, EPA generally estimates flow reductions and therefore entrainment reductions of approximately 8-15%. VSPs would not be impacted by land availability and would have a negligible impact on the remaining useful plant life, as only one VSP would need to be installed at the facility. The operation of VSPs will have a negative impact on thermal discharges, as the temperature differential between the intake and final discharge will generally increase. The operation of VSPs would therefore need to be coordinated with Georgia's instream water quality standards for temperature.

The facility currently utilizes air cooling and three air compressor pumps rated at 0.17 MGD apiece during the winter months (~November-March) to achieve intake flow reductions. Additionally, during the summer months the intake pumps operate 24 hours a day for 4 days each week. The total number of operating days for the cooling water intake structure was reported by the facility as 192 days. Given the number of operating days and the current flexibility provided by the existing air compressor pumps, potential flow reductions related to the installation of a VSP at Pump 2 are limited. Given the cost of retrofit and potential thermal impacts compared to minimal flow reductions expected for the technology, EPD has rejected this technology as part of the entrainment BTA determination.

### Fine Mesh Screens

Fine mesh screens (mesh size of 5 mm or less) can be mounted on conventional traveling screen systems and are used to exclude eggs, larvae, and juvenile forms of fish from intakes. While fine mesh screens can approach 90% performance in entrainment exclusion, the survival of entrainables converted to impingement is an average of 12%. The success of fine mesh screens is dependent on adequate fish handling and return systems to allow the safe return of impinged organisms. The operation of fine mesh screens is not expected to have significant impact on any of the other BTA determination factors. Due to the level of expected mortality from entrainables which are converted to impingement fine mesh screens have not been selected as BTA for minimizing adverse environmental impact.



### Seasonal Flow Reductions

Seasonal flow reductions are generally considered a form of entrainment reduction when implemented during biologically important time periods (e.g., spawning season). Due to the seasonal nature of such flow reductions, the associated entrainment reductions cannot be directly correlated because the density of the organisms and their susceptibility to entrainment may vary over the year. The Mount Vernon Mills, Inc. CWIS includes three 1-HP (0.17 MGD each) air compressor pumps and one main chiller pump (2.9 MGD). During the months of November – March, the facility is expected to only operate the AC pumps, resulting in an intake flow of 0.51 MGD. During the warmer months of April – October, the main chiller pump is expected to be utilized, increasing the DIF to 3.4 MGD. This period of increased flow corresponds with biologically important time periods such as spawning season (April – June) and larval recruitment/peak larval abundance (March – August). As the period of seasonal flow reductions does not correlate with the period when the density of organisms and susceptibility of them to entrainment is the highest, entrainment reduction performance is somewhat limited and should be further paired with other operational measures or technologies to represent BTA at the facility. EPD’s entrainment BTA determination includes a combination of seasonal flow reductions, flow reductions associated with unit retirements, proportional flow limitations, and biological monitoring.

### **5.4 Per- and Polyfluoroalkyl Substances (PFAS)**

In September 2021, EPA published the *Multi-Industry Per- and Polyfluoroalkyl Substances (PFAS) Study – 2021 Preliminary Report, EPA-821-R-21-004* which discussed information and data EPA collected on PFAS manufacture, use, control, and discharge by five point source categories. Since this initial report, EPA has initiated detailed studies of PFAS discharges from textile mills, the results of which are summarized in EPA’s *Effluent Guidelines Program Plan 15, EPA-821-R-22-004*. Based on the information and data EPA collected as part of these studies, EPA documented that PFAS have been, and continue to be, used by textile mills in the United States as part of their manufacturing processes.

Process wastewater generated at Mount Vernon Mills, Inc. as part of the production, dyeing, and finishing of broadwoven fabrics (cotton, polyester/cotton, cotton/nylon blends) is discharged to Town of Trion WPCP (NPDES Permit No. GA0025607), which has an approved industrial pretreatment program. The control authority (i.e., Town of Trion) may elect to control discharges of PFAS to the publicly-owned treatment works (POTW) through the approved industrial pretreatment program. Additionally, EPD may evaluate the potential for pass-through, or interference to the POTW associated with PFAS discharges as part of the permit reissuance for the Town of Trion WPCP (NPDES Permit No. GA0025607). EPA’s memorandum *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs (December 2022)* provides guidance as to how PFAS may be addressed.

