

Final Summary Page

Name of Facility Milliken & Company – Nicholls Plant (Bacon County)

NPDES Permit No. GA0024619

This permit is a reissuance of an NPDES permit for Milliken & Company. The facility discharges an average of 0.17 MGD of treated process wastewater to an unnamed tributary to Little Hurricane Creek in the Satilla River Basin. The permit became administratively extended on January 1, 2017.

The permit was placed on public notice from May 18, 2018 to June 19, 2018. Comments were received and addressed.

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

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

- Changed daily average/daily maximum mass limits of 53/107 lb/day of BOD and revised it to 49/98 lb/day. The change is due to recommendations by Watershed Planning and Monitoring Program (WPMP) for a BOD₅-equivalent effluent limit developed in the 2001 Dissolved Oxygen TMDL.
- Changed daily average/daily maximum mass limits of 53/107 lb/day of TSS and revised it to 58.45/117 lb/day. The change is due to changes in production and are technology-based limits from the Federal Regulations.
- Changed daily average/daily maximum mass limits of 107/215 lb/day of COD and revised it to 117/234 lb/day. The change is due to changes in production and are technology-based limits from the Federal Regulations.
- Added monitoring only for Total Kjeldahl Nitrogen (TKN). Per *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients* as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for organic nitrogen to develop these models.
- Added monitoring only for Nitrate-Nitrite. Per *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients* as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for nitrate-nitrite to develop these models.
- Added monitoring only for Organic Nitrogen. Per *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients* as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for organic nitrogen to develop these models.
- Added a Total Phosphorus daily average limit of 66 lbs/month and 99 lbs/month daily maximum based on the 2001 D.O. TMDL and WLA. A compliance schedule was added to comply with the limit within 24 months of permit effective date. See Factsheet for additional information.
- Added a Total Nitrogen daily average limit of 16 lbs/month and 24 lbs/month daily maximum based on the 2001 D.O. TMDL and WLA. A compliance schedule was added to comply with the limit within 24 months of permit effective date. See Factsheet for additional information.

Final Summary Page

- Added monitoring only for Orthophosphate based on EPD's Strategy for Addressing Phosphorus in NPDES Permitting and WLA. See Factsheet for additional information.
- Changed pH from 6.0-9.0 s.u. to 6.0-8.5 s.u. A compliance schedule was added to comply with the limit within 24 months of permit effective date.
- Removed Dissolved Oxygen monitoring based on WLA recommendations.

Standard Conditions & Boilerplate Modifications

The permit boilerplate includes modified language or 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.
- Final permit includes changes from the draft permit placed on public notice. See attached permit addendum and/or permit fact sheet addendum.
- Public comments were received during public notice period.
- Public hearing was held.

Final Permit Addendum

Name of Facility Milliken & Company – Alma Plant (Bacon County)

NPDES Permit No. GA0024619

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

Yes No

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

The measurement frequency for fecal coliform was changed from 1/Week to 2/Month.

The permittee has been made aware of these changes.



ENVIRONMENTAL PROTECTION DIVISION

JUL 13 2018

Richard E. Dunn, Director

EPD Director's Office
2 Martin Luther King, Jr. Drive
Suite 1456, East Tower
Atlanta, Georgia 30334
404-656-4713

Mr. Lee Slusher, Senior Environmental Engineer
Milliken & Company
P.O. Box 1926, M-482
Spartanburg, SC 29304

RE: Permit Issuance
Milliken & Company – Alma Plant
Permit No. GA0024619
Nicholls, Bacon County

Dear Mr. Slusher:

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
Coastal District Office
400 Commerce Center Drive
Brunswick, Georgia 31523

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 Alan Leake at 404.463.4957 or alan.leake@dnr.ga.gov.

Sincerely,

Richard E. Dunn
Director

RED:al
Enclosure(s)
cc: EPD Coastal District Office – Ms. Alice Vick (e-mail)

Permit No. GA0024619
Issuance Date: JUL 13 2018



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,

**Milliken & Company
P.O. Box 1926, M-482
Spartanburg, SC 29304**

is issued a permit to discharge from a facility located at

**2410 Georgia Highway 32 West
Nicholls, Georgia 31554
Bacon County**

to receiving waters

Unnamed tributary to Little Hurricane Creek (Outfall 001) in the Satilla 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 June 28, 2016, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on August 1, 2018.

This permit and the authorization to discharge shall expire at midnight July 31, 2023.



**Richard E. Dunn, Director
Environmental Protection Division**

PART I

A.1. Effluent Limitations and Monitoring Requirements

Upon the effective date of the permit and continuing for 24 months, the permittee is authorized to discharge from outfall number 001¹ (31.537361,-82.551222) – Includes process wastewater from carpet yarn manufacturing, utilities, sanitary wastewater, and storm water.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ²		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	Report	Report	--	--	Daily	Instantaneous	Final Effluent
BOD ₅	49	98	--	--	1/Month	Grab	Final Effluent
Total Suspended Solids	58.45	117	--	--	1/Month	Grab	Final Effluent
COD	117	234	--	--	1/Month	Grab	Final Effluent
Ammonia-Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Total Nitrogen, as N ⁴ (lbs/month)	Report	Report	Report	Report	1/Month	Grab	Final Effluent
Total Kjeldahl Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Nitrate-Nitrite Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Organic Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Total Phosphorus, as P ^{4,6} (lbs/month)	Report	Report	Report	Report	1/Month	Grab	Final Effluent
Orthophosphate, as P ⁴	--	--	Report	Report	1/Month	Grab	Final Effluent
Temperature, °F	--	--	--	Report	1/Month	Grab	Final Effluent
Fecal Coliform ⁵ (#/100mL)	--	--	200	400	2/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 monthly by a grab sample.⁶

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

- ² All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- ³ TKN, nitrate-nitrite, ammonia-nitrogen, and organic nitrogen will be analyzed or calculated from the same effluent sample.
- ⁴ Total Phosphorus and Orthophosphate will be analyzed from the same effluent sample.
- ⁵ Fecal coliform bacteria shall be reported as the geometric mean of the values for the samples collected during the month.
- ⁶ See Part III.B., Schedule of Compliance.

