



19-00071

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243

March 9, 2026

**Electronically Filed in TPUC Docket
Room on March 10, 2026 at 2:54 p.m.**

Mr. Mark Landreth
Senior Director, NA Regional Operations
e-copy: marklandreth@berryglobal.com
Glatfelter Sontara Old Hickory Inc. (a Magnera Brand)
70 Old Hickory Blvd
Old Hickory, TN 37138

Subject: **NPDES Permit No. TN0002259
Glatfelter Sontara Old Hickory, Inc.
Old Hickory, Davidson County, Tennessee**

Dear Mr. Landreth:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application.

Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment.

Any petition for permit appeal under this subsection (i) shall be filed with the Technical Secretary of the Water Quality, Oil and Gas Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

TDEC has activated an email address to accept appeals electronically. If you wish to file an appeal, you may do so by emailing the appeal and any attachments to TDEC.Appeals@tn.gov. If you file an appeal electronically, you do not have to send a paper copy. Electronic filing is encouraged, but not required.

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mrs. Tricia Swaney at (615) 253-5407 or by E-mail at Tricia.Swaney@tn.gov.

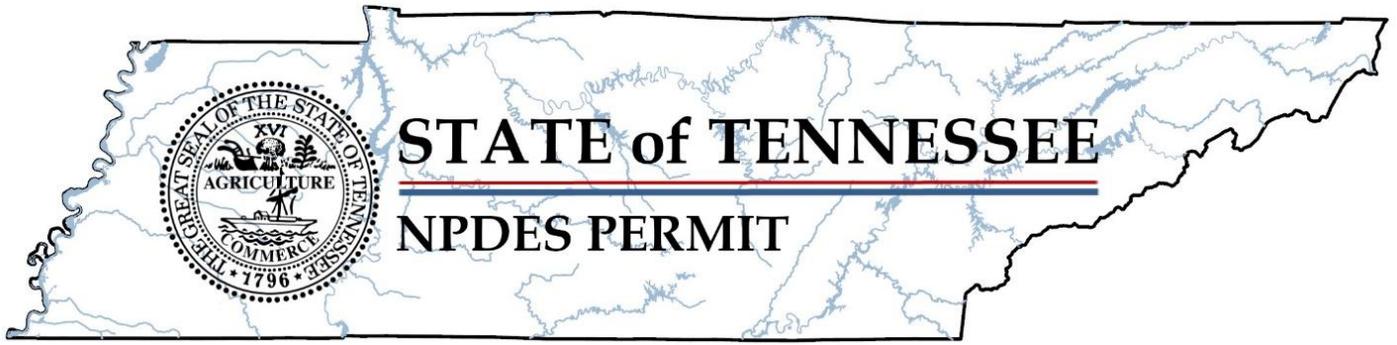
Sincerely,



Sarah Terpstra
Manager, Water-Based Systems

Enclosure

cc: Permit File
Nashville Environmental Field Office
NPDES Permit Section, EPA Region IV, r4npdespermits@epa.gov
Mrs. Megan Oliver, EHS Manager, Fiberweb, Inc. (a Magnera Brand), meganoliver@magnera.com
Ms. Patsy Fulton, Utility Rate Specialist, Tennessee Public Utility Commission, Patsy.Fulton@tn.gov
Mr. Steven Alexander, Ecologist, U.S. Fish and Wildlife Service (USFWS), steven_alexander@fws.gov
Mr. Jimmy Conner, Controls Engineer, Sontara Old Hickory Inc, jimmy.conner@jacob-holm.com



**Authorization to Discharge Under the
National Pollutant Discharge Elimination System (NPDES)
Permit Number TN0002259**

Issued by
**Department of Environment and Conservation
Division of Water Resources
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243**

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Permittee: **Glatfelter Sontara Old Hickory, Inc.**

is authorized to discharge: treated process wastewater (via internal monitoring points 01A and 01B), treated groundwater, filter press filtrate, miscellaneous cooling and non-process wastewaters and storm water runoff from Outfall 001; and to operate a Cooling Water Intake Structure (sourced by Old Hickory Reservoir)

from a facility located at: 326 Swinging Bridge Road, Old Hickory, Davidson County, Tennessee

to receiving waters named: Cumberland River (Old Hickory Reservoir) at mile 218.4

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

This permit shall become effective on: **April 1, 2026**

This permit shall expire on: **August 31, 2030**

Issuance date: **March 9, 2026**

A handwritten signature in blue ink, appearing to read 'Santana', is written over a horizontal line.

for April Grippo
Director

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PART 1

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS

Glatfelter Sontara Old Hickory, Inc. is authorized to discharge effluent to Cumberland River (Old Hickory Reservoir) at mile 218.4. The effluent consists of treated process wastewater (via internal monitoring points 01A and 01B), treated groundwater, filter press filtrate, miscellaneous cooling and non-process wastewaters and storm water runoff from Outfall 001. Glatfelter Sontara Old Hickory is authorized to operate a Cooling Water Intake Structure (sourced by Old Hickory Reservoir).

1.1.1. Numeric Effluent Limitations

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

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Monthly Average
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Daily Maximum
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Monthly Average
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
TAA3B	LC50 Static 48Hr Acute Ceriodaphnia Dubia	>=	2.4	%	Composite	Once Every Permit Cycle	Minimum

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
TAA6C	LC50 Static 48Hr Acute Pimephales Promelas	>=	2.4	%	Composite	Once Every Permit Cycle	Minimum

Description: Internal Monitoring Point, Number: 01A, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	129.4	lb/d	Composite	Twice Per Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	291.5	lb/d	Composite	Twice Per Month	Daily Maximum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00530	Total Suspended Solids (TSS)	<=	183.1	lb/d	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	527.5	lb/d	Composite	Weekly	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Monthly Average
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Daily Maximum

Description: Internal Monitoring Point, Number: 01B, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	1609.9	lb/d	Composite	Twice Per Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	2942.1	lb/d	Composite	Twice Per Month	Daily Maximum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum

Description: Internal Monitoring Point, Number: 01B, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00530	Total Suspended Solids (TSS)	<=	1346	lb/d	Composite	Once Every 2 Months	Monthly Average
00530	Total Suspended Solids (TSS)	<=	2747.5	lb/d	Composite	Once Every 2 Months	Daily Maximum
00745	Sulfide, total (as S)	<=	1.1	lb/d	Composite	Annual	Monthly Average
00745	Sulfide, total (as S)	<=	2.1	lb/d	Composite	Annual	Daily Maximum
01034	Chromium, total (as Cr)	<=	0.5	lb/d	Composite	Annual	Monthly Average
01034	Chromium, total (as Cr)	<=	1.1	lb/d	Composite	Annual	Daily Maximum
34694	Phenol	<=	0.5	lb/d	Composite	Annual	Monthly Average
34694	Phenol	<=	1.1	lb/d	Composite	Annual	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
81017	Chemical Oxygen Demand (COD)	<=	3938.9	lb/d	Composite	Twice Per Month	Monthly Average
81017	Chemical Oxygen Demand (COD)	<=	7322.6	lb/d	Composite	Twice Per Month	Daily Maximum

Notes:

New loading limits due to updated flow and production rate. Sulfide, phenols, and chromium (total) are added to IMP 01B for ELG compliance.

See **Part 1.2.3** for test procedures.

See **Part 3.3** for biomonitoring test and reporting requirements.

1.1.2. Narrative Conditions

Additional monitoring and reporting requirements and conditions include:

Due Date	Narrative Conditions
Within 45 days of permit effective date	The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents or minimizes the potential for the release of pollutants. See Part 5 of this permit for details.

The authorized discharge(s) shall not:



- Contain distinctly visible solids, scum, foam, oil, or sludge.
- Contain pollutants in amounts that were not disclosed to the department in such a manner that the discharge was within the reasonable contemplation of the department at the time of issuance of the final permit.

Sludge or any other material removed by any treatment works must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, Tennessee Code Annotated (Tenn. Code Ann.) §68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, Tenn. Code Ann. §68-46-101 et. seq.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act, in accordance with 40 CFR 125.98(b)(1).

1.2. MONITORING PROCEDURES

1.2.1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified herein shall be representative of the volume and nature of the monitored discharge and shall be taken after treatment and prior to mixing with uncontaminated stormwater runoff or the receiving stream. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed and calibrated by a qualified source at least once every 12 months¹, and maintained to ensure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

Composite samples must be proportioned by flow at the time of sampling. Aliquots may be collected manually or automatically. The sample aliquots must be maintained at $\leq 6^{\circ}\text{C}$ during the compositing period, or as otherwise specified in 40 CFR §136 or in the method.

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of

¹ The Division expects for permittees to meet EPA's guidance on proper operation and maintenance of flow measurement devices, as stated in the [NPDES Compliance Inspection Manual](#).



the monitored discharge. Samples must be representative of the effluent being discharged and collected prior to mixing with any other discharge or the receiving stream. This can be at a different point for different parameters but must be after all treatment for that parameter or all expected changes. Biomonitoring tests, if required, must be conducted on final effluent.

1.2.2. Sampling Frequency

The permittee should report "No Discharge" on Discharge Monitoring Reports (DMRs) only if a permitted outfall does not discharge at any time during the monitoring period. If the outfall discharges effluent at any time during the monitoring period, the permittee must provide at least one sampling result from the effluent of that outfall.

If the required monitoring frequency is once per month or 1/month, the monitoring period is one month. If the discharge occurs during only one day in that period, the permittee must sample on that day and report the results of analyses accordingly.

1.2.3. Test Procedures

- a) Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.
- b) Unless otherwise noted in the permit, all pollutant parameters shall be determined using sufficiently sensitive methods in Title 40 CFR § 136, as amended, and promulgated pursuant to Section 304 (h) of the Act. The chosen methods must be sufficiently sensitive as required in state rule 0400-40-03-.05(8).
- c) If the ML for all methods available in accordance with 40 CFR § 136 are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest ML shall be used.
- d) Where the analytical results are below the method detection limit (MDL), the permittee shall report the actual laboratory MDL and ML values. See **Section 1.3.4.** for instructions regarding reporting less than detection.
- e) When there is no analytical method that has been approved under 40 CFR §136 or required under 40 CFR chapter I, subchapter N or O, and a specific method is not otherwise required by the Director, the permittee may use any suitable method but shall provide a description of the method. When selecting



a suitable method, factors such as a method's precision, accuracy, or resolution must be considered when assessing the performance of the method.

- f) All sampling for total mercury shall use Methods 1631, 245.7, or any additional method in 40 CFR § 136 with a maximum detection limit of 5 ng/L.

1.2.4. Recording of Results

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

- i. The date, exact place, and time of sampling or measurements;
- ii. The individual(s) who performed the sampling or measurements;
- iii. The date analyses were performed;
- iv. The individual(s) who performed the analyses;
- v. The laboratory where the analyses were performed;
- vi. The analytical techniques or methods used; and
- vii. The results of such analyses.

