GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Summary Page

Name of Facility Custom Profiles, Inc.

NPDES Permit No. GA0037842

This permit is a reissuance of an NPDES permit for Custom Profiles, Inc. The facility conducts plastics extrusion operations and discharges a maximum of 0.133 MGD of contact cooling water. This facility discharges to Turkey Creek in the Suwanee River Basin. The permit expires on December 31, 2022.

The permit was placed on public notice from November 15, 2022 to December 15, 2022.

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

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

- ☐ Removed temperature monitoring based on the results over the previous permit term which indicated no reasonable potential to cause or contribute to a violation of the instream temperature standards.
- ☐ Added ammonia, as N; total Kjeldahl nitrogen; organic nitrogen; nitrate-nitrite; and total nitrogen monitoring to determine nutrient speciation and to quantify loadings in the Suwanee River Basin.

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)

Public Comments and EPD Responses on Draft NPDES Permit
Custom Profiles, Inc. – NPDES Permit No. GA0037842

COMMENTS RECEIVED	EPD RESPONSE
The draft permit is to discharge contact cooling water of a plastic molding and forming industrial category performing plastic extrusion processes. The draft permit included quarterly monitoring for all nitrogen-containing pollutants (Ammonia, TKN, Organic Nitrogen, and Nitrate-Nitrite). Our concern is that this level of monitoring is not warranted for our industry. The Plastics Molding and Forming Effluent Guidelines and Standards (40 CFR § 463) Development Document identified TKN as being detected 32 times from 38 samples between the concentration ranges of ND – 1.15 mg/L (Table VI-19, page 140, EPA Development Document for Effluent Limitations, Final, Dec. 1984). However, the final effluent guidelines do not require TKN testing because EPA did not consider it a constituent of concern. The industry has already completed recent wastewater monitoring in October 2022 and submitted data to the Department, which indicated values of non-detection for Ammonia and nitrate-nitrite. A non-detect result demonstrates no reasonable potential to cause or contribute to instream water quality violations. The same monitoring data showed TKN and Organic Nitrogen sampling results of 0.29 mg/L, only slightly greater than the detection limit of 0.20 mg/L. Since TKN is a function of Ammonia and Organic Nitrogen, and Ammonia is non-detect, Organic Nitrogen equals 0.29 mg/L. At a proposed flow rate of 0.133 MGD, 0.29 mg/L represents about 0.32 lbs/day. The industry contends that this value of less than half a pound per day is most likely caused by natural background sources from the well water in the watershed and is not related to the activities occurring now or in the future. The quarterly	As part of the permit development process the permit writer must consider both technology standards and water quality based standards. The effluent limitation guidelines at 40 CFR 463 are technology-based standards. EPA's decision not to include technology-based nutrient limitations despite the presence of ammonia and TKN identified in most samples does not impact water quality-based considerations. On April 5, 2022, EPA issued a memorandum titled "Accelerating Nutrient Pollution Reductions in the Nation's Waters which included a strategy to utilize EPA's Clean Water Act authorities to drive progress, innovation, and collaboration. In response, EPD is developing a comprehensive nutrient permitting strategy. The nutrient permitting strategy will build on *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients (2013)* [Nutrient WQS Plan], analyze available ambient and permitted discharge data, determine limiting factors, and develop a reasonable potential analysis for total nitrogen and total phosphorus. EPD is requiring monitoring from NPDES discharges containing nitrogen constituents to advance State and National objectives to address nutrient pollution and to develop numeric water quality standards in accordance with Georgia's Nutrient WQS Plan. As part of these water quality based considerations, EPD considered nutrient results reported in the application. The original application submittal indicated the presence of ammonia but did not include sampling for any other nitrogen-containing constituents. At the request of Custom Profiles, EPD allowed the facility to conduct a one-time sampling event for

COMMENTS RECEIVED	EPD RESPONSE
testing of all nitrogen-containing pollutants (Ammonia, TKN, organic nitrogen, and nitrate-nitrite) does not seem reasonable without cause. The permit states that monitoring for ammonia, TKN, organic Nitrogen, and nitrate-nitrite has been included in calculating total nitrogen, quantifying nutrient loadings in the Suwanee River Basin, and in providing information for the development of appropriate numeric or narrative effluent limitations (page 32, draft permit). To meet the Department's desire to develop appropriate numeric and narrative effluent limitations. The industry suggests a special condition for one-time testing of all nitrogen-containing pollutants during a specified period in the permit cycle. However, requiring the industry to sample pollutants not present in the processes for the entire five-year permit cycle is an undue burden. We respectfully request that the Department remove the sampling requirements and amend the permit with a special condition for one-time testing.	nutrients to demonstrate the absence of these parameters. The results of the sampling event indicated the presence of nitrogen-containing constituents in the final effluent. EPD must consider the pollutants detected in the final point source discharge to surface waters, regardless of whether the source is the groundwater used or if it is added by the facility's processes. Due to the presence of nitrogen-containing constituents, EPD included monitoring for ammonia, TKN, organic nitrogen, nitrate-nitrite, and total nitrogen to determine nutrient speciation and to quantify loadings in the Suwanee River Basin. When analyzing discharge data, determining nutrient speciation, quantifying loadings, and evaluating reasonable potential, EPD must account for the variability of pollutant levels within the effluent. EPD contends that a one-time sampling event is not sufficient to characterize the variability of nutrients in the wastestream. EPD determined that a quarterly monitoring requirement for nitrogen-containing pollutants would adequately characterize the wastestream without placing undue burden on the permittee.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

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

Mr. Scott Sheffield, CEO
Custom Profiles, Inc.
256 Benjamin H. Hill Dr. SE
Fitzgerald, Georgia 31750

01/26/2023

RE: Permit Issuance
Custom Profiles, Inc.
NPDES Permit GA0037842
Ben Hill County, Suwanee River Basin

Dear Mr. Sheffield:

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
Southwest District Office (Albany)
2024 Newton Road
Albany, Georgia 31701-3576

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.*

Sincerely,

Richard E. Dunn
Director

RED:im
Enclosure(s): Final Permit, Permit Fact Sheet with Appendices
cc: EPD Southwest District (Albany) Compliance Office – Kevin Hogan (*kevin.hogan@dnr.ga.gov*)
Custom Profiles, Inc., Accounting Manager – Mia Yarbrough
(*mia.yarbrough@customprofiles.com*)
EPD Watershed Planning and Monitoring Program – Josh Welte (e-mail)
EPD Watershed Planning and Monitoring Program – Tyler Parsons (e-mail)

Permit No. GA0037842
Issuance Date: 01/26/2023

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,

Custom Profiles, Inc.
256 Benjamin H. Hill Dr. SE
Fitzgerald, Georgia 31750

is issued a permit to discharge from a facility located at

256 Benjamin H. Hill Dr. SE
Fitzgerald, Georgia 31750
Ben Hill County

to receiving waters

Turkey Creek in the Suwanee 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 29, 2022, 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 February 01, 2023.

This permit and the authorization to discharge shall expire at midnight January 31, 2028.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

Richard E. Dunn, Director
Environmental Protection Division

PART I

A.1. Effluent Limitations and Monitoring Requirements

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 001[(1)] (31.702879, -83.240489) – contact cooling 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	Flow Meter	Final Effluent
BOD_5		15.61			1/Quarter	Grab	Final Effluent
Total Suspended Solids		11.41			1/Quarter	Grab	Final Effluent
Oil and Grease		17.41			1/Quarter	Grab	Final Effluent
Ammonia, as N[(3)]			Report	Report	1/Quarter	Grab	Final Effluent
Total Kjeldahl Nitrogen (TKN)[(3)]			Report	Report	1/Quarter	Grab	Final Effluent
Organic Nitrogen[(3)]			Report	Report	1/Quarter	Calculation	Final Effluent
Nitrate-Nitrite[(3)]			Report	Report	1/Quarter	Grab	Final Effluent
Total Nitrogen[(3)]			Report	Report	1/Quarter	Calculation	Final Effluent

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

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

(2) All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.

(3) Ammonia, as N, total Kjeldahl nitrogen, organic nitrogen, nitrate-nitrite, and total nitrogen shall be analyzed or calculated from the same effluent sample on the same day. Organic nitrogen shall be calculated as TKN minus Ammonia, as N. Total nitrogen shall be calculated as TKN plus nitrate-nitrite.