A.2. Effluent Limitations and Monitoring Requirements

Effective 24 months from the effective date of the permit and continuing until the expiration date of the permit, the permittee is authorized to discharge from outfall number 001¹ (31.537361,-82.551222) – Includes process wastewater from carpet yarn manufacturing, utilities, sanitary wastewater, and storm water.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ²		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	Report	Report	--	--	Daily	Instantaneous	Final Effluent
BOD ₅	49	98	--	--	1/Month	Grab	Final Effluent
Total Suspended Solids	58.45	117	--	--	1/Month	Grab	Final Effluent
COD	117	234	--	--	1/Month	Grab	Final Effluent
Ammonia-Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Total Nitrogen, as N (lbs/mo)	66	99	Report	Report	1/Month	Grab	Final Effluent
Total Kjeldahl Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Nitrate-Nitrite Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Organic Nitrogen, as N ³	--	--	Report	Report	1/Month	Grab	Final Effluent
Total Phosphorus, as P ⁴ (lbs/mo)	16	24	Report	Report	1/Month	Grab	Final Effluent
Orthophosphate, as P ⁴	--	--	Report	Report	1/Month	Grab	Final Effluent
Temperature, °F	--	--	--	Report	1/Month	Grab	Final Effluent
Fecal Coliform ⁵ (#/100mL)	--	--	200	400	2/Month	Grab	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored monthly by a grab sample.

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

- ² All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- ³ TKN, nitrate-nitrite, ammonia-nitrogen, and organic nitrogen will be analyzed or calculated from the same effluent sample.
- ⁴ Total Phosphorus and Orthophosphate will be analyzed from the same effluent sample.
- ⁵ Fecal coliform bacteria shall be reported as the geometric mean of the values for the samples collected during the month.

B. Monitoring

1. Representative Sampling

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

2. Sampling Period

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

3. Monitoring Procedures

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

4. Detection Limits

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

5. Recording of Results

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

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

6. Additional Monitoring by Permittee

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

7. Records Retention

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

8. Penalties

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

C. Definitions

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

D. Reporting Requirements

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

3. Other Reports

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

4. Other Noncompliance

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

5. Signatory Requirements

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

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

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

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

PART II

A. Management Requirements

1. Notification of Changes

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

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

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

2. Noncompliance Notification

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

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

3. Facility Operation

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

4. Adverse Impact

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

5. Bypassing

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

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

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

6. Sludge Disposal Requirements

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

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

7. Sludge Monitoring Requirements

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

8. Power Failures

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

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

9. Operator Certification Requirements

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

10. Laboratory Analyst Certification Requirements

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

B. Responsibilities

1. Right of Entry

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

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

2. Transfer of Ownership or Control

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

- a. The permittee notifies the Director of EPD in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of EPD's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

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

4. Permit Modification

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

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

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

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

7. State Laws

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

8. Water Quality Standards

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

9. Property Rights

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

10. Expiration of Permit

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

11. Contested Hearings

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

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

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

14. Need to Halt or Reduce Activity Not a Defense

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

15. Duty to Provide Information

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

16. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) and is grounds for enforcement action; for permit termination; revocation and reissuance, or modification; or for denial of a permit renewal application. Any instances of noncompliance must be reported to EPD as specified in Part I. D and Part II.A. of this permit.
- b. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Georgia Water Quality Control Act (Act) also provides procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

17. Upset Provisions

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

PART III

A. Previous Permits

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

B. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:
 - a. The effluent limitations and monitoring specified in Part I.A.1. and Part I.A.2. are effective on the effective date of this permit, except as specified below.
 - b. The permittee shall achieve compliance with the Total Nitrogen, Total Phosphorus, and pH limitations specified in Part I.A.2. of this permit in accordance with the following schedule.
 - (i) Beginning on the effective date of this permit and continuing for 24 months, the permittee shall meet effluent limits for Total Nitrogen, Total Phosphorus, and pH in accordance with Part I A.1. of this permit.
 - (ii) Within 24 months of the effective date of this permit, the permittee shall achieve compliance with Total Nitrogen, Total Phosphorus, and pH effluent limitations specified in Part I.A.2. of this permit.
 - c. The permittee shall submit a written progress report to EPD on June 30th and December 31st every year describing the status of achieving compliance with Part I.A.2. of this permit. The permittee shall submit the report to the EPD assigned Compliance Office.
2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. Special Conditions

1. The permittee shall submit information on new additives to be used in the cooling water system to EPD for approval. The new additives shall not be used prior to written approval.

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.