1.2.5. Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

1.3. REPORTING

1.3.1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly on Discharge Monitoring Reports (DMRs) using EPA's [NetDMR](#) website. The first DMR is due on the 15th of the month following permit effectiveness. Subsequent DMRs shall be submitted through NetDMR no later than 15 days after the completion of the reporting period. In compliance with the Federal NPDES Electronic Reporting Rule, DMRs may not be submitted via email under any circumstances.

Discharge Monitoring Reports and any other information or report must be signed and certified by a responsible corporate officer as defined in Tennessee Rules, Chapter [0400-40-05-.07\(2\)\(i\)](#), a general partner or proprietor, a principal municipal executive officer or ranking elected official, or his or her duly authorized



representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

In the event that electronic reporting is unavailable, the permittee shall comply with reporting conditions provided in **Section 1.7**.

1.3.2. Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR § 136, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or other reporting form specified by the Commissioner. Such increased frequency shall also be indicated.

1.3.3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in § 69-3-115 of the Tennessee Water Quality Control Act.

1.3.4. Reporting Less Than Detection; Reporting Significant Figures

For the purpose of evaluating compliance with the permit limits established herein, where certain limits are below the minimum level (ML) of 40 CFR § 136 approved analytical methods, compliance will be demonstrated when a non-detect result is obtained using the most sensitive method available. The results of non-detect analyses, in this case, shall be reported as Below Detection Limit (BDL) or "NODI = B" in NetDMR. Reporting examples are provided below.

Reporting Example 1: If the permit limit is 0.02 mg/L with a method detection limit (MDL) of 0.05 mg/L and no detection is shown, the permittee must report "BDL" or "NODI = B" on DMRs in NetDMR. Whenever "BDL" or "NODI = B" is reported, the actual MDL must be reported in the DMR comments or in an attachment submitted in NetDMR.

Reporting Example 2: If the permit limit is 0.02 mg/L with an MDL of 0.05 mg/L and detection is shown, the actual detected value must be reported.

Reporting Example 3: If the permit limit is 0.02 mg/L with an MDL of 0.01 mg/L and no detection is shown, the permittee must report less than MDL (<0.01 mg/L in this case).



For purposes of calculating monthly averages, zero may be assigned for values less than the MDL, the numeric value of the MDL may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level, the ML, in assessing compliance.

Reported results are to correspond to the number of significant figures (decimal places) set forth in the permit conditions. The permittee shall round values, if allowed by the method of sample analysis, using a uniform rounding convention adopted by the permittee.

1.3.5. Outlier Data

Outlier data include analytical results that are probably false. The validity of results is based on operational knowledge and a properly implemented quality assurance program. False results may include laboratory artifacts, potential sample tampering, broken or suspect sample containers, sample contamination or similar demonstrated quality control flaw.

Outlier data are identified through a properly implemented quality assurance program, and according to ASTM standards (e.g. Grubbs Test, 'h' and 'k' statistics). Furthermore, outliers should be verified, corrected, or removed based on further inquiries into the matter. If an outlier was verified (through repeated testing and/or analysis), it should remain in the preliminary data set. If an outlier resulted from a transcription or similar clerical error, it should be corrected and subsequently reported.

Therefore, only if an outlier was associated with problems in the collection or analysis of the samples and as such does not conform with the Guidelines Establishing Test Procedures for the Analysis of Pollutants (40 CFR §136), can it be removed from the data set and not reported on DMRs. Otherwise, all results (including monitoring of pollutants more frequently than required at the location(s) designated, using approved analytical methods as specified in the permit) should be included in the calculation and reporting of the values required in the DMR form. The permittee should use the "comment" section in NetDMR to explain any potential outliers or dubious results.



1.4. COMPLIANCE WITH SECTION 208

The limits and conditions in this permit shall require compliance with an area-wide waste treatment plan (208 Water Quality Management Plan) where such approved plan is applicable.

1.5. REOPENER CLAUSE

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 307(a)(2), and 304(b)(2) of the Clean Water Act, as amended, if the effluent standard or limitation so issued or approved:

- a) Contains different conditions or is otherwise more stringent than any condition in the permit; or
- b) Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

1.6. SCHEDULE OF COMPLIANCE

Full compliance and operational levels shall be attained from the effective date of this permit.

1.7. ELECTRONIC REPORTING

This permit requires the submission of forms developed by the Director in order for a person to comply with certain requirements, including, but not limited to, making reports, submitting monitoring results, and applying for permits. The Director may make these forms available electronically and, if submitted electronically, then that electronic submission shall comply with the requirements of Chapter [0400-01-40](#).

In the event of large-scale emergencies and/or prolonged electronic reporting system outages, an episodic electronic reporting waiver may be granted by the Commissioner in accordance with 40 CFR § 127.15. A request for a deadline extension or episodic electronic reporting waiver should be submitted to DWRWater.Compliance@tn.gov, in compliance with the Federal NPDES Electronic Reporting Rule.

If an episodic electronic reporting waiver is granted, reports with wet-ink original signatures shall be mailed to the following address:

*DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT UNIT
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243*

For purposes of determining compliance with this permit, data provided to the Division electronically is legally equivalent to data submitted on signed and certified forms. A copy must be retained for the permittee's files.

PART 2

2. GENERAL PERMIT REQUIREMENTS

2.1. GENERAL PROVISIONS

2.1.1. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2.1.2. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Division Director no later than 180 days prior to the expiration date. Such forms shall be properly signed and certified.

2.1.3. Proper Operation and Maintenance

- a) The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.
- b) Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT, or other technology based effluent limitations such as those established in Tennessee Rule [0400-40-05-.09](#).

2.1.4. Duty to Provide Information

The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.



2.1.5. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials, to:

- a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;
- b) Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) Sample or monitor at reasonable times for the purposes of assuring permit compliance or as otherwise authorized by the Director.

2.1.6. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the Division's offices or via the Department's [dataviewer webpage](#). As required by the Federal Act, effluent data shall not be considered confidential.

2.1.7. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

2.1.8. 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.



2.1.9. Severability

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

2.1.10. Other Information

If the permittee becomes aware of failure to submit any relevant facts in a permit application, or of submission of incorrect information in a permit application or in any report to the Director, then the permittee shall promptly submit such facts or information.

2.2. CHANGES AFFECTING THE PERMIT

2.2.1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in Rule [0400-40-05-02](#);
- b) 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
- c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices.

2.2.2. Permit Modification, Revocation, or Termination

- a) This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR § 122.62 and § 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended. Causes for such permit action include but are not limited to the following:
 - i. Violation of any terms or conditions of the permit;
 - ii. Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; and
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.



- b) The permittee shall furnish to the 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.
- c) If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit for the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.
- d) The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

2.2.3. Change of Ownership

Except as provided in Tennessee Rule Chapter [0400-40-05-.06\(5\)](#)(a) or (b), this permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect permit limits and conditions contained in the permit) by the permittee if:

- a) The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c) The permittee shall provide the following information to the Director in their formal notice of intent to transfer ownership:
 - i. The permit number of the subject permit;
 - ii. The effective date of the proposed transfer;
 - iii. The name, address, and contact information of the transferor;
 - iv. The name, address, and contact information of the transferee;



- v. The names of the responsible parties for both the transferor and transferee;
- vi. A statement that the transferee assumes responsibility for the subject permit;
- vii. A statement that the transferor relinquishes responsibility for the subject permit;
- viii. The signatures of the responsible parties for both the transferor and transferee pursuant to the signatory requirements of subparagraph (i) of Rule [0400-40-05-.07\(2\)](#); and
- ix. A statement regarding any proposed modifications to the facility, its operations, or any other changes, which might affect the permit, limits and conditions contained in the permit.

2.2.4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice, the original address of the permittee will be assumed to be correct.

2.3. NONCOMPLIANCE

2.3.1. Reporting of Noncompliance

- a) 24-hour Reporting:

In the case of any noncompliance, or any release (whether or not caused by improper operation and maintenance), which could cause a threat to human health or the environment, the permittee shall:

- i. Report the noncompliance or release to the Commissioner within 24 hours from the time the permittee becomes aware of the circumstances. Such noncompliance or release includes, but is not limited to, any unanticipated bypass exceeding any effluent limitation, any upset exceeding any effluent limitation, and violations of any maximum daily effluent limitation identified in the permit as requiring 24-hour reporting. (The EFO should be contacted for names and phone numbers of the environmental response team.)
- ii. Submit a written report within five days of the time the permittee becomes aware of the noncompliance. The permittee shall provide the following information:
 - 1. A description of and the cause of the noncompliance or release;

2. The period of noncompliance or release, including start and end dates and times i.e. duration or, if not corrected, the anticipated time the noncompliance or release is expected to continue;
 3. The steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance or release; and
 4. For POTWs or domestic wastewater treatment plants, reporting any dry weather overflow, wet weather overflow, dry weather release, wet weather release, combined sewer overflow, or bypass, this written report must also include the following:
 - I. Type of event;
 - II. Type of sewer overflow, release, or bypass structure (e.g., manhole, combined sewer overflow outfall);
 - III. Estimated volume (gallons);
 - IV. Types of human health and environmental impacts;
 - V. Location (latitude and longitude);
 - VI. Estimated duration (hours);
 - VII. The next downstream pump station (for overflows and releases only); and
 - VIII. The name of receiving water (if applicable).
- iii. Industrial dischargers that do not treat domestic waste shall comply with subpart a) ii. 4. of this subparagraph with respect to bypasses only.
 - iv. For overflows, releases, bypasses, upsets and washouts, the report required by a) ii. Shall be submitted electronically via MyTDEC Forms.
- b) Other Noncompliance.
- i. All permittees shall report each instance of noncompliance or any release (whether or not caused by improper operation and maintenance), not reported under sub-part a) at the time of submitting the next routine monitoring report, including all information required by sub-parts a) ii. 1-3.
 - ii. In addition to the information required by part i of this sub-part, POTWs and domestic wastewater treatment plants shall submit a written report containing the information required by sub-part a) i. 4. If these events are caused by an extreme weather event, the Commissioner may provide a written waiver of some or all of these reporting requirements.



- iii. In addition to the information required by sub-part i, industrial dischargers shall submit a written report of bypasses containing the information required by sub-part a) i. 4. This part does not relieve industrial dischargers from any applicable reporting requirements of 40 C.F.R. Part 117 (2021) and 40 C.F.R. Part 302 (2021).