B. Monitoring

1. Representative Sampling

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

2. Sampling Period

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

b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.

c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

3. Monitoring Procedures

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

4. Detection Limits

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

5. Recording of Results

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

a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;

b. The dates and times the analyses were performed, and the person(s) performing the analyses;

c. The analytical techniques or methods used;

d. The results of all required analyses.

6. Additional Monitoring by Permittee

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

7. Records Retention

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

8. Penalties

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

C. Definitions

1. The "daily average" mass means the total discharge by mass during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.

2. The "daily maximum" mass means the total discharge by mass during any calendar day.

3. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.

4. The "daily maximum" concentration means the daily determination of concentration for any calendar day.

5. A “calendar day” is defined as any consecutive 24-hour period.

6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

7. "Severe property damage" means substantial physical damage to property, damage to treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

8. “EPD” as used herein means the Environmental Protection Division of the Department of Natural Resources.

9. “State Act” as used herein means the Georgia Water Quality Control Act (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 2).

10. “Rules” as used herein means the Georgia Rules and Regulations for Water Quality Control.

D. Reporting Requirements

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

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

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

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

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

2. No later than December 21, 2025, the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:

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

3. Other Reports

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

4. Other Noncompliance

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

5. Signatory Requirements

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

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

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

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

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

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

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

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

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

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

3. The written authorization is submitted to the Director.

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

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

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

PART II

A. Management Requirements

1. Notification of Changes

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

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

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

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

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

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

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

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

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

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

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

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

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

2. Noncompliance Notification

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

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

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

3. Facility Operation

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

4. Adverse Impact

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

5. Bypassing

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

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

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

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

6. Sludge Disposal Requirements

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

7. Sludge Monitoring Requirements

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

8. Power Failures

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

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

9. Operator Certification Requirements

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

10. Laboratory Analyst Certification Requirements

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

B. Responsibilities

1. Right of Entry

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

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

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

2. Transfer of Ownership or Control

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

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

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

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

3. Availability of Reports

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

4. Permit Modification

This permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or

d. To comply with any applicable effluent limitation issued pursuant to the order of the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:

1. is different in conditions or more stringent than any effluent limitation in the permit; or

2. controls any pollutant not limited in the permit.

5. Toxic Pollutants

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

6. Civil and Criminal Liability

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

7. State Laws

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

8. Water Quality Standards

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

9. Property Rights

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

10. Expiration of Permit

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

11. Contested Hearings

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

12. Severability

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

13. Best Management Practices

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

14. Need to Halt or Reduce Activity Not a Defense

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

15. Duty to Provide Information

a. The permittee shall furnish to the EPD Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.

b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Duty to Comply

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) and is grounds for enforcement action; for permit termination; revocation and reissuance, or modification; or for denial of a permit renewal application. Any instances of noncompliance must be reported to EPD as specified in Part I. D and Part II.A. of this permit.

b. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Georgia Water Quality Control Act (Act) also provides procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director**.**

17. Upset Provisions

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

PART III

A. Previous Permits

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

B. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule: **N/A**

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

C. Biomonitoring and Toxicity Reduction Requirements

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

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

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

2. EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

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

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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

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

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.: GA0037842

1.2. Name and Address of Owner/Applicant

Custom Profiles, Inc.
256 Benjamin H. Hill Dr. SE
Fitzgerald, Georgia 31750

1.3. Name and Address of Facility

Custom Profiles, Inc.
256 Benjamin H. Hill Dr. SE
Fitzgerald, Georgia 31750
(Ben Hill County)

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

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	31° 42' 10.36" N (31.702879)	83° 14' 25.76" W (-83.240489)	Turkey Creek

1.5. Production Capacity

Average process water usage flow rate is utilized for the purpose of establishing technology-based effluent limitations for BOD_5, oil & grease, and TSS in accordance with 40 CFR 463, Subpart A. The average process water usage flow rate of a contact cooling and heating water process is equal to the volume of process water used per year by a process divided by the number of days per year the process operates. The average process water usage flow rate over the past permit term is summarized below:

Annual Process Water Usage Flow Rates (2018-2022)						
Year	Operating Days	Process Water Volume		Avg. Process Water Flowrate		
		Gallons	Liters	GPD	MGD	LPD
2022	241	14,261,900	53,987,164	59,178	0.05918	224,013
2021	276	20,414,300	77,276,532	73,965	0.07396	279,987
2020	247	17,792,000	67,350,046	72,032	0.07203	272,672
2019	238	18,853,100	71,366,747	79,215	0.07921	299,860
2018	219	18,072,200	68,410,719	82,521	0.08252	312,378

EPD has determined that the average process water usage flow rate of 291,224 liters per day over the previous permit term (2018-2021) represents a reasonable measure of the permittee's average process water usage flow rate to be used in the technology-based effluent limitation calculations.

1.6. SIC Code & Description

3089 – Plastics Products, Not Elsewhere Classified

1.7. Description of Industrial Processes

The facility conducts plastics extrusion operations. Plastic pellets/granules are heated and melted to produce a viscous material that is formed and sent through a cooling tank to lower the temperature of the plastic. Contact cooling water is discharged and replaced when cooler water is needed in the process.

1.8. Description of the Wastewater Treatment Facility

Outfall	Operation Description	Treatment Description
001	Contact Cooling Water	None

1.9. Type of Wastewater Discharge

☒ process wastewater ☐ stormwater

☐ domestic wastewater ☐ combined

☐ other

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

1.10.1. Outfall No. 001 – Contact Cooling Water

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.133	0.073
Biochemical Oxygen Demand,$_{5\text{-day}}$ (mg/L)	9.2	3.01
Total Suspended Solids (mg/L)	<2.50	<1.50
Temperature, Winter (°F)	77.00	73.19
Temperature, Summer (°F)	77.90	75.66
Ammonia (mg/L)	<0.25	N/A
Total Phosphorus (mg/L)	<0.10	N/A

2 APPLICABLE REGULATIONS

2.1 State Regulations

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

2.2 Federal Regulations

Source	Activity	Applicable Regulation
Industrial (Non POTW)	Non-Process Water Discharges	40 CFR 122 40 CFR 125 40 CFR 127 40 CFR 136
	Process Water Discharges	40 CFR 122 40 CFR 125 40 CFR 127 40 CFR 136 40 CFR 463

2.3 Industrial Effluent Limit Guideline(s)

Code of Federal Regulations, 40 CFR Part 463, Subpart A – Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory

See Appendix A of the Fact Sheet

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 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 Turkey Creek 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 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 $CaCO_3$)	Annual Average Flow (cfs)	Instream Total Suspended Solids (mg/L)
001	0.002	0.001	73.5[1]	6.7	6.7[1]

[1] Hardness and instream TSS data was obtained from the metals TMDLs developed in 2000, so that the reasonable potential analysis is consistent for both the listed and unlisted metals.

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

Turkey Creek (formerly known as Turkey Branch) is listed as not supporting the designated use for dissolved oxygen, fecal coliform, and algae.

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
Turkey Creek (formerly known as Turkey Branch)	Headwaters to Willacoochee River downstream Fitzgerald	Suwannee	Not Supporting	DO, FC, Algae	7.9	4a, 5	TMDLs completed FC 2000 (revised 2006), DO 2000, Fish Tissue (Mercury) 2002, Cd 2000, Cu 2000, Pb 2000, Zn 2000, Tox 2000.
GAR031102020605	Ben Hill	Fishing	1,2,10	NP, UR	Miles	2026	

3.4 Total Maximum Daily Load (TMDL)

A TMDL was developed for fecal coliform in 2000 and revised in 2006 for fifteen stream segments in the Suwanee River Basin. In accordance with the TMDL, all municipal and industrial wastewater treatment facilities with the potential for the occurrence of fecal coliform in their discharge will 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. *E. coli* is believed absent in the facility's contact cooling water discharge and effluent limitations have not been included in the permit.

A TMDL was developed for dissolved oxygen in 2002 for Turkey Creek (formerly known as Turkey Branch). The facility was not identified as a point source in the TMDL and is not considered to play a significant role in the oxygen depletion in Turkey Branch.