ENVIRONMENTAL PROTECTION DIVISION

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

Technical Contact: Alan Leake (Alan.leake@dnr.ga.gov)
404-463-4957

- Draft permit:**
- first issuance
 - reissuance with no or minor modifications from previous permit
 - reissuance with substantial modifications from previous permit
 - modification of existing permit.
 - requires EPA review
 - Designated as a Major facility

1. FACILITY INFORMATION

1.1 NPDES Permit No.: GA0024619

1.2 Name and Address of Owner/Applicant

Milliken & Company
P.O. Box 1926, M-482
Spartanburg, SC 29304

1.3 Name and Address of Facility

Milliken & Company – Nicholls Plant
2410 Georgia Highway 32 West
Nicholls, Bacon County, GA 31554

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

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	31.537361	-82.551222	Unnamed tributary to Little Hurricane Creek

**1.5 Production Capacity – 83,490 lbs/day Yarn Texturing
16,000 lbs/day Non-woven Formation**

1.6 SIC Code & Description – 2282 Yarn texturing

1.7 Description of Industrial Processes

Milliken is a carpet yarn and nonwoven fabric manufacturing facility. The facility produces about 83,490 pounds per day (PPD) of textured yarn and 16,000 PPD of non-woven product. The yarn texturing generates approximately 147,000 gpd of wastewater while the non-woven operation doesn't generate any wastewater. The remainder of the wastewater that is generated comes from utilities and domestic wastewater.

1.8 Description of the Wastewater Treatment Facility

Domestic wastewater is sent to an oxidation pond for treatment that then flows to a mixing area where all of the wastewater is collected. After mixing, the wastewater flows to the stabilization pond and then flows to the unnamed tributary that leads to Little Hurricane Creek.

Outfall	Operation Description	Treatment Description
001	Carpet yarn manufacturing, non-woven manufacturing, utilities, storm water, & sanitary wastewater	Oxidation pond, stabilization pond, & UV

1.9 Type of Wastewater Discharge

- process wastewater stormwater
 domestic wastewater combined (describe)
 other (description)

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

1.10.a. Outfall No. 001

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.26	0.165
Biochemical Oxygen Demand, _{5-day} (mg/L)	6	3
Total Suspended Solids (mg/L)	18	6
Temperature, Winter (°C)	27.4	18.7
Temperature, Summer (°C)	31.9	28.3
Ammonia (mg/L)	0.24	0.12
Total Organic Carbon (TOC) mg/L	2.5	2.5

2.0 APPLICABLE REGULATIONS

2.1 State Regulations

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

2.2 Federal Regulations

Source	Activity	Applicable Regulation
Industrial	Non-Process Water Discharges	40 CFR 122
		40 CFR 125
	Process Water Discharges	40 CFR 122
		40 CFR 125
		40 CFR 410

2.3 Industrial Effluent Limit Guideline(s)

Code of Federal Regulations, 40 CFR Part 410 Subpart C – Low Water Use Processing, General Processing

Code of Federal Regulations, 40 CFR Part 410 Subpart H – Nonwoven Manufacturer

See Appendix A of the Fact Sheet for the Federal Regulations.

3. WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

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

3.1 Receiving Waterbody Classification and Information

SPECIFIC WATER QUALITY CRITERIA FOR CLASSIFIED WATER USAGE

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

Fishing: Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; or for any other use requiring water of a lower quality:

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

Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.

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

3.2 Ambient Information

Outfall ID	7Q10 (cfs)	1Q10 (cfs)	Hardness mg/L	Annual Average Flow (cfs)	Upstream Total Suspended Solids ¹ (mg/l)
001	0	0	32	38.2	10

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

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

Little Hurricane River is listed as Not Supporting the designated use.

Little Hurricane Creek	Ga. Hwy. 92 to Hurricane Cr.	Stilla	DQ, FC	NP	22 miles	4a	TMDLs completed DO (2001), FC (2006).
R030702010901	Bacon/ Ware/ Pierce County	Fishing					
1.00							

3.4 Total Maximum Daily Load (TMDL)

There was a TMDL developed for DO for the Little Hurricane River in 2001. According to the TMDL, total nitrogen and total phosphorus are limited with annual limitations. The limitations were reduced to monthly limits because 40 CFR 122.45(d) says you have to have monthly average and daily maximum discharge limitations.

There was a TMDL developed for fecal coliform for the Satilla Watershed in 2006. According to the TMDL, fecal coliform will be limited to 200#/100mL. This limit is specified in the permit.

3.5 Wasteload Allocation Date – 2/12/2018

See Appendix B of the Fact Sheet

4. EFFLUENT LIMITS AND PERMIT CONDITIONS

4. Reasonable Potential Analysis (RP)

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

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

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

4.2 Applicable Water Quality and Technology Based Effluent Limitations

Water Quality Based Effluent Limits (WQBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed discharge on the quality of the

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

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

The term *pollutant* is defined in CWA section 502(6) and § 122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and § 401.16 (BOD₅, TSS, fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

Applicable Technology Based Effluent Limits (TBELs)

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

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

4.3 Conventional Pollutants

Pollutants of Concern	Basis
pH	<p><u>WQBEL</u> The instream waste concentration is 100%. When the instream waste concentration is over 50%, there is a reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore, a limit of 6.0 s.u. to 8.5 s.u. has been added. A 24 month compliance schedule has been implemented to meet this limit.</p>
001	<p><u>TBEL</u> Based on 40 CFR 410 Subpart C BPT regulations, the pH is within the range of 6.0 s.u. to 9.0 s.u.</p>
5-Day Biochemical Oxygen Demand	<p><u>WQBEL</u> The wasteload allocation (WLA) for BOD recommends a BOD₅-equivalent limit developed in the 2001 D.O. TMDL as 49 lbs/day daily average and 98 lbs/day daily max.</p>
001	<p><u>TBEL</u> A production based daily average mass limit of 58.45 lbs/day and daily maximum of 117 lbs/day is required according to 40 CFR 410 Subpart C best practicable control technology currently available (BPT).</p>
Total Suspended Solids	<p><u>WQBEL</u> There is no applicable water quality standard for TSS.</p>
001	<p><u>TBEL</u> A production based daily average mass limit of 58.45 lbs/day and daily maximum of 117 lbs/day is required according to 40 CFR 410 Subpart C BPT regulations.</p>
Chemical Oxygen Demand	<p><u>WQBEL</u> There is no applicable water quality standard for COD.</p>
001	<p><u>TBEL</u> A production based daily average mass limit of 117 lbs/day and daily maximum of 234 lbs/day is required according to 40 CFR 410 Subpart C BPT regulations.</p>
Fecal Coliform (#/100mL)	<p><u>WQBEL</u> According to the TMDL and Georgia WQS, fecal coliform will be limited to 200 #/100mL daily average and 400 #/100mL daily maximum.</p>
001	<p><u>TBEL</u> There is no federal technology based effluent limit for this type of outfall.</p>