2.3.2. Overflows and Releases

- a) For publicly owned treatment works (POTW) or domestic wastewater treatment plants, sanitary sewer overflows, including dry-weather overflows and wet weather overflows, are prohibited.
- b) Releases caused by improper operation and maintenance, which is to be determined by the Commissioner based on the totality of the circumstances, are prohibited.
- c) The permittee shall operate the collection, transmission, and treatment system so as to avoid sanitary sewer overflows and releases due to improper operation or maintenance. A “release” may be due to improper operation or maintenance of the collection system or may be due to other cause(s).
- d) The permittee shall take all reasonable steps to minimize any adverse impact associated with overflows and releases.
- e) No new or additional flows shall be added upstream of any point in the collection, transmission, or treatment system that experiences greater than 5 sanitary sewer overflows and/or releases per year² or would otherwise overload any portion of the system. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after:
 - 1) An authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem;
 - 2) The correction work is underway; and
 - 3) The cumulative, peak-design flows potentially added from new connections and line extensions upstream of any chronic overflow or release point are less than or proportional to the amount of inflow and infiltration removal documented upstream from that point.

² This includes dry weather overflows, wet weather overflows, dry weather releases and wet weather releases.



The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to the permittee's DMR and uploaded to NetDMR. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

- f) In the event that chronic sanitary sewer overflows or releases have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium of the actions identified in this paragraph, the permittee may request a meeting with Division EFO staff to petition for a waiver based on mitigating evidence.
- g) For industrial dischargers, the discharge of pollutants from any location other than a permitted outfall is prohibited.**

2.3.3. Upset

- a) An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
 - iii. The permittee submitted information required under "Reporting of Noncompliance" within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
 - iv. The permittee complied with any remedial measures required under "Adverse Impact".
- b) In any enforcement proceeding, the permittee seeking to establish the affirmative defense of an upset has the burden of proof.

2.3.4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature



and impact of the noncomplying discharge. It shall not be a defense for the 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.

2.3.5. Bypass

- a) Bypasses (see subpart 4.1) are prohibited unless all the following conditions are met:
 - i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There are no feasible alternatives to 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 adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance;
 - a. For anticipated bypass, the permittee submits prior notice, if possible at least ten days before the date of the bypass, or
 - b. For unanticipated bypass, the permittee submits notice of an unanticipated bypass within 24 hours from the time that the permittee becomes aware of the bypass.
- b) Bypasses that do not cause effluent limitations to be exceeded may be allowed only if the bypass is necessary for essential maintenance to assure efficient operation. The permittee must sample and report the discharge during each bypass to demonstrate that the bypass does not cause effluent limitations to be exceeded.

2.3.6. Washout

- a) For domestic wastewater plants only, a "*washout*" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decreases due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to inflow and infiltration.
- b) A washout is prohibited. If a washout occurs the permittee must report the incident to the Division in the appropriate EFO within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on that month's DMR. Each day of a washout is a separate violation.

2.4. LIABILITIES

2.4.1. Civil and Criminal Liability

Except as provided in permit conditions for "*Bypass*" (**Section 2.3.5**), "*Overflows and Releases*" (**Section 2.3.2**), and "*Upset*" (**Section 2.3.3**), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including, but not limited to, fish kills and losses of aquatic life and/or wildlife as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2.4.2. Liability Under State Law

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 the Federal Water Pollution Control Act, as amended.

PART 3

3. PERMIT SPECIFIC REQUIREMENTS

3.1. TOXIC POLLUTANTS

The permittee shall notify the Division as soon as it knows or has reason to believe that:

- a) Any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic substance(s) not limited in the permit (listed in 40 CFR 122, Appendix D, Table II and III), if that discharge will exceed the highest of the following “notification levels”:
 - i. One hundred micrograms per liter (100 µg/L);
 - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii. Five times the maximum concentration value reported for that pollutant(s) in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - iv. The level established by the Director in accordance with 40 CFR 122.44(f).

- b) Any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. Five hundred micrograms per liter (500 µg/L);
 - ii. One milligram per liter (1 mg/L) for antimony;
 - iii. Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - iv. The level established by the Director in accordance with 40 CFR 122.44(f).



3.2. BIOMONITORING REQUIREMENTS, ACUTE

The permittee shall conduct a 48-hour static acute toxicity test on two test species on samples of final effluent from Outfall 001. The test species to be used are Water Fleas (*Ceriodaphnia dubia*) and Fathead Minnows (*Pimephales promelas*).

The measured endpoint for toxicity will be the concentration causing 50% lethality (LC₅₀) of the test organisms. The LC₅₀ shall be determined based on a 50% lethality as compared to the controls, and as derived from linear interpolation.

Tests shall be conducted and results reported based on appropriate replicates of a total of five serial dilutions and a control, using the percent effluent dilutions as presented in the following table:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
4 X PL	2 X PL	Permit Limit (PL)	0.50 X PL	0.25 X PL	Control
% effluent					
9.6	4.8	2.4	1.2	0.6	0

The dilution/control water used will be moderately hard water as described in [Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms](#), EPA-821-R-02-012 (or the most current edition). An acute standard reference toxicant quality assurance test shall be conducted with each species used in the toxicity tests and the results submitted with the discharge monitoring report. Additionally, the analysis of this multi-concentration test shall include review of the concentration-response relationship to ensure that calculated test results are interpreted appropriately.

Toxicity will be demonstrated if the LC₅₀ is less than or equal to the permit limit indicated for each outfall in the above table(s).

All tests will be conducted using four separate grab samples of final effluent, to be used in four separate tests, and shall be collected at evenly spaced (6-hour) intervals over a 24-hour period. If in any control, more than 10% of the test organisms die in 48 hours, the test (control and effluent) is considered invalid and the test shall be repeated within two (2) weeks. Furthermore, if the results do not meet the acceptability criteria in the above-referenced *Methods for Measuring the Acute Toxicity* document, or if the required concentration-response review fails to yield a valid relationship per guidance contained in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing, EPA-821-B-00-004 (or



the most current edition), that test shall be repeated. Any test initiated but terminated before completion must also be reported along with a complete explanation for the termination.

The toxicity tests specified herein shall be conducted once during the permit (1/permit) for Outfall 001. Results can be submitted within 180 days of the expiration date of this permit.

Test procedures, quality assurance practices and determination of effluent lethality values will be made in accordance with [*Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*](#), EPA-821-R-02-012, or the most current edition. Results of all tests, reference toxicant information, copies of raw data sheets, statistical analysis and chemical analysis shall be compiled in a report also written in accordance with the *Methods for Measuring the Acute Toxicity* document above.

A copy of the biomonitoring report (including any follow-up reports) shall be submitted to the Division as an attachment to the monthly DMR in NetDMR.

3.3. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign at each outfall or the nearest publicly accessible location. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one-inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following are given as examples of the minimal amount of information that must be included on the signs:



Treated Industrial Wastewater:

**TREATED INDUSTRIAL WASTEWATER
Glatfelter Sontara Old Hickory, Inc.**

(Permittee's Phone Number)

NPDES Permit No. TN0002259

TENNESSEE DIVISION OF WATER RESOURCES

1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Nashville

Industrial Stormwater Runoff:

**INDUSTRIAL STORMWATER RUNOFF
Glatfelter Sontara Old Hickory, Inc.**

(Permittee's Phone Number)

NPDES Permit No. TN0002259

TENNESSEE DIVISION OF WATER RESOURCES

1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Nashville



PART 4

4. DEFINITIONS AND ACRONYMS

4.1. DEFINITIONS

Actual intake flow (AIF) means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past three years.

For the purposes of this permit, **annually** is defined as a monitoring frequency of once every 12 months beginning with the effective date of this permit, so long as the following set of measurements for a given 12 month period are made approximately 12 months subsequent to that time.

An **Alert Value** is a benchmark concentration that indicates presence of pollutants in concentrations that shall require a review of facility conditions. An alert value differs from an enforceable numerical limit in that an exceedance of the alert value is not a permit violation but rather a prompt to investigate the cause of the exceedance. However, the failure to report a sampled concentration with an alert value is a permit violation.

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

A **calendar day** means the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

A **composite sample** means a combination of not less than eight influent or effluent portions (aliquots), collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case less than eight hours. A sufficient volume of sample to perform all required analyses plus any additional amount for quality control must be obtained. For automatic samplers that use a peristaltic pump, a minimum 100 ml aliquot must be obtained.

Continuous monitoring, for the purposes of this permit, means the measurement of temperature or pH at a frequency that will accurately characterize the nature of discharges from the site and water in the receiving stream. Samples collected continuously shall be at a frequency of not less than once every 15 minutes for temperature.



Cooling water means water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations at the facility's premises.

Cooling water intake structure means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from waters of the United States up to, and including, the intake pumps.

The **daily maximum amount** means the total amount of any pollutant in the discharge by weight during any calendar day.

The **daily maximum concentration** is a limitation on the average concentration in units of mass per volume (e.g. milligrams per liter) of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily maximum concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily maximum concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

Degradation means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

Design intake flow (DIF) means the value assigned during the cooling water intake structure design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody.

De Minimis is degradation of a small magnitude, as provided in this paragraph:

(a) Discharges and withdrawals:

1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.

(Note: Consistent with T.C.A. § 69-3-108, special consideration will be given to bioaccumulative substances to confirm the effect is de minimis, even if they are less than five percent of the available assimilative capacity.)

2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.
 3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.
- (b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively, are offset by impact minimization and/or in-system mitigation, provided however, in Outstanding National Resource Waters (ONRWs) the mitigation must occur within the ONRW.

Discharge or **discharge of a pollutant** refers to the addition of pollutants to waters from a source.

An **ecoregion** is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

Entrainment means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

The **geometric mean** of any set of values means the n^{th} root of the product of the individual values where n is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero shall be considered to be one.

A **grab sample** means a single sample collected at a particular time.

IC₂₅ means the inhibition concentration in which at least a 25% reduction in reproduction and/or growth in test organisms occurs.

Industrial discharger means those industries identified in the standard industrial classification manual, Bureau of the Budget, 1987, as amended and



supplemented, under the category "Division D - Manufacturing" and such other classes of significant waste producers as the Board or Commissioner deems appropriate.

Industrial wastes means any liquid, solid, or gaseous substance, or combination thereof, or form of energy including heat, resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

The **instantaneous maximum concentration** means the concentration, in units of mass per volume, of any pollutant parameter in a grab sample taken at any point in time.

The **instantaneous minimum concentration** means the minimum concentration, in units of mass per volume, of a pollutant parameter in a grab sample taken at any point in time.

LC₅₀ means the concentration that causes at least 50% lethality of the test organisms.

Major facility means a municipal or domestic wastewater treatment plant with a design capacity of one million gallons per day or greater; or any other facility or activity classified as such by the Commissioner.

Minor facility means any facility that is not a major facility.

The **monthly average amount** means the arithmetic mean of all the measured daily discharges by weight during the calendar month when the measurements were made.

The **monthly average concentration**, means the arithmetic mean of all samples collected in a one calendar-month period, expressed in units of mass per volume of any pollutant other than bacteria.