The wastestreams associated with this permit reissuance (NPDES Permit No. GA0001422) do not include wastewater generated as part of the textiles manufacturing process and are therefore not expected to contain PFAS. Discharges from outfall 001 consist of once through non-contact cooling water for air chillers. Due to the non-contact nature of the cooling water,

EPD does not expect PFAS to be pollutants of concern. Discharges from outfall 002 consist of ash pond wastewater. The textile mill operates a steam plant to generate steam for textile processes by combusting either natural gas or coal in four boilers. In accordance with the facility's air permit, each boiler is equipped with a venturi scrubber system which must be operated to control particulate matter and acid gases (HCl and HF) while burning coal. The venturi scrubber systems discharge to the facility's two onsite ash ponds. The two ash ponds were constructed specifically to receive wastewater associated with the venturi scrubber systems and both historically and currently do not receive any process wastewater associated with the textile manufacturing process. Ash pond wastewater is piped directly to the Chattooga River without commingling with any other facility wastestreams. As a result, EPD has not identified PFAS to be pollutants of concern in the discharge from outfall 002.

## **6.0 REPORTING**

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

Georgia Environmental Protection Division  
EPD Mountain District (Cartersville) Office  
16 Center Road  
Cartersville, Georgia 30121

### **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 1470A East  
Atlanta, Georgia 30334

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1470A 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](mailto:EPDcomments@dnr.ga.gov) within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

### **9.3 Public Hearing**

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

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

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

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

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

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

#### **9.4 Final Determination**

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

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

#### **9.5 Contested Hearings**

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

Petitions for a contested hearing must include the following:

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

**APPENDIX A – WASTELOAD ALLOCATION**

FACT SHEET

Memorandum

Date: May 20, 2020
To: Josh Welte
Through: Audra Dickson
From: Bianca Lindsay
Subject: Waste Load Allocation (WLA) Request
Mount Vernon Mills
NPDES Permit No. GA0001422
Chattooga County, Coosa River Basin

WLA request for the reissuance of the above referenced facility, which will expire on September 30, 2020. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)

Table with 2 columns: Parameter and Value. Rows include Outfall No.: 001, Name of Receiving Waters: Chattooga River, Average Flow (MGD): 3.9, Summer Temperature (max): 30°C, Lat/Long: 34.545497/-85.311955, River Basin: Coosa, Maximum (Design) Flow (MGD): 7.2, Winter Temperature (max): 26.1°C.

Description of Industrial Processes: Producer of broadwoven fabrics, and dyeing and finishing of broadwoven fabrics of cotton, and polyester/cotton or cotton/nylon blends.

Type of Wastewater Discharge:

- Process Wastewater, Cooling Water (checked), Stormwater, Domestic Wastewater, Other

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

- BOD5 Not Detected, Total Phosphorus Not Provided, DO Not Provided, TRC Not Provided, NH3 Not Detected, Temperature 30°C (summer max.)

FACT SHEET

**Watershed Planning and Monitoring Program**

- 7Q10 48 cfs
- 30Q3 62 cfs
- 1Q10 37 cfs
- Mean Annual Stream Flow 287 cfs
- Receiving Stream Hardness \_\_\_\_\_
- Upstream TSS \_\_\_\_\_
- Chronic instream NH<sub>3</sub> toxicity \_\_\_\_\_

Outfall No.: 002	Lat/Long: 34.544975/-85.310016
Name of Receiving Waters: Chattooga River	River Basin: Coosa
Average Flow (MGD): 0.140	Maximum (Design) Flow (MGD): 0.250
Summer Temperature (max): 28°C	Winter Temperature (max): 13°C

**Description of Industrial Processes:** Producer of broadwoven fabrics, and dyeing and finishing of broadwoven fabrics of cotton, and polyester/cotton or cotton/nylon blends.

Type of Wastewater Discharge:

- Process Wastewater
- Cooling Water
- Stormwater
- Domestic Wastewater
- Other (Ash settling pond)

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

- BOD<sub>5</sub> 3.1 mg/L
- Total Phosphorus Not Provided
- DO \_\_\_\_\_
- TRC Not Provided
- NH<sub>3</sub> Not Detected
- Temperature 28°C (summer max.)