4.4 Nonconventional Pollutants

Pollutants of Concern	Basis
Ammonia-Nitrogen	<p><u>WQBEL</u> The reasonable potential analysis shows a predicted instream ammonia concentration of 53% of the instream toxicity criteria. Per the ammonia reasonable potential analysis procedure for NPDES permits, if at least 10 data points are available to calculate the permittee's in-stream concentration and if the permittees calculated maximum in-stream concentration is less than 100% (ie. less than 99.4%) the applicable site-specific in-stream ammonia criteria, then ammonia will be considered not to be present at levels of concern (no reasonable potential to cause or contribute to a violation of an in-stream water quality criteria) and EPD will not include an effluent limit in the permit. Monitoring will remain in the permit.</p>
001	<p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Total Kjeldahl Nitrogen	<p><u>WQBEL</u> Per Georgia's Plan for the Adoption of Water Quality Standards for Nutrients as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for Total Kjeldahl Nitrogen to develop these models.</p>
001	<p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Organic Nitrogen	<p><u>WQBEL</u> Per Georgia's Plan for the Adoption of Water Quality Standards for Nutrients as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for Organic Nitrogen to develop these models.</p>
001	<p><u>TBEL</u> There is no applicable federal technology based effluent limit.</p>
Nitrate-Nitrite	<p><u>WQBEL</u> Per Georgia's Plan for the Adoption of Water Quality Standards for Nutrients as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for Nitrate-Nitrite to develop these models.</p>
001	<p><u>TBELS</u> There is no applicable federal technology based effluent limit.</p>
Total Phosphorus, as P	<p><u>WQBEL</u> Per the WLA dated February 12, 2018, Total Phosphorus will be limited to 791 lbs/yr. The annual limit is divided by 12 months for monthly reporting. The daily average limit is 66 lbs/month and the daily maximum is 99 lbs/month, which is the daily</p>
001	

	average multiplied by 1.5. A 24 month compliance schedule has been implemented to meet this limit.
	<u>TBELS</u> There is no applicable federal technology based effluent limit.
Total Nitrogen, as N	<u>WOBEL</u> Per the WLA dated February 12, 2018, Total Nitrogen will be limited to 192 lbs/yr. The annual limit is divided by 12 months for monthly reporting. The daily average limit is 16 lbs/month and the daily maximum is 24 lbs/month, which is the daily average multiplied by 1.5. A 24 month compliance schedule has been implemented to meet this limit.
001	<u>TBELS</u> There is no applicable federal technology based effluent limit.
Orthophosphate	<u>WOBEL</u> Per the Strategy for Addressing Phosphorus in NPDES Permitting (the Strategy is available to review on EPD's website) all routine permit reissuances that have discharges upstream from reservoirs, lakes, impoundments, and/or estuaries must include Orthophosphate monitoring. The facility discharges upstream of estuaries, hence monitoring requirements have been added.
001	<u>TBELS</u> There is no applicable federal technology based effluent limit.
Temperature	<u>WOBEL</u> Commingled process wastewater and stormwater discharge into a stabilization basin with a retention time of 22.9 days, which allows for the reduction in the heat load. With outside exposure, the temperature of the wastewater becomes ambient, as seen in the effluent temperature data. Hence, there is no reasonable potential to cause or contribute to an in-stream excursion of the State Water Quality Standards for temperature. Monitoring only is required for temperature.
001	<u>TBEL</u> There is no applicable federal technology based effluent limit.

4.5 Calculations for Water Quality Based Effluent Limits

4.5.a. Instream Waste Concentration (IWC)

Outfall 001

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

$$IWC = \frac{0.26 \text{ (MGD)}}{(0.26 \text{ (MGD)} + 0 \text{ (MGD)})} \times 100\% = 100\%$$

4.5.b. Ammonia Toxicity Analysis

Stream Flow (Q_s) = 0 cfs Background Concentration (C_s) = 0 cfs

Effluent Flow (Q_d) = 0.40 cfs Effluent Average NH_3 Concentration (C_d) = 0.18 mg/L

Total Flowrate (Q_r) = 0.40 cfs Instream toxicity criteria determined by WPMP = 0.34 mg/L

$$\text{NH}_3 = \frac{(Q_s (\text{cfs}) \times C_s (\text{cfs})) + (Q_d (\text{cfs}) \times C_d (\text{mg/L}))}{Q_r (\text{cfs})}$$

$$\text{NH}_3 = \frac{(0 (\text{cfs}) \times 0 (\text{cfs})) + (0.40 (\text{cfs}) \times 0.18 (\text{mg/L}))}{0.40 (\text{cfs})} = 0.18 \text{ mg/L}$$

Predicted NH_3 Instream Conc. = 0.18 mg/L / 0.34 mg/L = 52.9% therefore limits aren't required

See Appendix C – Reasonable Potential Analysis for full ammonia analysis

4.5.c. Metals

A reasonable potential analysis (RPA) was conducted on pollutants in the application that were detected in the sampling analysis for Outfall 001. The pollutants were mercury and zinc. The RPA showed that there is no reasonable potential to cause or contribute to a violation of the instream Georgia Water Quality Standards. See the calculations in Appendix C of this Fact Sheet.