National Pollutant Discharge Elimination System or **NPDES** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the federal CWA. The term includes an "approved program."

New or increased discharge is a new discharge of pollutants to waters of the state or an increase in the authorized loading of a pollutant above either (1) numeric effluent limitations established in a National Pollutant Discharge Elimination



System permit for that discharge, or (2) if no such limitations exist, the actual discharges of that pollutant.

New source means any building, structure, facility, area, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced after the publication of state or federal regulations prescribing a standard of performance.

Nitrate (as N) means nitrate reported as nitrogen.

A **one-week period** (or **calendar-week**) means the period from Sunday through Saturday. For weekly average reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

Owner or **operator** means any person who owns, leases, operates, controls, or supervises a source.

Person means an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant means sewage, industrial wastes, or other wastes.

Pollution means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of the waters of this state including, but not limited to, changes in temperature, taste, color, turbidity, or odor of the waters that will:

- (a) Result or will likely result in harm, potential harm, or detriment to the public health, safety, or welfare;
- (b) Result or will likely result in harm, potential harm, or detriment to the health of animals, birds, fish, or aquatic life;
- (c) Render or will likely render the waters substantially less useful for domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or



- (d) Leave or likely leave the waters in such condition as to violate any standards of water quality established by the Board.

A **qualifying storm event** is a storm event in which greater than 0.1 inches of rainfall occurs after a period of at least 72 hours following any previous storm event with rainfall of 0.1 inches or greater.

Quarter means any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

Rainfall event means any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

Rationale or **fact sheet** means a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

A **reference site** means the least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A **reference condition** is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

Release means the flow of sewage from any portion of the collection or transmission system owned or operated by a publicly owned treatment works (POTW) or a domestic wastewater treatment plant, other than through permitted outfalls, that does not reach waters. In addition, a "release" includes a backup into a building or private property that is caused by blockages, flow conditions, or other malfunctions originating in the collection or transmission system owned or operated by the permittee. A "release" does not include:

- (a) Backups into a building or private property caused by blockages or other malfunctions originating in a private lateral;
- (b) Events caused by vandalism;
- (c) Events caused by lightning strike;



- (d) Events caused by damage due to third parties working on other utilities in the right of way, e.g., cross bore from telecommunications line; or
- (e) Events that are directly incidental to planned, preventative, or predictive maintenance provided the site is under the direct control of a certified operator or contractor, public access is restricted, and the site is disinfected.

Sanitary sewer overflow or **Overflow or SSO** means an unpermitted discharge of wastewater from the collection or treatment system of a publicly owned treatment works (POTW) or a domestic wastewater treatment plant other than through a permitted outfall.

Schedule of compliance means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, condition of a permit, other limitation, prohibition, standard, or regulation. This term includes, but is not limited to, schedules authorized by national effluent limitations guidelines or by Tennessee's water quality standards.

The term **semi-annually**, for the purposes of this permit, means the same as once every 6 months. Measurements of the limited effluent parameters may be made any time during a 6 month period beginning from the effective date of this permit, so long as the second set of measurements for a given 12 month period are made approximately 6 months subsequent to that time, if feasible.

Severe property damage, when used to consider the allowance of a bypass, means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which 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.

Sewage means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present.

Sewerage system means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.



Source means any activity, operation, construction, building, structure, facility, or installation from which there is or may be the discharge of pollutants.

Standard of performance means a standard for the control of the discharge of pollutants that reflects the greatest degree of effluent reduction that the Commissioner determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Stream means a surface water that is not a wet weather conveyance.

Subecoregion is a smaller, more homogenous area that has been delineated within an ecoregion.

Total dissolved solids or **TDS** means nonfilterable residue.

Unpermitted discharge refers to the discharge of pollutants to waters not authorized by this permit.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term **washout** is applicable to domestic wastewater activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

Waters means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof, except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

Watercourse means a man-made or natural hydrologic feature with a defined linear channel that discretely conveys flowing water, as opposed to sheet-flow.

Weekly average amount means the arithmetic mean of all the measured daily discharges by weight during the calendar week when the measurements were made.

Weekly average concentration means the arithmetic mean of all the concentrations expressed in units of mass per volume of any pollutant measured in a calendar week.

Wet weather conveyance means, notwithstanding any other law or rule to the contrary, man-made or natural watercourses, including natural watercourses that have been modified by channelization:

- (a) That flow only in direct response to precipitation runoff in their immediate locality;
- (b) Whose channels are at all times above the groundwater table;
- (c) That are not suitable for drinking water supplies; and
- (d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

Wet weather flow shall be construed to represent stormwater runoff which, in combination with all process and/or non-process wastewater discharges, as applicable, is discharged during a qualifying storm event.



4.2. ACRONYMS AND ABBREVIATIONS

1Q10	–	1-day minimum, 10-year recurrence interval
30Q5	–	30-day minimum, 5-year recurrence interval
7Q10	–	7-day minimum, 10-year recurrence interval
BAT	–	best available technology economically achievable
BCT	–	best conventional pollutant control technology
BDL	–	below detection limit
BOD ₅	–	five-day biochemical oxygen demand
BPT	–	best practicable control technology currently available
CBOD ₅	–	five-day carbonaceous biochemical oxygen demand
CEI	–	compliance evaluation inspection
CFR	–	code of federal regulations
CFS	–	cubic feet per second
CFU	–	colony forming units
CIU	–	categorical industrial user
CSO	–	combined sewer overflow
DMR	–	discharge monitoring report
D.O.	–	dissolved oxygen
<i>E. coli</i>	–	<i>Escherichia coli</i>
EPA	–	Environmental Protection Agency
EFO	–	environmental field office
GPM	–	gallons per minute
IC ₂₅	–	inhibition concentration causing 25% reduction in survival, reproduction, and growth of the test organisms
IU	–	industrial user
IWS	–	industrial waste survey
LB (lb)	–	pound
LC ₅₀	–	acute test causing 50% lethality
MDL	–	method detection limit
MGD	–	million gallons per day
mg/L	–	milligrams per liter
ML	–	minimum level of quantification
mL	–	milliliter
MLSS	–	mixed liquor suspended solids
MOR	–	monthly operating report
NODI	–	no discharge code in NetDMR
NPDES	–	national pollutant discharge elimination system
PL	–	permit limit
POTW	–	publicly owned treatment works
SAR	–	semi-annual report [pretreatment program]



- SIU – significant industrial user
- SSO – sanitary sewer overflow
- STP – sewage treatment plant
- TBEL – technology-based effluent limit
- TCA – Tennessee code annotated
- TDEC – Tennessee Department of Environment and Conservation
- TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation
- TMDL – total maximum daily load
- TRC – total residual chlorine
- TSS – total suspended solids
- WQBEL – water quality-based effluent limit



4.3. RESOURCES, HYPERLINKS, AND WEB PAGES

Clean Water Act NPDES Electronic Reporting (eReporting) Information

<https://www.epa.gov/compliance/npdes-ereporting>

Clean Water Act Section 316(b) Cooling Water Intake Existing Facility Final Rule

<https://www.federalregister.gov/documents/2014/08/15/2014-12164/national-pollutant-discharge-elimination-system-final-regulations-to-establish-requirements-for>

Electronic Code of Federal Regulations (eCFR), Title 40 (40 CFR § 1 through § 1099)

<https://www.ecfr.gov/cgi-bin/text-idx?SID=75202eb5d09974cab585afeea981220b&mc=true&tpl=/ecfrbrowse/Title40/40chapter1.tpl>

Electronic Reporting (NetDMR) Waiver Request

<https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting/e-report-waiver.html>

Low Flow Statistics Tools: A How-To Handbook for NPDES Permit Writers (EPA)

https://www.epa.gov/sites/production/files/2018-11/documents/low_flow_stats_tools_handbook.pdf

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA)

https://www.epa.gov/sites/production/files/2015-08/documents/acute-freshwater-and-marine-wet-manual_2002.pdf

NetDMR Login

<https://cdxnodengn.epa.gov/net-netdmr/>

NetDMR, MyTDEC Forms, & Electronic Reporting Information

<https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting.html>

NPDES Compliance Inspection Manual (EPA)

<https://www.epa.gov/sites/production/files/2017-01/documents/npdesinspect.pdf>

NPDES Electronic Reporting Rule

<https://www.federalregister.gov/documents/2015/10/22/2015-24954/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule>

Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys (QSSOP)

https://www.tn.gov/content/dam/tn/environment/water/documents/DWR-PAS-P-01-Quality_System_SOP_for_Macroinvertebrate_Stream_Surveys-081117.pdf

Rules of the TN Department of Environment and Conservation, Chapter 0400-40
<https://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm>

Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA)
https://www.epa.gov/sites/production/files/2015-08/documents/short-term-chronic-freshwater-wet-manual_2002.pdf

TDEC Water Quality Rules, Reports, and Publications
<https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html>

Technical Support Document for Water Quality-based Toxics Control (EPA)
<https://www3.epa.gov/npdes/pubs/owm0264.pdf>

Tennessee Nutrient Reduction Framework
https://www.tn.gov/content/dam/tn/environment/water/tmdl-program/wr-ws_tennessee-draft-nutrient-reduction-framework_030315.pdf

Tennessee Plant Optimization Program (TNPOP)
<https://www.tn.gov/environment/program-areas/wr-water-resources/tn-plant-optimization-programs/tnpop.html>

Tennessee Water Resources Data and Map Viewers
<https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-resources-data-map-viewers.html>

USGS StreamStats
https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools?qt-science_center_objects=0#qt-science_center_objects

USGS Hydrologic Toolbox
<https://pubs.usgs.gov/publication/tm4D3>

PART 5

5. BEST MANAGEMENT PRACTICES

5.1. GENERAL CONDITIONS

For purposes of this part, the terms “pollutant” or “pollutants” refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (CWA), oil, as defined in Section 311(a)(1) of the CWA, and any substance listed as hazardous under Section 311 of the CWA. The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents or minimizes the potential for the release of pollutants (including oil and grease) from ancillary activities (including material storage areas, plant site runoff, in-plant transfers, process and material handling areas, loading and unloading operations, and sludge waste disposal areas) to the waters of the State of Tennessee through plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

5.2. GENERAL REQUIREMENTS

The BMP Program shall:

- a) Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b) Establish specific objectives for the control of toxic and hazardous pollutants:
 - i. Each facility component or system shall be examined for its potential for causing a release of significant amounts of toxic or hazardous pollutants to waters of the State of Tennessee due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.; and
 - ii. Where experience indicates a reasonable potential for equipment failure (*e.g.*, a tank overflow or leakage), natural condition (*e.g.*, precipitation), or other circumstances to result in significant amounts of toxic or hazardous pollutants reaching surface waters, the Plan should include a prediction of the direction, rate of flow, and total quantity of toxic or hazardous pollutants which could be discharged from the facility as a result of each condition or circumstance.
- c) Establish specific best management practices to meet the objectives identified under section b) above, addressing each component or system capable of

causing a release of significant amounts of toxic or hazardous pollutants to the waters of the State of Tennessee.