The TMDL identified 5 NPDES point sources which were assigned a wasteload allocation. Approximately 19 other facilities, Custom Profiles, Inc. included, were not provided a specific wasteload allocation. These facilities are assumed to be discharging mercury in concentrations below the 6.8 ng/L applicable water quality target, or are not adding concentrations of mercury above that in their source water. The renewal application for Custom Profiles, Inc. indicated that mercury was below detection and no effluent limitations are required.

TMDLs were developed for cadmium, copper, lead, and zinc in 2000 for Turkey Creek (formerly known as Turkey Branch). Turkey Creek was considered an effluent dominant stream at critical conditions with a 7Q10/1Q10 of 0.0 cfs thus the wasteload allocations dictate that the allowable effluent concentration does not exceed instream total recoverable chronic and acute concentrations. In calculating the instream water quality standards, a hardness of 73.5 mg/L $CaCO_3$ and an instream TSS of 6.7 mg/L was utilized. The calculated instream total recoverable water quality standards are summarized below:

Total Recoverable Cadmium: Chronic = 3.38 µg/L / Acute = 10.9 µg/L
Total Recoverable Copper: Chronic = 23.5 µg/L / Acute = 34.3 µg/L
Total Recoverable Lead: Chronic = 4.42 µg/L / Acute = 113 µg/L
Total Recoverable Zinc: Chronic = 257 µg/L / Acute = 282 µg/L

As stated in the TMDLs, an allocation to a point source discharger does not automatically result in a permit limit or monitoring requirement. Through its NPDES permitting process, Georgia will determine whether the discharger has a reasonable potential of discharging the parameter at levels greater than the allocated load. Cadmium, copper, lead, and zinc were below detection levels in the renewal application and there is no reasonable potential for the discharge to exceed the allocated loads in these TMDLs.

A TMDL was developed for toxicity in 2000 for Turkey Creek (formerly known as Turkey Branch). The TMDL is written such that the chronic toxicity of Turkey Creek (and the accompanying point source dischargers) does not exceed 1.0 chronic toxic units (TU_c). As stated in the TMDL, an allocation to a point source discharger does not automatically result in a permit limit or monitoring requirement. Through its NPDES permitting process, Georgia will determine whether the discharger has a reasonable potential to discharge chronically toxic effluent. In accordance with EPD's *Whole Effluent Toxicity (WET) Strategy* (2001), WET testing is not required for Custom Profiles, Inc. as it is classified as a minor industrial facility, thus chronic WET testing data is unavailable. Based on the effluent characterization provided in the application, there is no reasonable potential for the discharge to be chronically toxic.

3.5 Wasteload Allocation Date (08/09/2022)

See Appendix B of the Fact Sheet

4 PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

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

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed pollutants in a discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality criteria or standards. By analyzing the effect of a pollutant in the discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards or protect downstream users. In such

cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (fishable/swimmable).

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

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

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

4.2 Reasonable Potential Analysis (RPA)

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

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

The term "pollutant" is defined in CWA section 502(6) and 40 C.F.R. §122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and 40 C.F.R.§401.16 (five day-biochemical oxygen demand (BOD_5), total suspended solids (TSS), fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as, but not limited to, chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

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

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

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

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

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

The sample type, grab vs. composite, is prescribed in the permit and determined by the permit writer after considering, at a minimum, the analytical method required in 40 C.F.R. §136, the type of pollutant, retention time, etc. Grab samples are required for the analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, *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	WQBEL The instream waste concentration is 99.0%. When the instream waste concentration is greater than 50%, there is a reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore, a limit of no less than 6.0 s.u. and no greater than 8.5 s.u. has been added to the permit.
		TBEL Effluent limitations of no less than 6.0 s.u. and no greater than 9.0 s.u. are required in accordance with 40 CFR 463, Subpart A, best practicable control technology currently available (BPT). The more stringent WQBELs have been included in the permit.

5-Day Biochemical Oxygen Demand	001	WQBEL The wasteload allocation issued on August 9, 2022 did not indicate the need for water quality based effluent limitations for BOD_5.
		TBEL A daily maximum effluent limitation of 16.69 mg/L is required in accordance with 40 CFR 463.12 Best Practicable Control Technology Currently Available (BPT). The more stringent daily maximum effluent limitation of 15.61 mg/L has been retained from the previous permit to satisfy anti-backsliding requirements at 40 CFR 122.44(l).
Total Suspended Solids	001	WQBEL Georgia has a narrative Water Quality Standard for total suspended solids. A narrative permit condition stating, "there shall be no floating solids, oil, scum or visible foam other than in trace amounts" has been added to the permit.
		TBEL A daily maximum effluent limitation of 12.20 mg/L is required in accordance with 40 CFR 463.12 Best Practicable Control Technology Currently Available (BPT). The more stringent daily maximum effluent limitation of 11.41 mg/L has been retained from the previous permit to satisfy anti-backsliding requirements at 40 CFR 122.44(l).
Oil & Grease	001	WQBEL Georgia has a narrative Water Quality Standard for total suspended solids. A narrative permit condition stating, "there shall be no floating solids, oil, scum or visible foam other than in trace amounts" has been added to the permit.
		TBEL A daily maximum effluent limitation of 18.62 mg/L is required in accordance with 40 CFR 463.12 Best Practicable Control Technology Currently Available (BPT). The more stringent daily maximum effluent limitation of 17.41 mg/L has been retained from the previous permit to satisfy anti-backsliding requirements at 40 CFR 122.44(l).

4.5 Nonconventional Pollutants

Pollutants of Concern	Outfall ID	Basis
Temperature	001	WQBEL Based on the monitoring conducted during the previous permit term, there is no reasonable potential for the discharge to cause or contribute to an instream violation of the Georgia Water Quality Standards for temperature. Temperature monitoring has been removed from the permit. TBEL There is no applicable federal technology based effluent limit.
Ammonia, Total Kjeldahl Nitrogen, Organic Nitrogen, Nitrate/Nitrite, Total Nitrogen	001	WQBEL 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. Based on the pollutant being present in the wastestream, EPD has identified total nitrogen as a pollutant of concern for the following: POTWs, Private and Institutional Developments, CSO Control Facilities, and applicable Non POTWs. Monitoring for ammonia, TKN, organic nitrogen, and nitrate-nitrite has been included in the permit to calculate total nitrogen, quantify nutrient loadings in the Suwanee River Basin, and to provide information for the development of appropriate numeric or narrative effluent limitations. Total nitrogen is the sum of all nitrogen forms, expressed as: TN = TKN + nitrite-nitrate Whereas; TKN = organic nitrogen + ammonia, as N Ammonia, TKN, organic nitrogen, and nitrate-nitrite, and must be analyzed or calculated from the same sample to correctly calculate total nitrogen. TBEL There is no applicable federal technology based effluent limit.

Total Phosphorus, Orthophosphate, as P	001	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. Based on the data submitted in the application which indicated values of "non-detect", there is no reasonable potential to cause or contribute to instream water quality standard violations.
		TBEL There is no applicable federal technology based effluent limit.

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

Pollutants of Concern	Outfall ID	Basis
Mercury, Total	001	WQBEL In accordance with the EPD reasonable potential procedures, mercury is not considered a pollutant of concern and additional monitoring is not required.
		TBEL There is no applicable federal technology based effluent limit.
Cadmium, Total	001	WQBEL In accordance with the EPD reasonable potential procedures, cadmium is not considered a pollutant of concern and additional monitoring is not required.
		TBEL There is no applicable federal technology based effluent limit.