4.6 Technology Based Effluent Limitation Calculations

There are several ways to calculate TBELs when developing a 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.

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/Sematch, to determine tolerance intervals for a normal distribution. This calculation gives us an upper one-sided tolerance interval based on a 95th or 99th percentile. This upper one-sided tolerance interval is the monthly average limit. To determine the daily maximum, in accordance with EPA guidance we multiple the monthly average limit by 1.5.

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

4.6.a Total Suspended Solids (TSS)

Production Based Effluent Limits Based On Effluent Limit Guidelines (ELG)

TSS limits for Outfalls 001

$$\text{Daily Production (lbs/day)} = 83,490$$

$$= \text{Daily Production (lbs/day)} \times \text{Mass Factor (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 83,490 \text{ (lbs/day)} \times 0.7 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 58.45 \text{ (lbs/day)}$$

$$\text{Daily Maximum (lbs/day)} = 83,490 \text{ (lbs/day)} \times 1.4 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Maximum (lbs/day)} = 117 \text{ (lbs/day)}$$

Calculated TSS limits for Outfall 001 are production based and have changed since the last permit issuance due to increase in production.

4.6.b Biochemical Oxygen Demand_{5-day}

Production Based Effluent Limits Based On ELG

BOD limits for Outfalls 001

$$\text{Daily Production (lbs/day)} = 83,490$$

$$= \text{Daily Production (lbs/day)} \times \text{Mass Factor (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 83,490 \text{ (lbs/day)} \times 0.7 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 58.45 \text{ (lbs/day)}$$

$$\text{Daily Maximum (lbs/day)} = 83,490 \text{ (lbs/day)} \times 1.4 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Maximum (lbs/day)} = 117 \text{ (lbs/day)}$$

Calculated BOD limits for Outfall 001 are production based and have changed since the last permit issuance due to increase in production.

4.6.c. Chemical Oxygen Demand

Production Based Effluent Limits Based On ELG

COD limits for Outfalls 001

$$\text{Daily Production (lbs/day)} = 83,490$$

$$= \text{Daily Production (lbs/day)} \times \text{Mass Factor (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 83,490 \text{ (lbs/day)} \times 1.4 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Average (lbs/day)} = 117 \text{ (lbs/day)}$$

$$\text{Daily Maximum (lbs/day)} = 83,490 \text{ (lbs/day)} \times 2.8 \text{ (lbs/1000 lbs)}$$

$$\text{Daily Maximum (lbs/day)} = 234 \text{ (lbs/day)}$$

Calculated COD limits for Outfall 001 are production based and have changed since the last permit issuance due to increase in production.

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

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

Outfall 001

Parameter	WQBELS	TBELS (lbs/day)	Current Permit Limits (lbs/day)	Explanation
BOD ₅	49/98	58.45/117	53/107	WQBEL - WLA
TSS	NA	58.45/117	53/107	TBEL – Production based
COD	NA	117/234	107/215	TBEL – Production based
pH (s.u.)	6.0-8.5	6.0-9.0	6.0-9.0	WQBEL
Fecal Coliform (#/100mL)	200/400	NA	200/400	Current Permit
Total Nitrogen (lbs/month)	16/24	NA	NA	WQBEL – WLA/TMDL
Total Phosphorus, as P (lbs/month)	66/99	NA	NA	WQBEL – WLA/TMDL
Ammonia-Nitrogen, as N (mg/L)	Report	NA	Report	WQBEL - WLA

NA – not applicable

5.0 Other Permit Requirements and Considerations

5.1 Special Requirements

The permittee shall submit information on new additives to be used in the cooling water system to EPD for approval. The new additives shall not be used prior to written approval.

5.2 Compliance Schedule

Milliken & Company is required to meet the Total Nitrogen, Total Phosphorus, and pH limitations in the permit. In order for the facility to meet the limitations, changes must be made at the site and they will need time to make these changes. Based on information from the company, EPD has determined that a reasonable schedule is 24 months to make the changes and be in compliance with the new limitations. The compliance schedule is given in Part I.A.1., A.2., and Part III.B.1. of the permit. See Appendix D for schedule.

6.0 REPORTING

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

Georgia Environmental Protection Division
Coastal District Office
400 Commerce Center Drive
Brunswick, Georgia 31523

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 an permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

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

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

9.2 Public Comments

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

9.3 Public Hearing

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

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

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

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

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

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

9.4 Final Determination

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

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

9.5 Contested Hearings

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

Petitions for a contested hearing must include the following:

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

Appendix A

Federal Effluent Guideline

40 CFR 410

Subpart C – Low Water Use Processing Subcategory

Milliken & Co.
Alma

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 6, 2017

Title 40 → Chapter I → Subchapter N → Part 410 → Subpart C

**Title 40: Protection of Environment
PART 410—TEXTILE MILLS POINT SOURCE CATEGORY**

Subpart C—Low Water Use Processing Subcategory

Contents

- §410.30 Applicability; description of the low water use processing subcategory.
- §410.31 Specialized definitions.
- §410.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.34 Pretreatment standards for existing sources (PSES).
- §410.35 New source performance standards (NSPS).
- §410.36 Pretreatment standards for new sources (PSNS).
- §410.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

§410.30 Applicability; description of the low water use processing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: yarn manufacture, yarn texturizing, unfinished fabric manufacture, fabric coating, fabric laminating, tire cord and fabric dipping, and carpet tufting and carpet backing. Rubberized or rubber coated fabrics regulated by 40 CFR part 428 are specifically excluded.