d) The BMP program:

- i. May reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under section 311 of the Act and 40 CFR part 112, and may incorporate any part of such plans into the BMP program by reference;
- ii. Shall ensure the proper management of solid and hazardous waste in accordance with regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) (40 U.S.C. §6901, et. seq.). Management practices required under RCRA regulations shall be expressly incorporated into the BMP program; and
- iii. Shall address the following points for the ancillary activities listed in section 5.1 above:
 - 1) *Statement of policy*;
 - 2) *Spill Control Committee*: responsible for BMP program implementation and subsequent review and updating;
 - 3) *Material inventory*: identification of all sources and quantities of toxic and hazardous substances handled or produced, including plant drawings and plot plans, materials flow diagrams, physical, chemical, toxicological, and health information on toxic and hazardous substances, and investigation and evaluation of new materials;
 - 4) *Material compatibility*: evaluation of process changes or revisions for materials compatibility, review of properties of chemicals handled and materials of construction, evaluation of means of chemical disposal and incompatibility, cleansing of vessels and transfer lines, and use of proper coatings and cathodic protection on buried pipelines if required;
 - 5) *Employee training*: meetings to be held at frequent intervals, spill drills, adequate job training, transmission of information on past spills and causes, informing employees of BMP program components, training in cleanup procedures, and review and interface with safety program;
 - 6) *Reporting and notification procedures*: maintenance of records of spills through formal reports for internal review, notification as required by law to governmental and environmental agencies in the event of a spill, and procedures for notifying the appropriate plant personnel;

- 7) *Visual inspections*: routine inspections with visual observations of storage facilities, transfer pipelines, and loading and unloading areas, detailed inspections of pipes, pumps, valves, fittings, tank corrosion, tank support and foundation deterioration, etc.;
- 8) *Preventative maintenance*: identification of equipment and systems to which the preventive maintenance program should apply, periodic inspection and testing of such equipment and systems, appropriate adjustment, repair, or replacement of parts, and maintenance of preventive maintenance records;
- 9) *Good housekeeping*: neat and orderly storage of chemicals, prompt removal of small spillage, regular garbage pickup, maintenance of dry and clean floors, proper pathways and walkways, minimum accumulation of liquid and solid chemicals on the ground or floor in a building, and stimulation of employee interest in good housekeeping; and
- 10) *Security*: plant patrols, fencing, good lighting, traffic control, controlled access where appropriate, visitor passes, locked entrances, locks on drain valves and pumps for chemical storage tanks, and television monitoring.

Additional technical information on BMPs and the elements of a BMP program is contained in the following EPA publications: [Guidance Manual for Developing Best Management Practices \(BMP\)](#) (EPA 833-B-93-004) and [Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices](#) (EPA 832-R-92-006).

5.3. DOCUMENTATION

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the permit issuing authority upon request.

5.4. BMP PLAN MODIFICATION

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility, which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

5.5. MODIFICATION FOR INEFFECTIVENESS

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under section 5.2 above, the permit shall



be subject to modification pursuant to 40 CFR 122.62 or 122.63 to incorporate revised BMP requirements. Any such permit modification shall be subject to review in accordance with the procedures for permit appeals set forth in accordance with 69-3-110, Tennessee Code Annotated.

5.6. COMPLIANCE SCHEDULE

Unless the permittee is otherwise authorized by the Division in writing, the BMP plan shall be completed as follows:

- a) The plan shall be developed and available for review within 45 days after the permit effective date.
- b) The permittee shall begin implementation of the BMP plan as soon as possible, but not later than 60 days after the permit effective date. Where new construction is necessary to implement the management plan, a construction schedule shall be included. Construction shall be completed as soon as possible.

The permittee shall fully complete the approved BMP plan, including all necessary construction, and be in full compliance within the CWA within 6 months following initial implementation of the plan.

RATIONALE

Glatfelter Sontara Old Hickory, Inc.
NPDES Permit No. TN0002259
Permit Writer: Tricia Swaney

1. PERMIT STATUS & PUBLIC PARTICIPATION

Permit Type:	Industrial
Previous Issuance Date:	August 23, 2021
Previous Expiration Date:	August 31, 2025
Previous Effective Date:	September 1, 2021

As provided under Rule 0400-40-05-.06, this permit allows 30 days for public comment on the proposed permit. The 30-day public comment period begins the date this permit is placed on public notice. The public notice document for this permit can be found at the Division's [Water Notices and Hearings website](#) under "Permit Public Notices".

Public Notice Date:	February 03, 2026
Comment Period Ends:	March 05, 2026

Those wishing to make a formal comment on the proposed permit may submit comments electronically to Water.Permits@tn.gov, or by mail to:

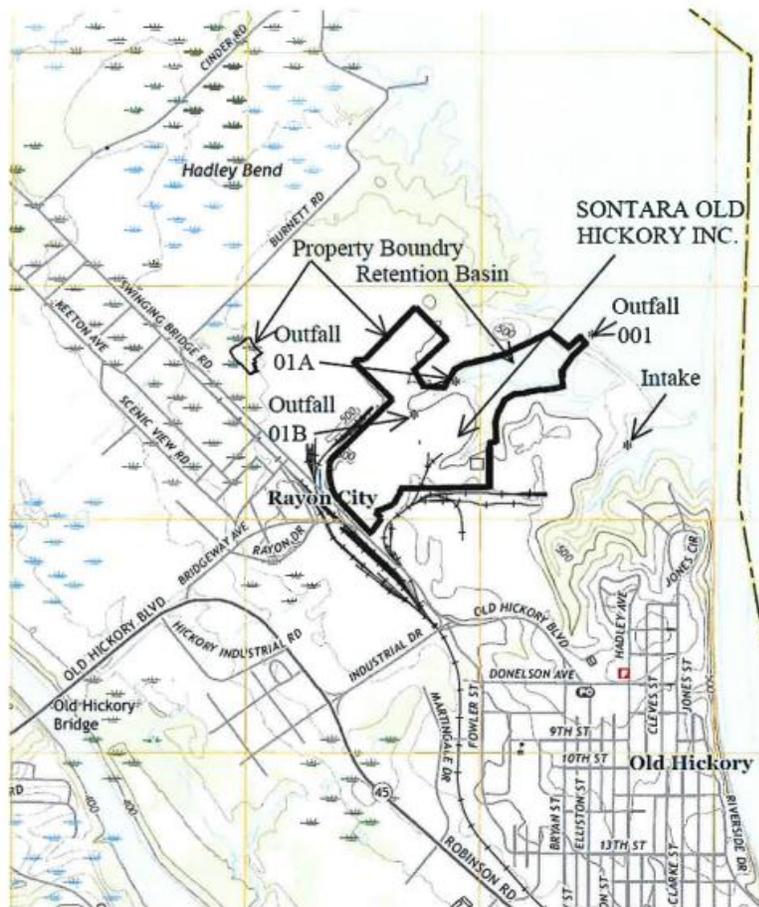
*Division of Water Resources - Water Based Systems Unit
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, TN 37243*

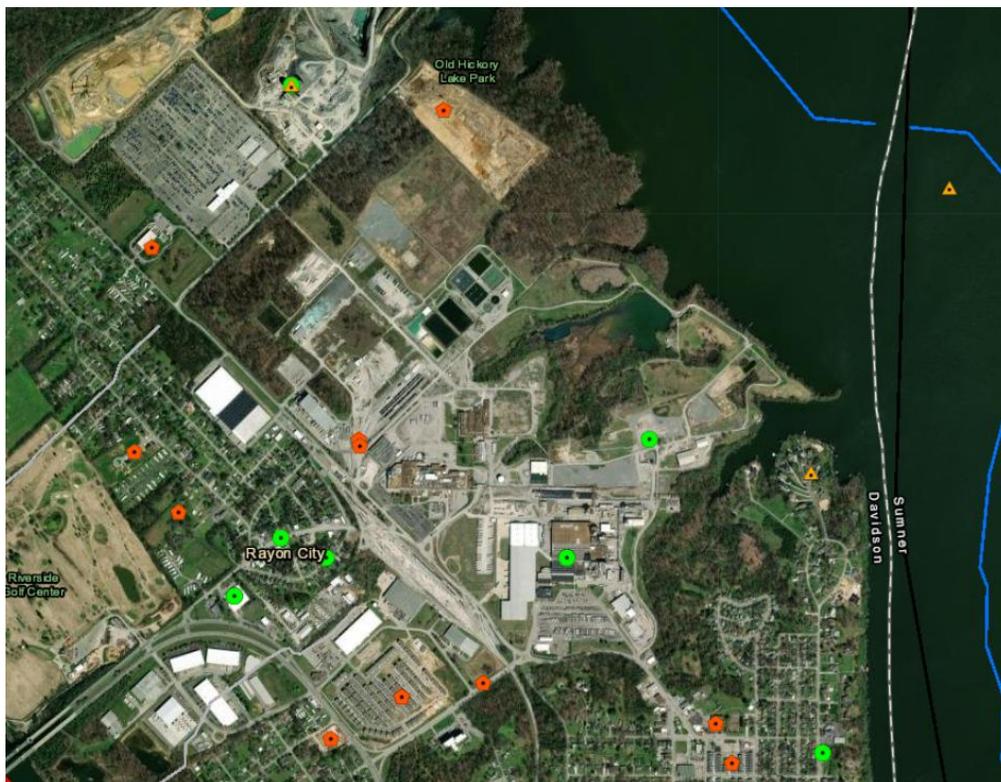
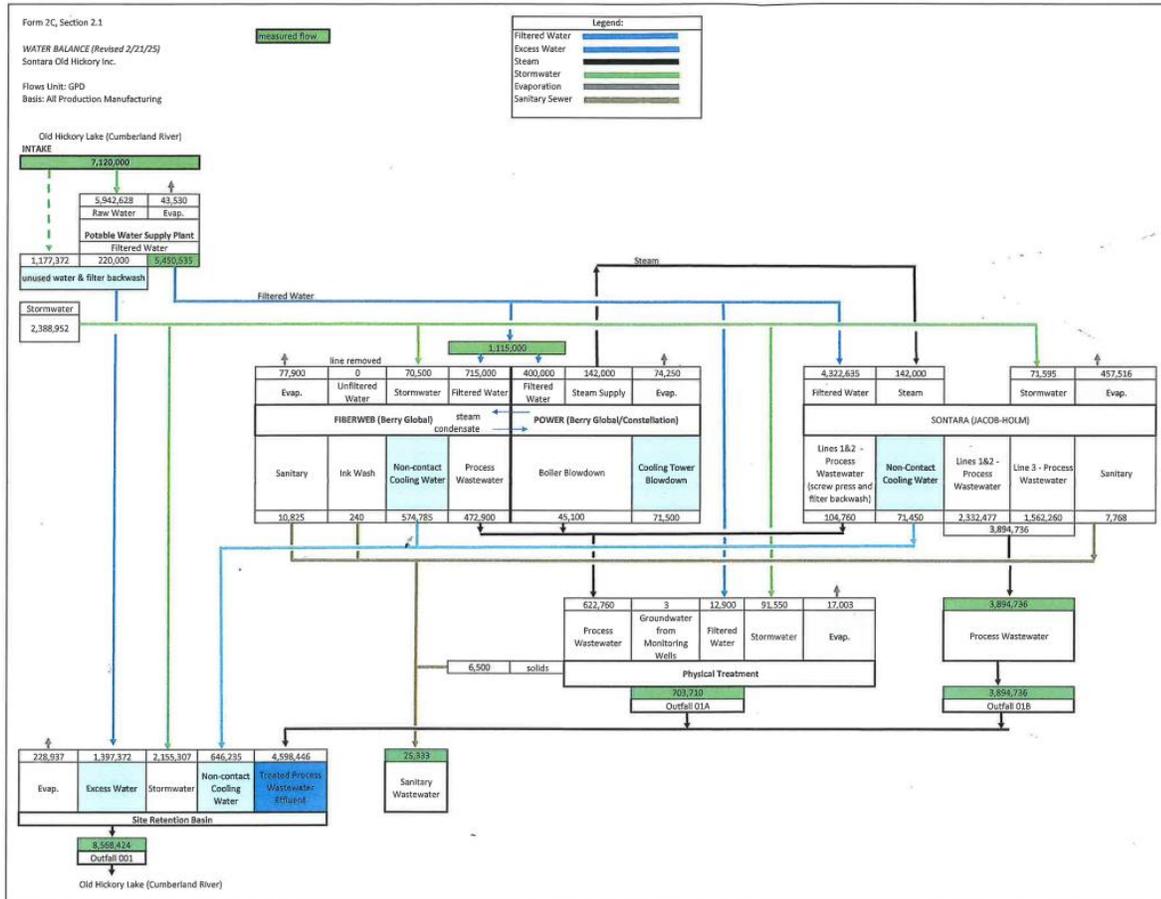
The public may also request a public hearing on a proposed permit by submitting such a request in writing during the public comment period specified above. The request should indicate the interest of the party filing it and the reasons why a hearing is warranted. A request for public hearing should be submitted as soon as practicable to the addresses provided above. Questions regarding the draft permit may be directed to 1-888-891-TDEC.