Copper, Total	001	WQBEL In accordance with the EPD reasonable potential procedures, copper is not considered a pollutant of concern and additional monitoring is not required.
		TBEL There is no applicable federal technology based effluent limit.
Lead, Total	001	WQBEL In accordance with the EPD reasonable potential procedures, lead is not considered a pollutant of concern and additional monitoring is not required.
		TBEL There is no applicable federal technology based effluent limit.
Zinc, Total	001	WQBEL In accordance with the EPD reasonable potential procedures, zinc is not considered a pollutant of concern and additional monitoring is not required.
		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)

$$IWC = \frac{\text{Effluent Flow (cfs)}}{\text{Effluent Flow (cfs)} + 7Q10 \text{ (cfs)}}$$

$$IWC = \frac{0.21 \text{ (cfs)}}{(0.21 \text{ (cfs)} + 0.002 \text{ (cfs)})}$$

IWC = 0.990 or 99.0%

4.8 Technology Based Effluent Limitation Calculations

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

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

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

4.8.1 Total Suspended Solids

Average Process Water Usage Flow Rate = 291,224 LPD
Daily Maximum ELG Concentration Factor = 19 mg/L

Mass-based Daily Maximum Effluent Limitation = Average Process Water Usage Flow Rate x Daily Maximum ELG Concentration Factor

Mass-based Daily Maximum Effluent Limitation = 291,224 LPD x 19 mg/L
Mass-based Daily Maximum Effluent Limitation = 5,533,256 mg/day (12.20 lbs/day)

4.8.2 Biochemical Oxygen Demand$_{5\text{-day}}$

Average Process Water Usage Flow Rate = 291,224 LPD
Daily Maximum ELG Concentration Factor = 26 mg/L

Mass-based Daily Maximum Effluent Limitation = Average Process Water Usage Flow Rate x Daily Maximum ELG Concentration Factor

Mass-based Daily Maximum Effluent Limitation = 291,224 LPD x 26 mg/L
Mass-based Daily Maximum Effluent Limitation = 7,571,824 mg/day (16.69 lbs/day)

4.8.3 Oil and Grease

Average Process Water Usage Flow Rate = 291,224 LPD
Daily Maximum ELG Concentration Factor = 29 mg/L

Mass-based Daily Maximum Effluent Limitation = Average Process Water Usage Flow Rate x Daily Maximum ELG Concentration Factor

Mass-based Daily Maximum Effluent Limitation = 291,224 LPD x 29 mg/L
Mass-based Daily Maximum Effluent Limitation = 8,445,496 mg/day (18.62 lbs/day)

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
BOD_5 (mg/L)	None	15.61	TBEL – Anti-backsliding
Total Suspended Solids (mg/L)	Narrative	11.41	TBEL – Anti-backsliding
Oil & Grease (mg/L)	Narrative	17.41	TBEL – Anti-backsliding
pH (s.u.)	6.0 – 8.5	6.0 – 9.0	WQBEL – WQS

5 OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Compliance Schedules

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

5.2 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.

6 REPORTING

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

Georgia Environmental Protection Division
Southwest District Office
2024 Newton Road
Albany, Georgia 31701-3576

6.1 E-Reporting

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

7 REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

8 PERMIT EXPIRATION

The permit will expire five years from the effective date.

9 PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

9.1 Comment Period

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

Georgia Environmental Protection Division
Wastewater Regulatory Program
2 Martin Luther King Jr. Drive
Suite 1470A East Tower
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 Tower, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday and on EPD's website accessible through the publicly available Georgia EPD Online System (GEOS) at: https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx. For additional information, you can contact 404-463-1511.

9.2 Public Comments

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

9.3 Public Hearing

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

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

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

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

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

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

9.4 Final Determination

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

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

9.5 Contested Hearings

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

Petitions for a contested hearing must include the following:

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

APPENDIX A – Applicable Federal Regulations

(6) Subpart G—Nickel Impregnated Cathodes—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of nickel applied	
	English units—pounds per 1,000,000 pounds of nickel applied	
Chromium	42.0	18.2
Mercury	26.0	11.0
Nickel	42.0	18.2
Silver	42.0	18.2
Zinc	8.0	3.6
Manganese	60.0	46.0

(7) Subpart G—Miscellaneous Wastewater Streams—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of cells produced	
	English units—pounds per 1,000,000 pounds of cells produced	
Chromium	0.27	0.12
Cyanide	0.039	0.016
Mercury	0.17	0.07
Nickel	0.27	0.12
Silver	0.27	0.12
Zinc	0.05	0.02
Manganese	0.39	0.30

(8) Subpart G—Silver Etch—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver processed	
	English units—pounds per 1,000,000 pounds of silver processed	
Chromium	1.56	0.68
Mercury	0.97	0.41
Silver	1.56	0.68
Zinc	0.30	0.13
Manganese	2.23	1.71

(9) Subpart G—Silver Peroxide Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver peroxide produced	
	English units—pounds per 1,000,000 pounds of silver peroxide produced	
Chromium	1.66	0.72
Mercury	1.03	0.44
Silver	1.66	0.72
Zinc	0.32	0.14
Manganese	2.37	1.82

(10) Subpart G—Silver Powder Production—PSNS.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units—mg/kg of silver powder produced	
	English units—pounds per 1,000,000 pounds of silver powder produced	
Chromium	0.67	0.29
Mercury	0.42	0.18
Silver	0.67	0.29
Zinc	0.13	0.06
Manganese	0.96	0.74

(b) There shall be no discharge allowance for process wastewater pollutants from any battery manufacturing operation other than those battery manufacturing operations listed above.

[49 FR 9134, Mar. 9, 1984; 49 FR 13879, Apr. 9, 1984]

PART 463—PLASTICS MOLDING AND FORMING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Subpart A—Contact Cooling and Heating Water Subcategory

Subpart B—Cleaning Water Subcategory

Subpart C—Finishing Water Subcategory

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307, 308, and 501, Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended by Clean Water Act of 1977) (the ''Act''); 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 49 FR 49047, Dec. 17, 1984, unless otherwise noted.

GENERAL PROVISIONS

§ 463.1 Applicability.

(a) This part applies to any plastics molding and forming process that discharges or may discharge pollutants to waters of the United States or that introduces pollutants into a publicly owned treatment works. Plastics molding and forming processes include processes that blend, mold, form, or otherwise process plastic materials into intermediate or final plastic products. They include commonly recognized processes such as extrusion, molding, coating and laminating, thermoforming, calendering, casting, foaming, cleaning, and finishing.

(b) Plastics molding and forming processes (e.g., extrusion and pelletizing) used by plastics resin manufacturers to process crude intermediate plastic material for shipment off-site are excluded from this regulation and regulated under the organic chemicals, plastics, and synthetic fibers category. Plastics molding and forming processes used by plastic resin manufacturers to process crude intermediate plastic materials, which are further processed on-site into intermediate or final plastics products in molding and forming processes, are controlled by the effluent limitations guidelines and standards for the plastics molding and forming category in this part.

(c) Processes that coat a plastic material onto a substrate may fall within the definition of electroplating and metal finishing as defined in 40 CFR parts 413 and 433. These coating processes are excluded from the effluent limitations guidelines and standards for the electroplating and metal finishing point source categories and are subject to the plastics molding and forming regulation in this part.

(d) Coating of plastic material onto a formed metal substrate is also covered by the plastics molding and forming effluent limitations guidelines and standards and is not covered by the specific metal forming guidelines such as aluminum forming (40 CFR part 467), copper forming (40 CFR part 468), and nonferrous metals forming (40 CFR part 471). However, the plastics molding and forming effluent limitations guidelines and standards in this part apply only to the coating process; the metal forming operations are subject to the specific metal forming regulation.

(e) Research and development laboratories that produce plastic products using a plastics molding and forming process are subject to the effluent limitations guidelines and standards in this part if the plastics molding and forming process discharges process water. The mass of plastic product produced in the plastics molding and forming process is not considered when determining the applicability of the plastics molding and forming regulation in this part to plastics molding and forming processes at research and development laboratories.

(f) Chemical and thermal reticulation processes for polyurethane foam are not subject to the effluent limitations guidelines and standards in this part. Water used in those processes is not considered to be process water as defined in this regulation. Processes used to further mold or form the reticulated foam are subject, however, to this regulation if they discharge process water.

(g) Processes used to regenerate cellulose and to produce a product (e.g., rayon) from the regenerated cellulose are not subject to the effluent limitations guidelines and standards in this part. Processes that mold or form cellulose derivatives (e.g., cellulose acetate) are subject to the effluent limitations guidelines and standards in this part if they discharge process water.

[49 FR 49047, Dec. 17, 1984; 50 FR 18249, Apr. 30, 1985]

§ 463.2 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) ''Plastics molding and forming'' is a manufacturing process in which plastic materials are blended, molded, formed, or otherwise processed into intermediate or final products.

(b) ''Process water'' is any raw, service, recycled, or reused water that contacts the plastic product or contacts shaping equipment surfaces such as molds and mandrels that are, or have been, in contact with the plastic product.

(c) ''Contact cooling and heating water'' is process water that contacts the raw materials or plastic product for the purpose of heat transfer during the plastics molding and forming process.