[↑ Back to Top](#)

§410.31 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definitions apply to this subpart:

- (a) The term *general processing* shall mean the internal subdivision of the low water use processing subcategory for facilities described in §410.30 that do not qualify under the water jet weaving subdivision.
- (b) The term *water jet weaving* shall mean the internal subdivision of the low water use processing subcategory for facilities primarily engaged in manufacturing woven greige goods through the water jet weaving process.

[↑ Back to Top](#)

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

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

GENERAL PROCESSING

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	

BOD5	1.4	0.7
COD	2.8	1.4
TSS	1.4	0.7
ph	(1)	(1)

¹Within the range 6.0 to 9.0 at all times.

WATER JET WEAVING

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
BOD5	8.9	4.5
COD	21.3	13.7
TSS	5.5	2.8
ph	(1)	(1)

¹Within the range 6.0 to 9.0 at all times.

[Back to Top](#)

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

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

GENERAL PROCESSING

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
COD	2.8	1.4

WATER JET WEAVING

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
COD	21.3	13.7

[Back to Top](#)

§410.34 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[Back to Top](#)

§410.35 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

GENERAL PROCESSING

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
BOD5	1.4	0.7
COD	2.8	1.4
TSS	1.4	0.7
pH	(1)	(1)

¹Within the range 6.0 to 9.0 at all times.

WATER JET WEAVING

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
BOD5	8.9	4.5
COD	21.9	13.7
TSS	5.5	2.5
pH	(1)	(1)

¹Within the range 6.0 to 9.0 at all times.

[↑ Back to Top](#)

§410.36 Pretreatment standards for new sources (PSNS).

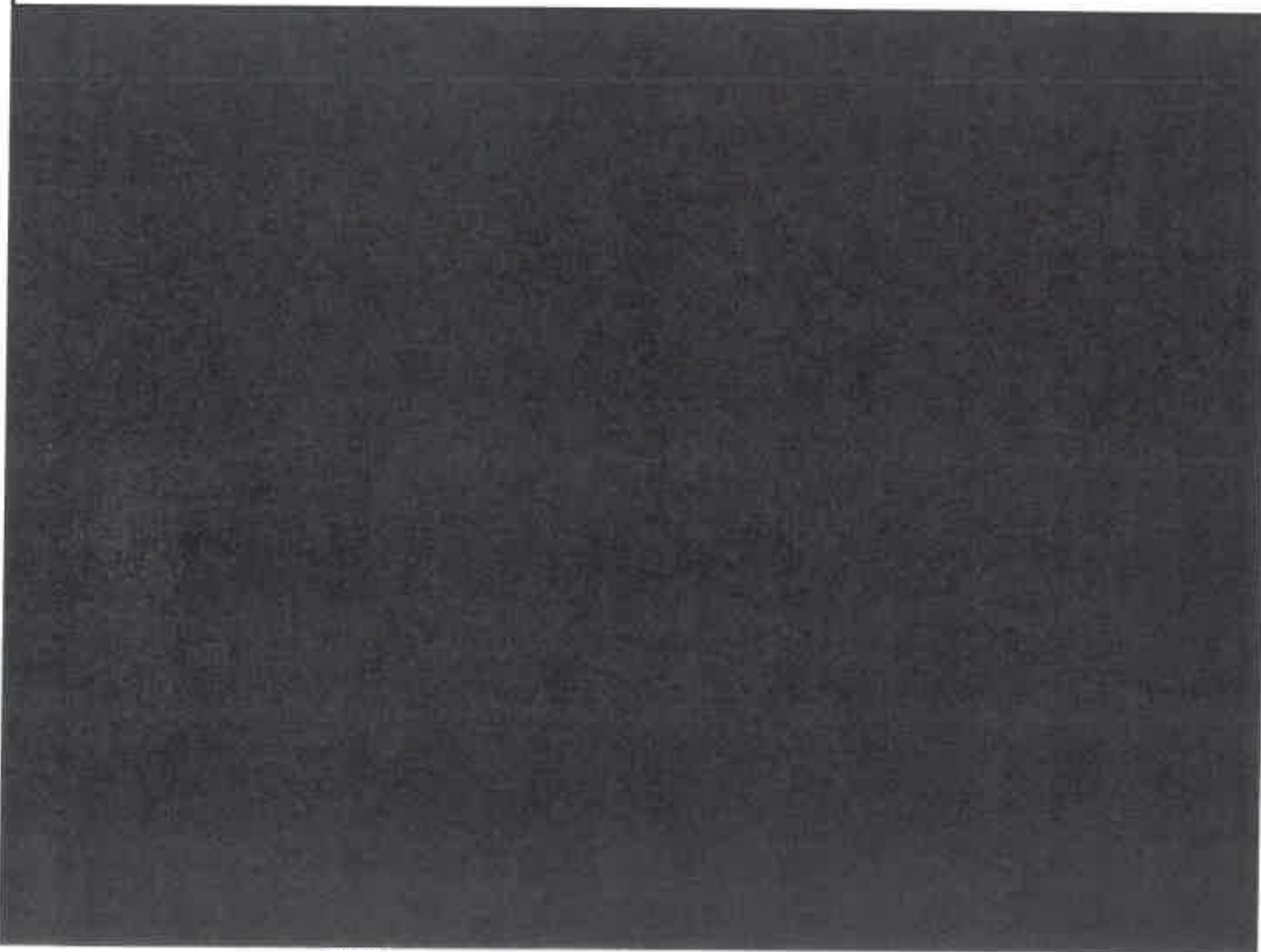
Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