2. FACILITY INFORMATION

Permittee Name:	Glatfelter Sontara Old Hickory, Inc.
Location:	326 Swinging Bridge Road, Old Hickory, Davidson County, Tennessee
Average Flow Rate:	8.568 MGD
Nature of Business:	Manufacture of spunbonded polypropylene and/or polypropylene fibers by melt-blown process, and spunlaced fiber sheet material by hydro-consolidating natural & synthetic fibers.
SIC Code(s):	2297
Industrial Classification:	Primary Facility *
Discharger Rating:	Major

* PRIMARY INDUSTRY CATEGORY means any industry category listed in the NRDC Settlement Agreement (Natural Resources Defense Council v. Train, 8 ERC 2120 [D.D.C. 1976], modified 12 ERC 1833 [D.D.C. 1979])





3. FACILITY DISCHARGES AND RECEIVING STREAM INFORMATION

Receiving Waterbody:	Cumberland River (Old Hickory Reservoir) at mile 218.4 for Outfall 001			
Watershed Group:	Cumberland-Lower-Sycamore (Cheatham Lake)			
Hydrocode:	05130202			
Primary Outfall Latitude:	36.2775			
Primary Outfall Longitude:	-86.6497			
Low Flow:	1Q10 = 1187.25 MGD (1837.00 CFS)			
Low Flow Reference:	USGS StreamStats/Hydrologic Toolbox, Gage Station 03426310			
Stream Designated Uses:	<i>Domestic Water Supply</i>	<i>Industrial</i>	<i>Fish & Aquatic Life</i>	<i>Recreation</i>
	X	X	X	X
	<i>Livestock & Wildlife</i>	<i>Irrigation</i>	<i>Navigation</i>	<i>Trout</i>
	X	X	X	

Facility General Information

Glatfelter Sontara Old Hickory, Inc., is located in Old Hickory, TN. The site contains two industrial companies: Fiberweb and Glatfelter Sontara Old Hickory. The facility discharges treated process wastewater (via internal monitoring points 01A and 01B), treated groundwater, filter press filtrate, miscellaneous cooling and non-process wastewaters and storm water runoff from Outfall 001. Outfall 001 discharges to Cumberland River (Old Hickory Reservoir) at mile 218.4. Glatfelter Sontara also operates a Cooling Water Intake Structure sourced by Old Hickory Reservoir. Appendix 5 summarizes facility discharges and the receiving stream information for the relevant outfall(s).

Glatfelter Sontara Old Hickory manufactures spunlaced fiber sheet material by hydro-consolidating various natural and synthetic fibers. Fiberweb manufactures spunbonded polyester and/or polypropylene fibers by melt-blown process.

Some stormwater is collected and used as part of the production process. This stormwater is treated via retention basin and discharged through Outfall 001. Other stormwater discharges associated with the industrial activity of this facility are covered by three separate Tennessee Multi-Sector General Storm Water Permits (TMSPs) TNR056004, TNR058417, and TNR058900. Stormwater concerns associated with this facility are covered in the general permit and will therefore not be addressed in detail in this permit.

IMP 01A

IMP 01A is an internal monitoring point (IMP) in which the following operations contribute to the overall flow:

- process wastewater from the boiler blowdown/utility water
- contact stormwater
- manufacture of spun laced and spunbonded non-fabric
- groundwater monitoring wells
- process wastewater from production Lines 1 & 2
- filtered water
- evaporation
- wastewater solids

This combined discharge undergoes physical treatment using equalization and sedimentation. Solids from this treatment are disposed via landfill. Treated wastewater discharges from IMP 01A to the site retention basin where it combines with process wastewater from IMP 01B. Effluent is then discharged to the receiving stream via Outfall 001.

FACILITY DISCHARGES AND RECEIVING WATERS																																						
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* Reference: IMP - Internal Monitoring Point																																						

IMP 01B

IMP 01B is an internal monitoring point in which the following operations contribute to the overall flow:

- process wastewater from production Lines 1 & 2
- process wastewater from production Line 3

This combined discharge undergoes physical treatment screening, flotation, and flocculation. Solids from this treatment are also disposed via landfill. Treated wastewater discharges from IMP 01B to the site retention basin where it is combined with IMP 01A. Effluent is then discharged to the receiving stream via Outfall 001.

FACILITY DISCHARGES AND RECEIVING WATERS				
IMP01B				
LONGITUDE	LATITUDE			
36-16-29	-86-39-29			
FLOW (MGD)	DISCHARGE SOURCE			
2.332	Lines 1 & 2 Process Wastewater			
1.562	Line 3 Process Wastewater			
3.895		TOTAL DISCHARGE Through IMP01B		
Treatment: Screening, Flotation, and Flocculation w/ sludge discharge to landfill				
* Reference: IMP - Internal Monitoring Point				

RECEIVING STREAM DISCHARGE ROUTE			
IMP01A and IMP01B discharge to an onsite retention pond. The pond then discharges to the Cumberland River (Old Hickory Lake) at mile 218.4 via Outfall 001.			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	NA	NA	NA
(MGD)	NA	NA	NA

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
INDUSTRIAL	NAVIGATION			

Outfall 001

Outfall 001 consists of the following minus evaporation:

- treated process wastewater effluent from IMP 01A and IMP 01B.
- non-contact cooling water
- stormwater
- excess water

All effluent is treated via the site retention basin before discharge at Outfall 001 to the Cumberland River (Old Hickory Reservoir) at mile 218.4.

FACILITY DISCHARGES AND RECEIVING WATERS				
OUTFALL 001				
LONGITUDE	LATITUDE			
36-16-39	-86-38-59			
FLOW (MGD)	DISCHARGE SOURCE			
4.598	Treated Process Wastewater Effluent (01A & 01B)			
0.646	Non-contact cooling water			
2.155	Stormwater			
1.397	Excess water			
-0.229	Evaporation			
8.568		TOTAL DISCHARGE		
Treatment: Equalization & Sedimentation w/ sludge discharge to landfill				
* Reference: USGS Gage Station 03426310; IMP - Internal Monitoring Point				

RECEIVING STREAM DISCHARGE ROUTE			
IMP01A and IMP01B discharge to an onsite retention pond. The pond then discharges to the Cumberland River (Old Hickory Lake) at mile 218.4 via Outfall 001.			
STREAM LOW FLOW (CFS) *	7Q10	1Q10	30Q5
	3269.30	1837.00	4764.30
(MGD)	2112.95	1187.25	3079.17

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH & AQUATIC LIFE	RECREATION	IRRIGATION	LIVESTOCK & WILDLIFE	DOMESTIC WATER SUPPLY
X	X	X	X	X
INDUSTRIAL	NAVIGATION			
X	X			

Receiving Stream

In this permit, USGS Gage Station 03426310 provides sufficient data to characterize the low flow of the receiving stream. Gage data was analyzed with Hydrologic Toolbox and used to calculate the 1Q10 below. Appendix 5 details the

Streamstats and Hydrologic Toolbox outputs used for this calculation, along with the processes for each outfall and facility process diagram.

4. APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

The Standard Industrial Classification (SIC) code for Glatfelter Sontara Old Hickory, Inc. is 2297 – Non-woven Fabrics. Effluent Limitation Guidelines (ELGs) for each outfall are as follows and are summarized in Appendix 4:

IMP 01A

As shown in the flow diagram, process wastewater (Lines 1 & 2) is discharged through IMP 01A. This wastewater is regulated by applicable best practicable control technology (BPT) ELGs for facilities classified under Organic Chemicals, Plastics, and Synthetic Fibers ([40 CFR 414.31, Subpart C](#)) and under Textile Mills ([40 CFR Part 430.122, Subpart L](#)).