(d) ''Cleaning water'' is process water used to clean the surface of an intermediate or final plastic product or to clean the surfaces of equipment used in plastics molding and forming that contact an intermediate or final plastic product. It includes water used in both the detergent wash and rinse cycles of a cleaning process.

(e) ''Finishing'' water is processed water used to remove waste plastic material generated during a finishing process or to lubricate a plastic product during a finishing process. It includes water used to machine or to assemble intermediate or final plastic products.

(f) ''Plastic material'' is a synthetic organic polymer (*i.e.*, a thermoset polymer, a thermoplastic polymer, or a combination of a natural polymer and a thermoset or thermoplastic polymer) that is solid in its final form and that was shaped by flow. The material can be either a homogeneous polymer or a polymer combined with fillers, plasticizers, pigments, stabilizers, or other additives.

(g) ''Crude intermediate plastic material'' is plastic material formulated in an on-site polymerization process.

(h) ''Mass of pollutant that can be discharged'' is the pollutant mass calculated by multiplying the pollutant concentration times the average process water usage flow rate.

§ 463.3 Monitoring and reporting requirements.

The ''monthly average'' regulatory values shall be the basis for the monthly average effluent limitations guidelines and standards in direct discharge permits. Compliance with the monthly average effluent limitations guidelines and standards is required regardless of the number of samples analyzed and averaged.

Subpart A—Contact Cooling and Heating Water Subcategory

§ 463.10 Applicability; description of the contact cooling and heating water subcategory.

This subpart applies to discharges of pollutants from processes in the contact cooling and heating water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the contact cooling and heating water subcategory are processes where process water comes in contact with plastic materials or plastic products for the purpose of heat transfer during plastics molding and forming.

§ 463.11 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a contact cooling and heating water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses contact cooling and heating water is the sum of the ''average process water usage flow rates'' for the contact cooling and heating processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a contact cooling and heating water process and comes in contact with the plastic product over a period of one year.

§ 463.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BPT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD_5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

§ 463.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate are reserved.

(b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, there are no toxic pollutants in treatable concentrations in contact cooling and heating water. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to the BPT effluent limitations guidelines.

§ 463.14 New source performance standards.

(a) NSPS for bis(2-ethylhexyl) phthalate are reserved.

(b) Any new source subject to this subpart must achieve performance standards (*i.e.*, mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a new source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate NSPS	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD_5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source contact cooling and heating water processes from the permittee.

§ 463.15 Pretreatment standards for existing sources.

(a) PSES for bis(2-ethylhexyl) phthalate are reserved.

(b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

§ 463.16 Pretreatment standards for new sources.

(a) PSNS for bis(2-ethylhexyl)phthalate are reserved.

(b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

§ 463.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology, which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BCT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD_5	26
Oil and grease	29
TSS	19
pH	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

Subpart B—Cleaning Water Subcategory

§ 463.20 Applicability; description of the cleaning water subcategory.

This subpart applies to discharges of pollutants from processes in the cleaning water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the cleaning water subcategory are processes where water comes in contact with the plastic product for the purpose of cleaning the surface of the product and where water comes in contact with shaping equipment, such as molds and mandrels, that contact the plastic material for the purpose of cleaning the equipment surfaces.

§ 463.21 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a cleaning water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses cleaning water is the sum of

the ''average process water usage flow rates'' for the cleaning processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a cleaning process and comes in contact with the plastic product over a period of one year.

§ 463.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the cleaning water processes at a point source times the following pollutant concentrations:

SUBPART B

[Cleaning water]

Concentration used to calculate BPT effluent limitations		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
BOD_5	49	22
Oil and grease	71	17
TSS	117	36
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the cleaning water processes from the permittee.

§ 463.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The Agency has determined that there are insignificant quantities of toxic pollutants in cleaning process wastewaters after compliance with applicable BPT effluent limitations guidelines. Accordingly, because the BPT level of treatment provides adequate control, the Agency is establishing BAT effluent limitations guidelines equal to the BPT effluent limitations guidelines.

§ 463.24 New source performance standards.

Any new source subject to this subpart must achieve performance standards (*i.e.*, mass of pollutant discharged) calculated by multiplying the average process water usage flow rate for cleaning processes at a new source times the following pollutant concentrations:

SUBPART B

[Cleaning water]

Concentration used to calculate NSPS		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
BOD_5	49	22
Oil and Grease	71	17
TSS	117	36
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source cleaning water processes from the permittee.

§ 463.25 Pretreatment standards for existing sources.

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

§ 463.26 Pretreatment for new sources.

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

§ 463.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

Subpart C—Finishing Water Subcategory

§ 463.30 Applicability; description of the finishing water subcategory.

This subpart applies to discharges of pollutants from processes in the finishing water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the finishing water subcategory are processes where water comes in contact with the plastic product during finishing.

§ 463.31 Specialized definitions.

For the purpose of this subpart:

(a) The ''average process water usage flow rate'' of a finishing water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The ''average process water usage flow rate'' for a plant with more than one plastics molding and forming process that uses finishing water is the sum of the ''average process water usage flow rates'' for the finishing processes.

(b) The ''volume of process water used per year'' is the volume of process water that flows through a finishing water process and comes in contact with the plastics product over a period of one year.

§ 463.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the finishing water processes at a point source times the following pollutant concentrations:

SUBPART C

[Finishing water]

Concentration used to calculate BPT effluent limitations		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
TSS	130	37
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the finishing water processes from the permittee.

§ 463.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate, there are no toxic pollutants in treatable concentrations in finishing waters. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to BPT effluent limitations guidelines.

§ 463.34 New source performance standards.

(a) NSPS for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any new source subject to this subpart must achieve performance standards (*i.e.*, mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the finishing water processes at a new source times the following pollutant concentrations:

SUBPART C

[Finishing water]

Concentration used to calculate NSPS		
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
TSS	130	37
pH	(1)	(1)

[1] Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source finishing water processes from the permittee.

§ 463.35 Pretreatment standards for existing sources.

(a) PSES for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

§ 463.36 Pretreatment standards for new sources.

(a) PSNS for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.

(b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

§ 463.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

PART 464—METAL MOLDING AND CASTING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.

Subpart A—Aluminum Casting Subcategory

Subpart B—Copper Casting Subcategory

Subpart C—Ferrous Casting Subcategory

Appendix B – Wasteload Allocation

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

Memorandum

Date: August 8, 2022

To: Josh Welte

Through: Audra Dickson

From: Ian McDowell

Subject: Waste Load Allocation (WLA) Request
Custom Profiles, Inc.
NPDES Permit No. GA0037842
Ben Hill County, Suwannee River Basin

WLA request for the reissuance of the above referenced facility, which will expire on December 31, 2022. The analytical analyses accompanying the application for renewal of the NPDES permit indicated the presence of oxygen demanding constituents, nutrients or toxics above detectable limits and the Wastewater Regulatory Program is requesting water quality limits for the permit.

Wastewater Regulatory Program: Permit Information (for each outfall)
(Duplicate this section for each outfall you need a WLA for)

Outfall No.: 001	Lat/Long: 31.702879, -83.240489
Name of Receiving Waters: Turkey Creek (formerly known as Turkey Branch)	River Basin: Suwannee
Average Flow (MGD): 0.073	Maximum (Design) Flow (MGD): 0.133
Summer Temperature (max): 77.90 °F	Winter Temperature (max): 77.00 °F

Description of Industrial Processes:

Contact Cooling Water

Type of Wastewater Discharge:

☒ Process Wastewater ☐ Cooling Water ☐ Stormwater

☐ Domestic Wastewater ☐ Other (Describe)

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:

Provide daily average and daily maximum values reported on the application below, with units.

- ☒ BOD_5 DA = 3.01 mg/L; DM = 9.20 mg/L
- ☒ DO Not Provided
- ☒ NH_3 DA/DM = <0.25 mg/L
- ☒ Total Phosphorus DA/DM = <0.10 mg/L
- ☐ TRC Believed Absent
- ☐ Temperature DA = 74.42 °F; DM = 77.90 °F

Watershed Planning and Monitoring Program

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

- ☒ 7Q10 0.002 cfs
- ☒ 30Q3 0.02 cfs
- ☒ 1Q10 0.001 cfs
- ☒ Mean Annual Stream Flow 6.7 cfs
- ☒ Receiving Stream Hardness _____
- ☒ Upstream TSS _____
- ☒ Chronic instream NH_3 toxicity _____

Please provide the following items about Total Maximum Daily Loads applicable to the receiving waterbody/watershed and indicate "NA" if an item does not apply.