[Need assistance?](#)



Appendix B

WASTELOAD ALLOCATION

(WLA)

National Pollutant Discharge Elimination System Wasteload Allocation Form

Part I: Background Information

WLA Request Type: Reliance Expansion Relocation New Discharge
 Facility Name: Milliken & Company County: Bacon WQMU: 0706
 NPDES Permit No.: GA0024819 Expiration Date: Dec 31, 2016 Outfall Number: 001
 Receiving Water: Unnamed ditch to Little Hurricane Creek River Basin: Satilla 10-Digit HUC: 0307020109
 Discharge Type: Domestic Industrial Both Proportion (D:I): Indu. Flow(s) Requested (MGD): 0.26
 Industrial Contributions Type(s): This facility receives production wastewater from carpet manufacturing, sanitary and storm water.
 Treatment Process Description: Oxidation pond, flow equalization and stabilization pond.
 Additional Information: (history, special conditions, other facilities):
 Requested by: Alan Leake Title: EE Program: WRP
 Telephone: 404.463-4936 Date: 07/15/2016

Part II: Receiving Water Information

Receiving Water: Unnamed ditch to Little Hurricane Creek Designated Use Classification: Fishing
 Integrated 305(b)/303(d) List: Yes No Support: Not Support: Criteria: DO, FC
 Total Maximum Daily Load Yes No Parameter(s) DO, Fecal Coliform WLA Complies with TMDL Yes No
 The 2001 Satilla River Basin Dissolved Oxygen TMDL specified a TOC, TN and TP loading for this facility. The limits are 189,952 lbs/year, 192 lbs/year and 781 lbs/year, respectively. The 2006 Fecal Coliform TMDL specified a level that is equivalent to 200 counts/100mL.

Part III: Water Quality Model Review Information

Model Type: Uncalibrated Calibrated Verified Cannot be Modeled Model Length (mi): 3.86
 Field Data: None Fair Good Excellent
 Model and Field Data Description: Steady-state dissolved oxygen Georgia DOSAG model originally developed for the State Water Plan updated in 2016. No model was found for the original WLA.
 Critical Water Temperature (°C): Drainage Area (mi²): 7Q10 streamflow at discharge (cfs):
 7Q10 Yield (cfs/mi²): Velocity (range fps): 1Q10 streamflow at discharge (cfs):
 Effluent Flow Rate (cfs): 7Q10 IWC (%): 100 Mean annual streamflow at discharge (cfs):
 Slope (range - fpm): K1 K3: Escape Coef. (ft⁻¹): K2 (range):
 SOD: f-Ratio (BOD₅/BOD₂₀) Background Hardness (as CaCO₃)(mg/L): 32
 More data is needed to determine the natural DO of the Little Hurricane stream segments. The DOSAG model will need to be recalibrated to newly collected data.

Part IV: Recommended Permit Limitations and Conditions (mg/L as a monthly average except as noted)

Rationale: Same as current Revised New
 Location: Existing Outfall to a ditch at 0.3 mile from Little Hurricane Creek at approximately 0.6 mile downstream from County Route 32 (CR-32) intersection

Effluent Flow Rate (MGD)	BOD ₅ (lbs/day)	NH ₃ -N	Fecal Coliform (No./100ml)	pH (std. units)	Total Phosphorus (lbs/year)	Ortho-Phosphate	Organic Nitrogen	Total Kjeldahl Nitrogen	Nitrate-Nitrite	Total Nitrogen (lbs/year)
0.26	49	0.34	200	6.0 - 8.5	192	Monitor	Monitor	Monitor	Monitor	791

Additional Comments:

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

* Watershed Planning and Monitoring Program (WPMP) recommends a BOD₅-equivalent effluent limit developed in the 2001 D.O. TMDL as represented by the Total Organic Carbon (TOC) load limit of 189,952 lbs./year. Additionally, WPMP recommends TP and TN limits to be based on the 2001 TMDL.

-Effluent monitoring for Total Phosphorus, Ortho-Phosphate, TKN, Nitrate-Nitrite, and Organic Nitrogen are recommended once a month. TKN, nitrate-nitrite, and organic nitrogen should be analyzed from the same effluent sample. Total Phosphorus and Ortho-Phosphate should be analyzed from the same effluent sample. Monitoring of nutrients will help the development of numeric nutrient criteria in the future.

-Temperature and DO monitoring of upstream and downstream locations should continue, but can be reduced to once a month. Both locations should be monitored on the same date.

-The revised Ammonia limit meets the EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013.