**Watershed Planning and Monitoring Program**

- 7Q10 48 cfs
- 30Q3 62 cfs
- 1Q10 37 cfs
- Mean Annual Stream Flow 287 cfs
- Receiving Stream Hardness \_\_\_\_\_
- Upstream TSS \_\_\_\_\_
- Chronic instream NH<sub>3</sub> toxicity \_\_\_\_\_

**APPENDIX B – REASONABLE POTENTIAL ANALYSIS**



**FACT SHEET**  
**Appendix B**  
**Mount Vernon Mills, Inc.**  
**NPDES Permit No. GA0001422**  
**Outfall 001**

**Stream Data (upstream of the discharge):**

TSS:	<b>10</b>	mg/L
7Q10:	<b>48</b>	ft <sup>3</sup> /s
1Q10:	<b>37</b>	ft <sup>3</sup> /s
Mean flow:	<b>287</b>	ft <sup>3</sup> /s

**Effluent Data:**

Average Effluent TSS:	<b>0.0</b>	mg/L
Permitted Flow:	<b>3,400,000</b>	gal/day
Flow:	5.26	ft <sup>3</sup> /s

**Stream data (downstream of the discharge):**

Receiving Water Type:	<b>Freshwater</b>
Permit Type:	<b>Industrial</b>

Hardness:	<b>96.0</b>	mg/L
TSS (at 7Q10):	9.01	mg/L
Dilution factor (at mean annual flow):	55.6	
Dilution factor (at 7Q10):	10.12	
Dilution factor (at 1Q10):	8.03	

IWC (at mean annual flow):	2
IWC (at 7Q10):	9.9
IWC (at 1Q10):	12.4

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

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Number of samples	Maximum effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Acute</sub> (μg/L)	WQC <sub>Acute</sub> (adjusted) <sup>(1)</sup> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0		0.0	340	170	no
Cadmium	4.00.E+06	-1.131	0.000	0		0.0	1.727	0.863	no
Chromium III	3.36.E+06	-0.930	0.00	0		0.0	551	275.5	no
Chromium VI	3.36.E+06	-0.930	0.00	0		0.0	16.0	8.00	no
Copper	1.04.E+06	-0.744	0.35	1	<b>8.2</b>	0.36	12.93	6.47	no
Lead	2.80.E+06	-0.800	0.00	1	<b>0.0</b>	0.0	61.8	30.89	no
Mercury	---	---	---	0		0.0	1.40	0.700	no
Nickel	4.90.E+05	-0.572	0.00	0		0.0	452	226.2	no
Selenium	---	---	---	0		0.0	N/A	N/A	no
Zinc	1.25.E+06	-0.704	0.29	1	<b>25</b>	0.92	113.2	56.6	no

**NOTES:**

(1) The "adjusted" WQC is the WQC applicable to a pollutant based on the number of samples used in the analysis. In accordance with Georgia EPD's *NPDES Reasonable Potential Procedures*, January 2003, when less than 10 samples are used, the effluent concentration shall be compared to 50% of the WQC.

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

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

$$Dilution Factor = \frac{Q_{Stream} (ft^3/sec) + Q_{Effluent} (ft^3/sec)}{Q_{Effluent} (ft^3/sec)}$$

**FACT SHEET**  
**Appendix B**  
**Mount Vernon Mills, Inc.**  
**NPDES Permit No. GA0001422**

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

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Number of samples	Average effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Chronic</sub> (μg/L)	WQC <sub>Chronic</sub> (adjusted) <sup>(1)</sup> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0		0.0	150	75.0	no
Cadmium	4.00.E+06	-1.131	0.000	0		0.0	0.697	0.348	no
Chromium III	3.36.E+06	-0.930	0.00	0		0.0	71.7	35.84	no
Chromium VI	3.36.E+06	-0.930	0.00	0		0.0	11.0	5.50	no
Copper	1.04.E+06	-0.744	0.35	1	8.2	0.29	8.65	4.32	no
Lead	2.80.E+06	-0.800	0.00	1	0.0	0.0	2.407	1.204	no
Mercury	---	---	---	0		0.0	0.012	0.006	no
Nickel	4.90.E+05	-0.572	0.00	0		0.0	50.2	25.12	no
Selenium	---	---	---	0		0.0	5.00	2.50	no
Zinc	1.25.E+06	-0.704	0.29	1	25.0	0.73	114.1	57.1	no

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

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

**Total Recoverable Metal Effluent Limit**

Metal	C <sub>S</sub> (μg/L)	Chronic C <sub>T</sub> (μg/L)	Chronic C <sub>T</sub> (lb/day)	Acute C <sub>T</sub> (μg/L)	Acute C <sub>T</sub> (lb/day)
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
Selenium	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A