☒ TMDL name and year: FC (2006), Mercury (2002), DO (2000), Lead (2000), Cadmium (2000), Copper (2000), Tox (2000), Zinc (2000)

☒ WLA Provided to facility in TMDL: See attached, Facility was not identified as contributing source in DO, FC, and Mercury TMDLs

For new facilities:

☐ Available WLA which can be allocated to this facility_____

- Discharge located in ecoregion 65l Atlantic Southern Loam Plains
- Rec pH: 6.0 – 8.5 SU

Total Maximum Daily Load

Evaluation

for

Turkey Branch

in the

Suwannee River Basin

(Cadmium)

Submitted to:

The U.S. Environmental Protection Agency
Region 4
Atlanta, Georgia

Submitted by:
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

June 2000

5.0 ALLOCATION

5.1 Total Maximum Daily Load

A TMDL is the sum of the individual WLAs for point sources and load allocations (LA) for nonpoint sources and natural background (40 CFR 130.2). The sum of these components may not result in an exceedence of water quality standards for that water body. To protect against exceedences, the TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. Conceptually, a TMDL can be expressed as follows:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while maintaining water quality standards. For pollutants such as metals, TMDLs are expressed on a mass loading basis (e.g., pounds per day). In accordance with 40 CFR Part 130.2(i), "TMDLs can be expressed in terms of ... mass per time, toxicity, or other appropriate measure."

5.2 Waste Load Allocations

As is stated in Section 4.1 of this report, the dissolved cadmium chronic criterion is equal to 0.82 ug/l and the dissolved cadmium acute criterion is equal to 2.65 ug/l for the established critical conditions.

Using a translation factor equal to 4.12, the allowable instream total recoverable concentrations are 3.38 ug/l and 10.9 ug/l in order to respectively protect against chronic and acute effects of cadmium. Furthermore, the WLA is calculated using the flows established for critical conditions. Since there is no available dilution during critical conditions, the effluent concentration from each point source cannot exceed the allowable instream total recoverable chronic and acute concentrations.

Allowable total recoverable loading to protect the dissolved cadmium chronic criterion:

allowable loading = sum of the allowable loadings from the individual point sources

where the allowable loading from an individual point source is calculated as follows:

individual point source loading = (allowable effluent chronic conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 0.07676 kg/day
2. allowable loading from Aeroquip Corporation = 0.00102 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.00064 kg/day

allowable loading to protect the chronic cadmium criterion = 0.07842 kg/day

Allowable total recoverable loading to protect the dissolved cadmium acute criterion:

individual point source loading = (allowable effluent acute conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 0.24754 kg/day
2. allowable loading from Aeroquip Corporation = 0.00330 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.00206 kg/day

allowable loading to protect the acute cadmium criterion = 0.25290 kg/day

5.3 Load Allocations

There are currently no known cadmium contributions to Turkey Branch from nonpoint sources. In the event that nonpoint source contributions of cadmium were present, it is extremely unlikely that the WLA would need to be different than what has been established in this report, because the WLA requires that the effluent from each facility must itself be protective of the water quality criteria. Considering this information, the load allocation is established as 0.0 kg/day.

5.4 TMDL Results

The TMDL can be summarized as follows:

Table 4. TMDL SUMMARY

Parameter	Criterion	WLA	LA	MOS	TMDL
Total Recoverable Cadmium	Dissolved Chronic Criterion	Fitzgerald WWTP (0.07676 kg/day) Custom Profiles Inc. (0.00064 kg/day) Aeroquip Corporation (0.00102 kg/day) TOTAL WLA = 0.07842 kg/day	0.0 kg/day	Implicit	0.07842 kg/day
Total Recoverable Cadmium	Dissolved Acute Criterion	Fitzgerald WWTP (0.24754 kg/day) Custom Profiles Inc. (0.00206 kg/day) Aeroquip Corporation (0.00330 kg/day) TOTAL WLA = 0.25290 kg/day	0.0 kg/day	Implicit	0.25290 kg/day

5.5 Seasonal Variation

The low flow critical conditions incorporated in this TMDL represent the most critical design condition and will provide year-round protection of water quality.

5.6 Margin of Safety

The MOS is a required component of TMDL development. As specified by section 303(d) of the CWA, the margin of safety must account for any lack of knowledge concerning the relationship between effluent limitations and water quality. There are two basic methods for incorporating the MOS: 1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; or 2) explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations.

Total Maximum Daily Load

Evaluation

for

Turkey Branch

in the

Suwannee River Basin

(Copper)

Submitted to:

The U.S. Environmental Protection Agency
Region 4
Atlanta, Georgia

Submitted by:
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

June 2000

5.0 ALLOCATION

5.1 Total Maximum Daily Load

A TMDL is the sum of the individual WLAs for point sources and load allocations (LA) for nonpoint sources and natural background (40 CFR 130.2). The sum of these components may not result in an exceedence of water quality standards for that water body. To protect against exceedences, the TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. Conceptually, a TMDL can be expressed as follows:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while maintaining water quality standards. For pollutants such as metals, TMDLs are expressed on a mass loading basis (e.g., pounds per day). In accordance with 40 CFR Part 130.2(i), "TMDLs can be expressed in terms of ... mass per time, toxicity, or other appropriate measure."

5.2 Waste Load Allocations

As is stated in Section 4.1 of this report, the dissolved copper chronic criterion is equal to 8.7 ug/l and the dissolved copper acute criterion is equal to 12.7 ug/l for the established critical conditions.

Using a translation factor equal to 2.69, the allowable instream total recoverable concentrations are 23.5 ug/l and 34.3 ug/l in order to respectively protect against chronic and acute effects of copper. Furthermore, the WLA is calculated using the flows established for critical conditions. Since there is no available dilution during critical conditions, the effluent concentration from each point source cannot exceed the allowable instream total recoverable chronic and acute concentrations.

Allowable total recoverable loading to protect the dissolved copper chronic criterion:

allowable loading = sum of the allowable loadings from the individual point sources

where the allowable loading from an individual point source is calculated as follows:

individual point source loading = (allowable effluent chronic conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 0.5337 kg/day
2. allowable loading from Aeroquip Corporation = 0.0071 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.0045 kg/day

allowable loading to protect the chronic copper criterion = 0.5453 kg/day

Allowable total recoverable loading to protect the dissolved copper acute criterion:

individual point source loading = (allowable effluent acute conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 0.7790 kg/day
2. allowable loading from Aeroquip Corporation = 0.0104 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.0065 kg/day

allowable loading to protect the acute copper criterion = 0.7959 kg/day

5.3 Load Allocations

There are currently no known copper contributions to Turkey Branch from nonpoint sources. In the event that nonpoint source contributions of copper were present, it is extremely unlikely that the WLA would need to be different than what has been established in Section 5.2 of this report, because the WLA requires that the effluent from each facility must itself be protective of the water quality criteria. Considering this information, the load allocation is established as 0.0 kg/day.

5.4 TMDL Results

This TMDL can be summarized as follows:

Table 4. TMDL SUMMARY

Parameter	Criterion	WLA	LA	MOS	TMDL
Total Recoverable Copper	Dissolved Chronic Criterion	Fitzgerald WWTP (0.5337 kg/day) Custom Profiles Inc. (0.0045 kg/day) Aeroquip Corporation (0.0071 kg/day) TOTAL WLA = 0.5453 kg/day	0.0 kg/day	Implicit	0.5453 kg/day
Total Recoverable Copper	Dissolved Acute Criterion	Fitzgerald WWTP (0.7790 kg/day) Custom Profiles Inc. (0.0065 kg/day) Aeroquip Corporation (0.0104 kg/day) TOTAL WLA = 0.7959 kg/day	0.0 kg/day	Implicit	0.7959 kg/day

5.5 Seasonal Variation

The low flow critical conditions incorporated in this TMDL represent the most critical design condition and will provide year-round protection of water quality.

5.6 Margin of Safety

The MOS is a required component of TMDL development. As specified by section 303(d) of the CWA, the margin of safety must account for any lack of knowledge concerning the relationship between effluent limitations and water quality. There are two basic methods for incorporating the MOS: 1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; or 2) explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations.