-Hardness value had been revised

Prepared by: William Wang *W* Date: 10/19/2016 Reviewed by: Josh Welts *JW* Date: 6.FEB.18

Part V: Program Manager Comments

Elizabeth Booth

Elizabeth A. Booth

Date: 2/12/18

Appendix C

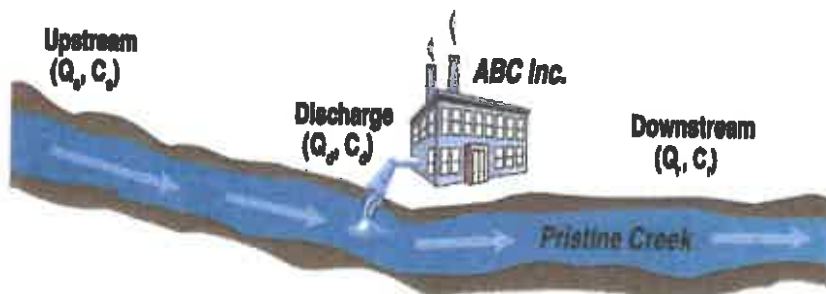
Reasonable Potential Analysis

(RPA)

Ammonia Reasonable Potential Analysis

General Information		
Facility	Milliken Company	
Permit #	GA0024619	
Staff	Leake	
Date	23.Aug.17	
Upstream Conditions		Basis
Flow, Q_u	0.00 cfs	QStream as determined by WPMP
Concentration, C_u	0.00 mg/L	background concentration generally ~0.13 mg/L or as specified by WPMP
Discharge Characteristics		Basis
Flow, Q_d	0.260 MGD	effluent flow rate
Flow, Q_d	0.40 cfs	effluent flow rate
Concentration, C_d	0.18 mg/L	concentration
IWC	100.0 %	instream waste concentration
Predicted Downstream		Basis
Flow, Q_r	0.40 cfs	calculated combined flow
Concentration, C_r	0.18 mg/L	calculated instream concentration
Applicable Criteria	0.34 mg/L	instream toxicity criteria as determined by WPMP
Ratio	53 %	predicted instream concentration as % of criteria
RP	Yes	is there reasonable potential to exceed criteria?
Action	Monitoring	what is appropriate permitting action?

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



$$\text{Mass-Balance Equation: } Q_u C_u + Q_d C_d = Q_r C_r$$

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

$$C_r = \frac{(Q_u)(C_u) + (Q_d)(C_d)}{Q_r}$$

Reasonable Potential Analysis for Freshwater

Milliken & Company
NPDES Permit No. GA0024619

Stream Data:

Receiving stream Hardness:	32	mg/L
Upstream TSS:	10	mg/L
7Q10:	0.00	ft ³ /s
	0	gal/day
1Q10:	0.00	ft ³ /s
	0	gal/day

Effluent Data:

Flow	260,000	gal/day
TSS	6.40	mg/L
Instream TSS:	6.40	mg/L
Acute Dilution factor:	1.00	
Chronic Dilution factor:	1.00	

Water Quality Criteria:

Mean annual streamflow at discharge:	98.20	ft ³ /s
	24,687,590	gal/day
Dilution factor:	95.952	
IWC	100.00	

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

Metal	K_{10}	α	f_D	Maximum effluent C_T ($\mu\text{g/L}$)	Instream C_D ($\mu\text{g/L}$)	WQC _{Acute} ($\mu\text{g/L}$)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.00	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.00	0.66	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.00	224.08	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.00	16.00	no
Copper	1.04.E+06	-0.744	0.00	0.0	0.00	4.59	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.00	18.32	no
Mercury	2.91.E+06	-1.136	0.31	0.0017	0.00	1.40	no
Nickel	4.90.E+05	-0.572	0.00	0.0	0.0	178.58	no
Zinc	1.25.E+06	-0.704	0.32	13.000	4.1	44.62	no

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

Metal	K_{10}	α	f_D	Average effluent C_T ($\mu\text{g/L}$)	Instream C_D ($\mu\text{g/L}$)	WQC _{Chronic} ($\mu\text{g/L}$)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.0	0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.0	0.11	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.0	29.15	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.0	11.00	no
Copper	1.04.E+06	-0.744	0.00	0.00	0.0	3.38	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.0	0.71	no
Mercury	2.91.E+06	-1.136	0.31	0.0017	0.0	0.012	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.0	178.58	no
Zinc	1.25.E+06	-0.704	0.32	0.013	0.0	44.99	no
Selenium	NA	NA	NA	0.0	0.0	5.00	no

$$f_D = \frac{1}{1 + K_{10} \times TSS_{stream} (mg/L)^{0.84} \times 10^4}$$

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

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

Total Recoverable Effluent Limit

Metal	C_0 ($\mu\text{g/L}$)	Chronic C_T ($\mu\text{g/L}$) 30-Day Avg	Chronic C_T (Kg/day) 30-Day Avg	Acute C_T ($\mu\text{g/L}$) Daily Max	Acute C_T (Kg/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	-	-

$$(1) \quad \text{Acute } C_T = \frac{WQC_{Acute} \times (Q_e + 1Q10) - (1Q10 \times C_0)}{Q_e}$$

$$\text{Chronic } C_T = \frac{WQC_{Chronic} \times (Q_e + 7Q10) - (7Q10 \times C_0)}{Q_e}$$

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

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

- NOTES:
 (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33.
 (2) Assuming background dissolved metal concentration (C_0) in the stream is 0 $\mu\text{g/L}$, equations above become:

NOTES:

- ¹ Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.
² If the calculated instream concentration is less than 50% of the instream water quality criteria, then the constituent will be considered not to be present at levels of concern in the effluent and it will not be included in the permit.
³ If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that constituent will be placed in the permit.

End of report

Appendix D

Compliance Schedule Deadlines

Timeline Schedule to Meet 24 Month Compliance Requirements

Action	Timeframe
Effluent Characterization with Seasonal Variances	Beginning at permit issuance and continuing for 9 months.
Modifications with plans & specifications developed to meet the effluent limits	Submit the plans & specifications for any modifications within 18 months of permit issuance.
Implement construction of any proposed changes.	Within 21 months of permit issuance.
Monitor the pollutants in compliance schedule.	When implementation of the proposed changes have been accomplished.
Obtain compliance with all effluent limits.	Within 24 months of permit issuance