**NOTES:**

- Chronic and acute total recoverable metal effluent concentration (C<sub>T</sub>) from EPA 823-B-96-007, June 1996, page 33:

$$Chronic C_T = \frac{WQC_{Chronic} \times (Q_E + 7Q_{10}) - (7Q_{10} \times C_S)}{f_D \times Q_E}$$

$$Acute C_T = \frac{WQC_{Acute} \times (Q_E + 1Q_{10}) - (1Q_{10} \times C_S)}{f_D \times Q_E}$$

(1) The "adjusted" WQC is the WQC applicable to a pollutant based on the number of samples used in the analysis. In accordance with Georgia EPD's *NPDES Reasonable Potential Procedures*, January 2003, when less than 10 samples are used, the effluent concentration shall be compared to 50% of the WQC.

**FACT SHEET**  
**Appendix B**  
**Mount Vernon Mills, Inc.**  
**NPDES Permit No. GA0001422**  
**Outfall 002**

**Stream Data (upstream of the discharge):**

TSS:	<b>10</b>	mg/L
7Q10:	<b>48</b>	ft <sup>3</sup> /s
1Q10:	<b>37</b>	ft <sup>3</sup> /s
Mean flow:	<b>287</b>	ft <sup>3</sup> /s

**Effluent Data:**

Average Effluent TSS:	<b>21.0</b>	mg/L
Permitted Flow:	<b>250,000</b>	gal/day
Flow:	0.39	ft <sup>3</sup> /s

**Stream data (downstream of the discharge):**

Hardness:	<b>96</b>	mg/L
TSS (at 7Q10):	10.09	mg/L
Dilution factor (at mean annual flow):	742.9	
Dilution factor (at 7Q10):	125.08	
Dilution factor (at 1Q10):	96.65	

Receiving Water Type:	<b>Freshwater</b>
Permit Type:	<b>Industrial</b>

IWC (at mean annual flow):	0.13
IWC (at 7Q10):	0.80
IWC (at 1Q10):	1.03

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

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Number of samples	Maximum effluent C <sub>T</sub> (μg/L)	Instream C <sub>D</sub> (μg/L)	WQC <sub>Acute</sub> (μg/L)	WQC <sub>Acute</sub> (adjusted) <sup>(1)</sup> (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.53	1	<b>75</b>	0.4	340	170	no
Cadmium	4.00.E+06	-1.131	0.000	1	<b>0.0</b>	0.0	1.727	0.863	no
Chromium III	3.36.E+06	-0.930	0.00	1	<b>0.0</b>	0.0	551	275.5	no
Chromium VI	3.36.E+06	-0.930	0.00	1	<b>0.0</b>	0.0	16.0	8.00	no
Copper	1.04.E+06	-0.744	0.35	1	<b>8.3</b>	0.03	12.93	6.47	no
Lead	2.80.E+06	-0.800	0.00	1	<b>0.0</b>	0.0	61.8	30.89	no
Mercury	---	---	---	1	<b>0.0</b>	0.0	1.40	0.700	no
Nickel	4.90.E+05	-0.572	0.00	1	<b>0.0</b>	0.0	452	226.2	no
Selenium	---	---	---	1	<b>43</b>	0.4	N/A	N/A	no
Zinc	1.25.E+06	-0.704	0.00	1	<b>0.0</b>	0.00	113.2	56.6	no

**NOTES:**

<sup>(1)</sup> The "adjusted" WQC is the WQC applicable to a pollutant based on the number of samples used in the analysis. In accordance with Georgia EPD's *NPDES Reasonable Potential Procedures*, January 2003, when less than 10 samples are used, the effluent concentration shall be compared to 50% of the WQC.

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

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

$$Dilution Factor = \frac{Q_{Stream} (ft^3/sec) + Q_{Effluent} (ft^3/sec)}{Q_{Effluent} (ft^3/sec)}$$