Total Maximum Daily Load

Evaluation

for

Turkey Branch

in the

Suwannee River Basin

(Lead)

Submitted to:

The U.S. Environmental Protection Agency
Region 4
Atlanta, Georgia

Submitted by:
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

June 2000

5.0 ALLOCATION

5.1 Total Maximum Daily Load

A TMDL is the sum of the individual WLAs for point sources and load allocations (LA) for nonpoint sources and natural background (40 CFR 130.2). The sum of these components may not result in an exceedence of water quality standards for that water body. To protect against exceedences, the TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. Conceptually, a TMDL can be expressed as follows:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while maintaining water quality standards. For pollutants such as metals, TMDLs are expressed on a mass loading basis (e.g., pounds per day). In accordance with 40 CFR Part 130.2(i), "TMDLs can be expressed in terms of ... mass per time, toxicity, or other appropriate measure."

5.2 Waste Load Allocations

As is stated in Section 4.1 of this report, the dissolved lead chronic criterion is equal to 1.80 ug/l and the dissolved lead acute criterion is equal to 46.1 ug/l for the established critical conditions.

Using a translation factor equal to 2.46, the allowable instream total recoverable concentrations are 4.42 ug/l and 113 ug/l in order to respectively protect against chronic and acute effects of lead. Furthermore, the WLA is calculated using the flows established for critical conditions. Since there is no available dilution during critical conditions, the effluent concentration from each point source cannot exceed the allowable instream total recoverable chronic and acute concentrations.

Allowable total recoverable loading to protect the dissolved lead chronic criterion:

allowable loading = sum of the allowable loadings from the individual point sources

where the allowable loading from an individual point source is calculated as follows:

individual point source loading = (allowable effluent chronic conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 0.10038 kg/day
2. allowable loading from Aeroquip Corporation = 0.00134 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.00084 kg/day

allowable loading to protect the chronic lead criterion = 0.10256 kg/day

Allowable total recoverable loading to protect the dissolved lead acute criterion:

Individual point source loading = (allowable effluent acute conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 2.566 kg/day
2. allowable loading from Aeroquip Corporation = 0.034 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.021 kg/day

allowable loading to protect the acute lead criterion = 2.621 kg/day

5.3 Load Allocations

There are currently no known lead contributions to Turkey Branch from nonpoint sources. In the event that nonpoint source contributions of lead were present, it is extremely unlikely that the WLA would need to be different than what has been established in Section 5.2 of this report, because the WLA requires that the effluent from each facility must itself be protective of the water quality criteria. Considering this information, the load allocation is established as 0.0 kg/day.

5.4 TMDL Results

This TMDL can be summarized as follows:

Table 4. TMDL SUMMARY

Parameter	Criterion	WLA	LA	MOS	TMDL
Total Recoverable Lead	Dissolved Chronic Criterion	Fitzgerald WWTP (0.10038 kg/day) Custom Profiles Inc. (0.00084 kg/day) Aeroquip Corporation (0.00134 kg/day) TOTAL WLA = 0.10256 kg/day	0.0 kg/day	Implicit	0.10256 kg/day
Total Recoverable Lead	Dissolved Acute Criterion	Fitzgerald WWTP (2.566 kg/day) Custom Profiles Inc. (0.021 kg/day) Aeroquip Corporation (0.034 kg/day) TOTAL WLA = 2.621 kg/day	0.0 kg/day	Implicit	2.621 kg/day

5.5 Seasonal Variation

The low flow critical conditions incorporated in this TMDL represent the most critical design condition and will provide year-round protection of water quality.

5.6 Margin of Safety

The MOS is a required component of TMDL development. As specified by section 303(d) of the CWA, the margin of safety must account for any lack of knowledge concerning the relationship between effluent limitations and water quality. There are two basic methods for incorporating the MOS: 1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; or 2) explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations.

Total Maximum Daily Load

Evaluation

for

Turkey Branch

in the

Suwannee River Basin

(Toxicity)

Submitted to:

The U.S. Environmental Protection Agency
Region 4
Atlanta, Georgia

Submitted by:
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

June 2000

5.0 ALLOCATION

5.1 Total Maximum Daily Load

A TMDL is the sum of the individual waste load allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background (40 CFR 130.2). The sum of these components may not result in an exceedence of water quality standards for that water body. To protect against exceedences, the TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. Conceptually, a TMDL can be expressed as follows:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while maintaining water quality standards.

For some pollutants, TMDLs are expressed on a mass loading basis (e.g., pounds per day). In accordance with 40 CFR Part 130.2(i), "TMDLs can be expressed in terms of ... mass per time, toxicity, or other appropriate measure." In additions, NPDES permitting regulations in 40 CFR 122.45(f) state that "All pollutants limited in permits shall have limitations ...expressed in terms of mass except ... pollutants which cannot appropriately be expressed by mass." For the toxicity TMDL for Turkey Branch, the Total Maximum Daily Load is expressed in terms of chronic toxicity units (TU_cs)

5.2 Waste Load Allocations

Under critical low flow conditions, the toxicity wasteload allocations (WLA) for Turkey Branch is expressed as follows:

Toxicity from each point source = 100 / NOEC = 100 / IWC = 100 / 100 = 1.0 TU_c

5.3 Load Allocations

The toxicity contributions to Turkey Branch from nonpoint sources is assumed to be 0.0 TU_c. Since the wasteload allocations uses all of the assimilative capacity of Turkey Branch during critical conditions, the allocation to the nonpoint sources (i.e., the load allocations) is set to equal the existing toxicity contributions of 0.0 TU_c.

5.4 TMDL Results

This TMDL can be shown to be protective of an instream chronic toxicity of 1.0 TU_c for Turkey Branch as follows:

$$\text{Instream Toxicity} = \frac{\text{upstream toxicity x upstream flow} + \Sigma\,(\text{effluent toxicity x effluent flow})}{\text{Upstream flow} + \Sigma\,\text{effluent flows}}$$

$$= \frac{0.0\ TUc \times 0.0\ MGD + (1.0\ TUc \times 6.0\ MGD + 1.0\ TUc \times 0.5\ MGD + 1.0\ TUc \times 0.08\ MGD)}{0.0\ MGD + (6.0\ MGD + 0.05\ MGD + 0.08\ MGD)}$$

= 1.0 TUc

Table 1. TMDL Summary

Parameter	WLA	LA	MOS	TMDL
Chronic toxicity	Fitzgerald WWTP (1.0 TU_c) Custom Profiles Inc. (1.0 TU_c) Aeroquip Corporation (1.0 TU_c)	0.0 TU_c	Implicit	1.0 TU_c

5.5 Seasonal Variation

The low flow critical conditions incorporated in this TMDL represent the most critical design condition and will provide year-round protection of water quality.

5.6 Margin of Safety

The MOS is a required component of TMDL development. There are two basic methods for incorporating the MOS: 1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; or 2) explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations. The MOS was implicitly incorporated into the TMDL process by the use of critical low flow conditions.

Total Maximum Daily Load

Evaluation

for

Turkey Branch

in the

Suwannee River Basin

(Zinc)

Submitted to:

The U.S. Environmental Protection Agency
Region 4
Atlanta, Georgia

Submitted by:
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, Georgia

June 2000

5.0 ALLOCATION

5.1 Total Maximum Daily Load

A TMDL is the sum of the individual WLAs for point sources and load allocations (LA) for nonpoint sources and natural background (40 CFR 130.2). The sum of these components may not result in an exceedence of water quality standards for that water body. To protect against exceedences, the TMDL must also include a margin of safety (MOS), either implicitly or explicitly, that accounts for the uncertainty in the relationship between pollutant loads and the water quality response of the receiving water body. Conceptually, a TMDL can be expressed as follows:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while maintaining water quality standards. For pollutants such as metals, TMDLs are expressed on a mass loading basis (e.g., pounds per day). In accordance with 40 CFR Part 130.2(i), "TMDLs can be expressed in terms of ... mass per time, toxicity, or other appropriate measure."

5.2 Waste Load Allocations

As is stated in Section 4.1 of this report, the dissolved zinc chronic criterion is equal to 80.5 ug/l and the dissolved zinc acute criterion is equal to 88.1 ug/l for the established critical conditions.