40 CFR Effluent Limit Guidelines		
414 – Organic Chemicals, Plastics, and Synthetic Fibers		
40 CFR Part 414.31, Subpart C		
Parameter	Monthly Average (mg/L)	Daily Maximum (mg/L)
BOD5	18	48
TSS	36	115
pH	Range 6.0 – 9.0	

40 CFR Effluent Limit Guidelines		
430 – Tissue, Filter, Non-Woven, and Paperboard from Purchased Pulp		
40 CFR Part 430.122, Subpart L (continuous discharger)		
Parameter	Monthly Average (lb/1000lb)	Daily Maximum (lb/1000lb)
BOD5	16.3	29.6
TSS	13	26.6
pH	Range 5.0 – 9.0	

IMP 01B

As shown in the flow diagram, process wastewater (Lines 1, 2, and 3) is discharged through IMP 01B. This wastewater is regulated by applicable BPT ELGs for facilities classified under Tissue, Filter, Non-Woven, and Paperboard from Purchased Pulp Subcategory ([40 CFR 430.122, Subpart L](#)) and Textile Mills Point Source Category ([40 CFR 410.82, Subpart H](#)).

40 CFR Effluent Limit Guidelines 430 – Tissue, Filter, Non-Woven, and Paperboard from Purchased Pulp 40 CFR Part 430.122, Subpart L (continuous discharger)		
Parameter	Monthly Average (lb/1000 lb)	Daily Maximum (lb/1000 lb)
BOD5	16.3	29.6
TSS	13.0	26.6
pH	Range 5.0 – 9.0	

40 CFR Effluent Limit Guidelines 410 – Textile Milles Point Source Category 40 CFR Part 410.82, Subpart H		
Parameter	Monthly Average (lb/1000 lb)	Daily Maximum (lb/1000 lb)
BOD5	2.2	4.4
COD	20.0	40.0
TSS	3.1	6.2
Sulfide	0.023	0.046
Phenol	0.011	0.023
Total Chromium	0.011	0.023
pH	Range 6.0 – 9.0	

Outfall 001

Currently, there are no ELGs for the discharge of cooling waters, storm water runoff, or miscellaneous non-stormwater flows for this facility.

5. PERMIT TERM REVIEW & PERMIT HISTORY

A review of the permittee’s Discharge Monitoring Reports (DMRs) from September 2021 to September 2025 revealed that the permittee reported only one violation of permit limits for BOD₅ in October 2022. A summary of data reported on DMRs during the previous permit term is located in Appendix 2.

During the previous permit term, Division personnel from the Nashville Environmental Field Office performed two Compliance Evaluation Inspections (CEIs) of the permittee’s facility.

March 2, 2023

The first CEI was performed by Mr. Jordan Fey and Mr. Daniel Pleasant of TDEC, and the permittee was found to be in compliance. The inspection report described the effluent flume containing significant algae growth.

September 11, 2025

The second CEI was performed by Ms. Teri Horsley of TDEC, and the permittee was found to be in compliance. The inspection report described minor issues with pH method documentation and meter calibration.

6. NEW PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

The proposed new permit limits have been selected by determining a technology-based limit and evaluating if that limit protects the water quality of the receiving stream. If the technology-based limit would cause violations of water quality, the water quality-based limit is chosen. The technology-based limit is determined from EPA effluent limitations guidelines if applicable (see Part 4 above) or from State of Tennessee maximum effluent limits for effluent limited segments per [Rule 0400-40-05-.08](#). Note that in general, the term “anti-backsliding” refers to a statutory provision that prohibits the renewal, reissuance, or modification of an existing NPDES permit that contains effluents limits, permit conditions, or standards that are less stringent than those established in the previous permit.

- a) Language throughout the permit has been updated to reflect the eReporting Phase 2 requirements in 40 CFR § 127.
- b) For comparison, this rationale contains the previous permit limits and effluent monitoring requirements in Appendix 1.
- c) Effluent limits are calculated for IMP 01A and IMP 01B to establish compliance with ELGs prior to mixing with effluent at Outfall 001. Calculations are shown in Appendix 4.
- d) Monitoring and effluent limits for sulfide, phenols, and total chromium are added to IMP 01B to establish compliance with ELGs. See **Section 6.2.4**.

6.1. INTERNAL MONITORING POINT 01A (IMP 01A)

IMP 01A effluent consists of process wastewater from the following operations and sources:

- process water from boiler blowdown/utility water
- contact stormwater
- manufacture of spunlaced and spunbonded non-woven fabrics
- groundwater monitoring wells
- process wastewater from Lines 1 and 2

- filtered water

The effluent is treated using equalization and sedimentation (settling). Any residual sludge is discharged to a publicly owned treatment facility and/or landfill. As discussed in Section 4 and shown in the flow diagram in Section 2, applicable ELGs are based on 2 separate regulated wastewater sources from Fiberweb and Sontara:

- Process wastewaters generated from fiber production from Fiberweb. This wastewater is regulated by 40 CFR 414.31 (Subpart C) for BOD₅, TSS, and pH.
- Process wastewater from screw press and filter backwash (Lines 1 and 2) from Sontara. This wastewater is regulated by 40 CFR 430.122 (Subpart L) for BOD₅, TSS, and pH.

6.1.1. Flow

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in million gallons per day (MGD) and monitored at the time of sample collection.

6.1.2. Biological Oxygen Demand (BOD₅) and Total Suspended Solids (TSS)

Both BOD₅ and TSS are regulated by ELGs as described above. Using the ELGs, mass limits are calculated based on the long-term average flow reported to be 0.704 MGD. These calculations are shown in Appendix 4. Below are the calculated limits for daily maximum and monthly average for both BOD₅ and TSS for IMP-01A.

IMP 01A - Flow Allocation Table: Typical Hydraulic Load
Applicable ELGs: 414.31 Subpart C and 430.122 Subpart L

	SUBPART C	SUBPART L	
Long-Term Average Flow *			
[MGD]	67.2	14.9	%
0.704	0.473	0.105	MGD

*Based on the flow diagram submitted on 02/2025

IMP 01A - Flow Allocation Table: Typical Hydraulic Load

Applicable ELGs: 414.31 Subpart C and 430.122 Subpart L

CFR 443.31 and 430.122-BASED EFFLUENT LIMITS CALCULATIONS FOR BOD5 and TSS			
MONTHLY			
	Fiberweb-Subpart C	Sontara-BPJ Subpart L	TOTAL
EFFLUENT CHARACTERISTIC	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)
BOD5	71.0	55.1	126.1
TSS	142.0	43.0	185.0
DAILY			
	SUBPART C	Sontara-BPJ Subpart L	TOTAL
EFFLUENT CHARACTERISTIC	MAX. AMNT. (lb/day)	MAX. AMNT. (lb/day)	MAX. AMT. (lb/day)
BOD5	189.3	98.0	287.3
TSS	453.6	88.1	541.7

The State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [[Chapter 0400-40-03-.03\(3\)\(c\)](#)] state there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream.

6.1.3. pH

Applicable ELGs described above require pH monitoring. The most stringent pH range of 6.0 to 9.0 will be retained for this permit.

6.1.4. Chemical Oxygen Demand (COD)

Due to the principal oxygen-demanding waste occurring in the form of COD rather than BOD5 for Subpart L, COD will continue to be reported for IMP 01A. COD sampling will continue to occur weekly.

6.2. INTERNAL MONITORING POINT 01B (IMP 01B)

IMP 01B effluent consists of process wastewater from the following operations and sources:

- process wastewater from Lines 1 and 2
- process wastewater from Line 3

The effluent is treated using screening, flotation, and flocculation. Residual solid waste is discharged to landfill. Per the permit application, wastewater from Sontara’s manufacturing process is regulated by:

- 40 CFR 430.22 (Subpart L) for BOD₅, TSS, and pH
- 40 CFR 410.82 (Subpart H) for BOD₅, COD, TSS, Sulfide, Phenol, Total Chromium, and pH.

6.2.1. Flow

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in million gallons per day (MGD) and monitored at the time of sample collection.

6.2.2. Biological Oxygen Demand (BOD₅), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS)

BOD₅ and TSS are regulated by ELGs as described above. Using the ELGs, mass limits are calculated based upon the applications reported 77,000 lb/day of pulp (paper) and 46,100 lbs/day of non-woven fabric.

There is no ELG for COD under 40 CFR 430.122 (Subpart L). Therefore, the COD limit is calculated using a previously agreed 2:1 ratio to the BOD₅ from Subpart L. This ratio will be retained for this permit. Below are the calculated limits for daily maximum and monthly average for both BOD₅, COD, and TSS for IMP 01B.

IMP 01B - Flow Allocation Table: Typical Hydraulic Load
Applicable ELGs: 430.122 Subpart L and 410.82 Subpart H

CFR 443.31 and 430.122-BASED EFFLUENT LIMITS CALCULATIONS			
MONTHLY			
EFFLUENT CHARACTERISTIC	Subpart L	Subpart H	TOTAL
	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)
BOD5	1172.4	101.4	1273.8
COD	2344.8	922.0	3266.8
TSS	957.0	142.9	1099.9

DAILY			
EFFLUENT CHARACTERISTIC	Subpart L	Subpart H	TOTAL
	MAX. AMNT. (lb/day)	MAX. AMNT. (lb/day)	MAX. AMT. (lb/day)
BOD5	2181.1	202.8	2383.9
COD	4362.2	1844.0	6206.2
TSS	1960.1	285.8	2245.9

The State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [[Chapter 0400-40-03-.03\(3\)\(c\)](#)] state there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream.

6.2.3. pH

Applicable ELGs described above require pH monitoring. The most stringent pH range of 6.0 to 9.0 will be retained for this permit.

6.2.4. Sulfide, Phenols, and Total Chromium

ELG 40 CFR 410.82 (Subpart H) has flow-based limits for sulfide, phenol, and total chromium. The previous permit waived monitoring for these parameters with the reasoning that application data reported below detection limits and that thermal or chemical bonding was not used for manufacturing the non-woven fabric.

Reviewing 40 CFR 410.80 as it addresses the applicability and description of non-woven manufacturing, the regulation states the following:

The provisions of this subpart are applicable to process wastewater discharges resulting from facilities that primarily manufacture nonwoven textile products of wool, cotton, or synthetics, singly or as blends, by mechanical, thermal, and/or adhesive bonding procedures.

The site's manufacturing uses mechanical bonding. For this permit's renewal application, total phenols and total chromium were reported non-detect. However, sulfide was marked believed absent and not analyzed. Based on 40 CFR 410.80, regulation does not exempt permit monitoring for specified parameters, even if the application reports non-detects. Therefore, annual monitoring is added to this permit for sulfide, phenols, and total chromium.

Using 40 CFR 410.82 (Subpart H), mass limits are calculated based upon the applications reported 46,100 lb/day of pulp (paper).

IMP 01B - Flow Allocation Table: Typical Hydraulic Load
Applicable ELGs: 430.122 Subpart L and 410.82 Subpart H

CFR 443.31 and 430.122-BASED EFFLUENT LIMITS CALCULATIONS			
MONTHLY			
	Subpart L	Subpart H	TOTAL
EFFLUENT CHARACTERISTIC	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)
Sulfide	-	1.1	1.1
Phenols	-	0.5	0.5
Chromium (Total)	-	0.5	0.5
DAILY			
	Subpart L	Subpart H	TOTAL
EFFLUENT CHARACTERISTIC	MAX. AMNT. (lb/day)	MAX. AMNT. (lb/day)	MAX. AMT. (lb/day)
Sulfide	-	2.1	2.1
Phenols	-	1.1	1.1
Chromium (Total)	-	1.1	1.1

6.3. OUTFALL 001

6.3.1. Flow

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in million gallons per day (MGD) and monitored at the time of sample collection.