**FACT SHEET**  
**Appendix B**  
**Mount Vernon Mills, Inc.**  
**NPDES Permit No. GA0001422**

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

Metal	K <sub>PO</sub>	α	f <sub>D</sub>	Number of samples	Average effluent C <sub>T</sub> (µg/L)	Instream C <sub>D</sub> (µg/L)	WQC <sub>Chronic</sub> (µg/L)	WQC <sub>Chronic</sub> (adjusted) <sup>(1)</sup> (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.53	1	75	0.3	150	75.0	no
Cadmium	4.00.E+06	-1.131	0.000	1	0.0	0.0	0.697	0.35	no
Chromium III	3.36.E+06	-0.930	0.00	1	0.0	0.0	71.7	35.84	no
Chromium VI	3.36.E+06	-0.930	0.00	1	0.0	0.0	11.0	5.50	no
Copper	1.04.E+06	-0.744	0.35	1	8.3	0.02	8.65	4.32	no
Lead	2.80.E+06	-0.800	0.00	1	0.0	0.0	2.407	1.204	no
Mercury	---	---	---	1	0.0	0.0	0.012	0.006	no
Nickel	4.90.E+05	-0.572	0.00	1	0.0	0.0	50.2	25.12	no
Selenium	---	---	---	1	43	0.3	5.00	2.50	no
Zinc	1.25.E+06	-0.704	0.00	1	0.0	0.00	114.1	57.1	no

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

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

**Total Recoverable Metal Effluent Limit**

Metal	C <sub>S</sub> (µg/L)	Chronic C <sub>T</sub> (µg/L)	Chronic C <sub>T</sub> (lb/day)	Acute C <sub>T</sub> (µg/L)	Acute C <sub>T</sub> (lb/day)
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
Selenium	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A

**NOTES:**

- Chronic and acute total recoverable metal effluent concentration (C<sub>T</sub>) from **EPA 823-B-96-007, June 1996, page 33:**

$$Chronic C_T = \frac{WQC_{Chronic} \times (Q_E + 7Q_{10}) - (7Q_{10} \times C_S)}{f_D \times Q_E}$$

$$Acute C_T = \frac{WQC_{Acute} \times (Q_E + 1Q_{10}) - (1Q_{10} \times C_S)}{f_D \times Q_E}$$

<sup>(1)</sup> The "adjusted" WQC is the WQC applicable to a pollutant based on the number of samples used in the analysis. In accordance with Georgia EPD's *NPDES Reasonable Potential Procedures*, January 2003, when less than 10 samples are used, the effluent concentration shall be compared to 50% of the WQC.

**APPENDIX C – TSS DEMONSTRATED PERFORMANCE**

**Tolerance Intervals for the Normal Distribution**

Fill in the following information:

If I measured a sample of **38** items,  
 and got a mean of **13.0**  
 and a standard deviation of **6.597448**  
 then I can be **99.0%** certain  
 that **95.0%** of the population  
 will be contained...

**within** the interval from: -4.83539 to **30.83539** (a Two-sided Tolerance Interval)

**below** the value: **28.79627** DAILY average LIMIT (an Upper One-sided Tolerance Interval)

**above** the value: -2.79627 (a Lower One-sided Tolerance Interval)

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

- z(1-p): 1.644854
- z(1-g): 2.326348
- a: 0.926866
- b: 2.563125
- k1: 2.3943
- df: 37 1.959964
- z((1-p)/2): 1.959964
- Excel's ChiSq(g,n-1): 19.96023
- Robust ChiSq(g,n-1): 19.96023
- k2: 2.703377

Reference:

NIST/Sematech Handbook, Section 7.2.6.3

<http://www.itl.nist.gov/div898/handbook/prc/section2/prc263.htm>

Note: The very last line on this page:

"The upper (one-sided) tolerance limit is therefore  $97.07 + 1.8752 \cdot 2.68 = 102.096$ ."

is wrong. The standard deviation is 0.0268, not 2.68, so the answer should be 97.12.

TSS

Year	Month	Outfall 002
		TSS
2020	February	21.0
2020	January	20.0
2019	December	7.0
2019	November	9.0
2019	October	4.0
2019	April	9.0
2019	March	17.0
2019	February	8.0
2019	January	7.0
2018	December	5.0
2018	November	5.0
2018	October	5.0
2018	September	4.0
2018	August	9.0
2018	July	14.0
2018	June	7.0
2018	May	9.0
2018	April	17.0
2018	March	27.0
2018	February	17.0
2018	January	9.0
2017	December	7.0
2017	November	11.0
2017	July	13.0
2017	June	27.0
2017	May	14.0
2017	April	22.0
2017	March	22.0
2017	February	24.0
2017	January	16.0
2016	December	14.0
2016	November	22.0
2016	October	6.0
2016	September	11.0
2016	August	13.0
2016	July	15.0
2016	June	8.0
2016	May	19.0

Outfall 002	
Average	13.0
Standard Deviation	6.597447672
Maximum	27.0
Number of Samples	38