Using a translation factor equal to 3.20, the allowable instream total recoverable concentrations are 257 ug/l and 282 ug/l in order to respectively protect against chronic and acute effects of zinc. Furthermore, the WLA is calculated using the flows established for critical conditions. Since there is no available dilution during critical conditions, the effluent concentration from each point source cannot exceed the allowable instream total recoverable chronic and acute concentrations.

Allowable total recoverable loading to protect the dissolved zinc chronic criterion:

allowable loading = sum of the allowable loadings from the individual point sources

where the allowable loading from an individual point source is calculated as follows:

individual point source loading = (allowable effluent chronic conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 5.836 kg/day
2. allowable loading from Aeroquip Corporation = 0.078 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.049 kg/day

allowable loading to protect the chronic zinc criterion = 5.963 kg/day

Allowable total recoverable loading to protect the dissolved zinc acute criterion:

individual point source loading = (allowable effluent acute conc.) x (effluent flow rate) x (unit conversion factor)

1. allowable loading from the Fitzgerald WWTP = 6.404 kg/day
2. allowable loading from Aeroquip Corporation = 0.085 kg/day
3. allowable loading from Custom Profiles, Inc. = 0.053 kg/day

allowable loading to protect the acute zinc criterion = 6.542 kg/day

5.3 Load Allocations

There are currently no known zinc contributions to Turkey Branch from nonpoint sources. In the event that nonpoint source contributions of zinc were present, it is extremely unlikely that the WLA would need to be different than what has been established in Section 5.2 of this report, because the WLA requires that the effluent from each facility must itself be protective of the water quality criteria. Considering this information, the load allocation is established as 0.0 kg/day.

5.4 TMDL Results

This TMDL can be summarized as follows:

Table 4. TMDL

Parameter	Criterion	WLA	LA	MOS	TMDL
Total Recoverable Zinc	Dissolved Chronic Criterion	Fitzgerald WWTP (5.836 kg/day) Custom Profiles Inc. (0.049 kg/day) Aeroquip Corporation (0.078 kg/day) TOTAL WLA = 5.963 kg/day	0.0 kg/day	Implicit	5.963 kg/day
Total Recoverable Zinc	Dissolved Acute Criterion	Fitzgerald WWTP (6.404 kg/day) Custom Profiles Inc. (0.053 kg/day) Aeroquip Corporation (0.085 kg/day) TOTAL WLA = 6.542 kg/day	0.0 kg/day	Implicit	6.542 kg/day

5.5 Seasonal Variation

The low flow critical conditions incorporated in this TMDL represent the most critical design condition and will provide year-round protection of water quality.

5.6 Margin of Safety

The MOS is a required component of TMDL development. As specified by section 303(d) of the CWA, the margin of safety must account for any lack of knowledge concerning the relationship between effluent limitations and water quality. There are two basic methods for incorporating the MOS: 1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; or 2) explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations.

The MOS was implicitly incorporated into the TMDL for Turkey Branch through the use of critical conditions established in section 4.1 of this report. Through the use of low flow conditions, the

Appendix C – Reasonable Potential Analysis

FACT SHEET
Appendix C
Custom Profiles, Inc.
NPDES Permit No. GA0037842
Outfall 001

Stream Data (upstream of the discharge):

TSS:	**10**	mg/L
7Q10:	**0.002**	ft^3/s
1Q10:	**0.001**	ft^3/s
Mean flow:	**6.7**	ft^3/s

Effluent Data:

Average Effluent TSS:	**0.0**	mg/L
Permitted Flow:	**133,000**	gal/day
Flow:	0.21	ft^3/s

Receiving Water Type: **Freshwater**
Permit Type: **Industrial**

Stream data (downstream of the discharge):

Hardness:	**73.5**	mg/L
TSS (at 7Q10):	**6.7**	mg/L

Dilution factor (at mean annual flow):	33.6	IWC (at mean annual flow):	3
Dilution factor (at 7Q10):	1.01	IWC (at 7Q10):	99.0
Dilution factor (at 1Q10):	1.00	IWC (at 1Q10):	99.5

Acute Water Quality Criteria (WQC_{Acute}) - Metals:

Metal	K_{PO}	α	f_D	Number of samples	**Maximum** effluent C_T (µg/L)	Instream C_D (µg/L)	WQC_{Acute} (µg/L)	WQC_{Acute} (adjusted) (1) (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	1	**0.0**	0.0	340	170	no
Cadmium	N/A	N/A	N/A	1	**0.0**	0.0	10.9	5.45	no
Chromium III	3.36.E+06	-0.930	0.00	1	**0.0**	0.0	443	221	no
Chromium VI	3.36.E+06	-0.930	0.00	1	**0.0**	0.0	16	8	no
Copper	N/A	N/A	N/A	1	**0.0**	0.0	34.3	17.2	no
Lead	N/A	N/A	N/A	1	**0.0**	0.0	113	56.5	no
Mercury	---	---	---	1	**0.0**	0.0	0.0068	0.0034	no
Nickel	4.90.E+05	-0.572	0.00	1	**0.0**	0.0	361	180	no
Selenium	---	---	---	1	**0.0**	0.0	N/A	N/A	no
Zinc	N/A	N/A	N/A	1	**0.0**	0.00	282	141	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.

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

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

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

FACT SHEET
Appendix C
Custom Profiles, Inc.
NPDES Permit No. GA0037842
Outfall 001

Chronic Water Quality Criteria ($WQC_{Chronic}$) - Metals:

Metal	K_{PO}	α	f_D	Number of samples	Average effluent C_T (µg/L)	Instream C_D (µg/L)	$WQC_{Chronic}$ (µg/L)	$WQC_{Chronic}$ (adjusted) (1) (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	1	**0.0**	0.0	150	75	no
Cadmium	N/A	N/A	N/A	1	**0.0**	0.0	3.38	1.69	no
Chromium III	3.36.E+06	-0.930	0.00	1	**0.0**	0.0	58	29	no
Chromium VI	3.36.E+06	-0.930	0.00	1	**0.0**	0.0	11	5.5	no
Copper	N/A	N/A	N/A	1	**0.0**	0.0	23.5	11.8	no
Lead	N/A	N/A	N/A	1	**0.0**	0.0	4.42	2.21	no
Mercury	---	---	---	1	**0.0**	0.0	0.0068	0.0034	no
Nickel	4.90.E+05	-0.572	0.00	1	**0.0**	0.0	40	20	no
Selenium	---	---	---	1	**0.0**	0.0	5.0	2.5	no
Zinc	N/A	N/A	N/A	1	**0.0**	0.0	257	129	no

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

Total Recoverable Metal Effluent Limit

Metal	C_S (µg/L)	Chronic C_T (µg/L)	Chronic C_T (lb/day)	Acute C_T (µg/L)	Acute C_T (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_T) from **EPA 823-B-96-007, June 1996, page 33:**

$$\text{Chronic } C_T = \frac{\frac{WQC_{Chronic}}{f_D} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{Q_E} \qquad \text{Acute } C_T = \frac{\frac{WQC_{Acute}}{f_D} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{Q_E}$$

(1) In accordance with Georgia EPD's *NPDES Reasonable Potential Procedures* , January 2003, the effluent concentration shall be compared to 50% of the chronic WQC. The "adjusted" WQC is 50% of the chronic WQC.

Ammonia Reasonable Potential Analysis

General Information		
Facility	Custom Profiles, Inc.	
Permit #	GA0037842	
Staff	McDowell	
Date	4.Nov.22	
Upstream Conditions		**Basis**
Flow, Q_s	0.02 cfs	30Q3 as determined by WPMP
Concentration, C_s	0.13 mg/L	background concentration generally ~0.13 mg/L or as specified by WPMP
Discharge Characteristics		**Basis**
Flow, Q_d	0.133 MGD	effluent flow rate
Flow, Q_d	0.21 cfs	effluent flow rate
Concentration, C_d	0.00 mg/L	concentration
IWC	91.1 %	instream waste concentration
Predicted Downstream		**Basis**
Flow, Q_r	0.23 cfs	calculated combined flow
Concentration, C_r	0.01 mg/L	calculated instream concentration
Applicable Criteria	0.7 mg/L	instream toxicity criteria as determined by WPMP
Ratio	2 %	predicted instream concentration as % of criteria
RP	**No**	is there reasonable potential to exceed criteria?
Action	**None**	what is appropriate permitting action?