6.3.2. Metals and Toxics

Effluent permit limits for metals and toxics were calculated as shown in Appendix 3. All parameters were non-detect except for Chloroform which is well below water quality standards. Effluent limits for metals and toxics were calculated as shown in Appendix 3.

6.3.3. Oil and Grease

The Division has determined that an oil and grease limitation not needed for this outfall as oil and grease was not detected in the sampling for the renewal application.

According to the State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [Chapter [0400-40-03-.03\(3\)\(c\)](#)], there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream.

6.3.4. Total Suspended Solids (TSS)

Monitoring for TSS was on “report” only basis during the previous permit term, since TBEL-based reporting is established above for upstream process wastewater discharges. The monitoring frequency is retained at monthly on a grab sample, since the pond effluent is completely mixed.

6.3.5. pH

According to the State of Tennessee Water Quality Standards [Chapter [0400-40-03-.03\(3\) \(b\)](#)], the pH for the protection of Fish and Aquatic Life shall not fluctuate more than 1.0 unit over a period of 24 hours and shall not be outside the following ranges: 6.0 – 9.0 standard units (SU) in wadeable streams and 6.5 – 9.0 SU in larger rivers, lakes, reservoirs, and wetlands. Considering that the receiving stream will provide some buffering capacity, effluent limitation for pH will be retained in a range 6.0 to 9.0. The sample type will be grab.

6.3.6. Ammonia (NH₃-N)

To assess ammonia toxicity impacts, the state utilizes Tennessee Rules, Chapter [0400-40-03-.03-3\(3\)\(j\)](#), dated September 11, 2019, to derive allowable instream protection values protective of chronic and acute exposures to a continuous discharge. A mass balance equation with the treatment facility, stream flows, and these allowable values determines the monthly average and daily maximum permit limits.

The temperature used in calculations is determined based on measured ambient instream temperature or is estimated according to Tennessee’s Three Grand Divisions as follows: East (winter 15°C, summer 25°C), Middle (winter 17°C, summer 27°C), and West (winter 20°C, summer 30°C). A pH value of 7.5 is used because the average pH for ambient monitoring for the receiving stream is 7.5.

Using temperature and pH values, the criterion continuous concentration (CCC) and criterion maximum concentration (CMC) values are calculated using the following equations:

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

and

$$CMC = MIN \left\{ \left(\frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}} \right), \left(0.7249 * \left(\frac{0.0114}{1 + 10^{7.204-pH}} + \frac{1.6181}{1 + 10^{pH-7.204}} \right) * (23.12 * 10^{0.036 * (20-T)}) \right) \right\}$$

The determined CCC and CMC values are then used in the mass balance equation as follows:

$$CCC = \frac{Q_s C_s + Q_d C_d}{Q_s + Q_d} \quad \text{or} \quad C_d = \frac{CCC(Q_s + Q_d) - (Q_s C_s)}{Q_d}$$

where:

- CCC = Criteria continuous concentration (mg/L)
- Q_s = 7Q10 flow of receiving stream (MGD)
- Q_d = Average flow of facility (MGD)
- C_s = Assumed/Measured instream NH₃ (mg/L)
- C_d = Allowable facility discharge of NH₃ (mg/L)

See below for calculations:

CCC Calculation: Chronic Limits			
Winter		Summer	
Temp (°C)=	17	Temp (°C)=	27
pH=	7.5	pH=	7.5
MAX Expression	17.0000	MAX Expression	27.0000
Winter CCC=	1.69	Summer CCC=	0.89
CCC - Continuous Chronic Criterion Allowable instream NH ₃ concentration [mg/l]			
$CCC = 0.8876 * \left(\frac{0.0278}{1 + 10^{7.688-pH}} + \frac{1.1994}{1 + 10^{pH-7.688}} \right) * (2.126 * 10^{0.028 * (20 - MAX(T,7))})$			
where:	1187.25	Critical Low Flow [MGD] (1Q10 value)	
	0.029	Background Ammonia Concentration [mg/L] *	
	8.568	WWTP Design Flow or long-term average flow [MGD]	
$Effluent Concentration = \frac{CCC * ([Background Ammonia Concentration] + [Design Flow]) - ([Critical Low Flow] * [Background Ammonia Concentration])}{Design Flow}$			
Therefore, the Allowable Effluent Concentrations and corresponding Amounts in winter and summer are:			
Winter	231.97	Concentration [mg/L]	Summer
	16575.7	Amount [lb/day]	119.829
			8562.6
			Amount [lb/day]

* In the absence of measured data, an assumed background concentration of 0.1mg/L is used based on an Agreed Wasteload Allocation Modeling Methodology between the EPA and State of TN

CMC Calculation: Acute Limits																	
<p>Winter</p> <p>Temp (°C)= 17 pH= 7.5 MAX Expression 17.0000</p> <p>Winter CMC= 11.84</p>	<p>Summer</p> <p>Temp (°C)= 27 pH= 7.5 MAX Expression 27.0000</p> <p>Summer CMC= 5.17</p>																
<p>CMC - Continuous Maximum Criterion Allowable instream NH3 concentration [mg/l]</p>																	
$CMC = MIN \left(\frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}} \right) \cdot \left(0.7249 \times \left(\frac{0.0114}{1 + 10^{7.204 - pH}} + \frac{1.6181}{1 + 10^{pH - 7.204}} \right) \times (23.12 \times 10^{0.036 \times (20 - T)}) \right)$																	
<p>where:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%; text-align: center;">1187.25</td> <td style="width: 60%;">Critical Low Flow [MGD] (1Q10 value)</td> </tr> <tr> <td></td> <td style="text-align: center;">0.029</td> <td>Background Ammonia Concentration [mg/L]</td> </tr> <tr> <td></td> <td style="text-align: center;">8.568</td> <td>WWTP Design Flow or long-term average flow [MGD]</td> </tr> </table>					1187.25	Critical Low Flow [MGD] (1Q10 value)		0.029	Background Ammonia Concentration [mg/L]		8.568	WWTP Design Flow or long-term average flow [MGD]					
	1187.25	Critical Low Flow [MGD] (1Q10 value)															
	0.029	Background Ammonia Concentration [mg/L]															
	8.568	WWTP Design Flow or long-term average flow [MGD]															
<p><i>Effluent Concentration =</i></p> $\frac{CCC \times ([Background Ammonia Concentration] + [Design Flow]) - ([Critical Low Flow] \times [Background Ammonia Concentration])}{Design Flow}$																	
<p>Therefore, the Allowable Effluent Concentrations and corresponding Amounts in winter and summer are:</p>																	
<table style="border: none;"> <tr> <td style="border: 1px solid black; padding: 2px;">Winter</td> <td style="padding: 2px;">Concentration [mg/L]</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">1649.05</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="border: none;"></td> <td style="padding: 2px;">Amount [lb/day]</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">117836.1</td> <td style="padding: 2px;"></td> </tr> </table>	Winter	Concentration [mg/L]	1649.05			Amount [lb/day]	117836.1		<table style="border: none;"> <tr> <td style="border: 1px solid black; padding: 2px;">Summer</td> <td style="padding: 2px;">Concentration [mg/L]</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">717.570</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="border: none;"></td> <td style="padding: 2px;">Amount [lb/day]</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">51275.5</td> <td style="padding: 2px;"></td> </tr> </table>	Summer	Concentration [mg/L]	717.570			Amount [lb/day]	51275.5	
Winter	Concentration [mg/L]																
1649.05																	
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117836.1																	
Summer	Concentration [mg/L]																
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	Amount [lb/day]																
51275.5																	
<p>* In the absence of measured data, an assumed background concentration of 0.1 mg/L is used based on an Agreed Wasteload Allocation Modeling Methodology between the EPA and State of TN</p>																	

The calculated acute and chronic toxicity values above are calculated to protect ambient dissolved oxygen levels. The permit imposes the most stringent values in the analysis. The analysis compares the calculated chronic ammonia value (CCC) with a monthly average limit previously imposed to protect dissolved oxygen or to prevent toxicity. The analysis compares the calculated acute ammonia value (CMC) with reported analytical data in the renewal application to protect dissolved oxygen or to prevent toxicity. Generally, water quality models have predicted the monthly average ammonia limit to protect dissolved oxygen. The Division has historically developed a companion daily maximum value to protect dissolved oxygen by multiplying the monthly average limit by two. Empirical data supports the factor of two developed in consideration of the natural variation in biological pollutant removal and the design basis for treatment unit sizing.

Considering that Outfall 001 discharges to a receiving stream with a large critical low flow proportional to the effluent flow rate and ammonia not detected in application, there is no reasonable potential of exceeding the calculated acute and chronic limits. Therefore, ammonia monitoring is not required as part of this permit.

6.3.7. Chlorination

The total residual chlorine (TRC) limit is derived using the mass balance formula and the EPA acute instream protection value of 0.019 mg/L for fish and aquatic

life. Applying this formula yields the following calculation for the TRC daily maximum limit:

$$\frac{0.019 (Q_d + Q_s)}{Q_d} = \text{Limit (mg/L)} = \frac{0.019(8.568 + 1187.25)}{8.568} = 2.652 \text{ mg/L} \approx 2.65 \text{ mg/L}$$

Where:

0.019 mg/L	=	acute instream protection value
1187.25	=	Q _s – 1Q ₁₀ flow of receiving stream (MGD)
8.568	=	Q _d – average flow of facility (MGD)

Similarly, the chronic instream protection value of 0.011 mg/L for fish and aquatic life is applied to the mass balance formula to determine the monthly average limit for TRC. Previous permits do not contain rationale for omitting this limit and may have utilized the belief that chlorine’s reactivity with other compounds will ensure it does not remain in solution long enough to result in chronic exposure to fish and aquatic life. The best way to reflect that chronic exposure to harmful levels of chlorine is not occurring is reporting successful operation of the de-chlorination technology in compliance with the monthly average limit. This added limit does not entail additional sampling but rather calculation of a monthly average value based on the sampling results in consideration of the method detection level of the test method.

$$\frac{0.011 (Q_d + Q_s)}{Q_d} = \text{Limit (mg/L)} = \frac{0.011(8.568 + 1187.25)}{8.568} = 1.535 \text{ mg/L} \approx 1.54 \text{ mg/L}$$

Considering that Outfall 001 discharges to a receiving stream with a large critical low flow proportional to the effluent flow rate and TRC is not detected in application, there is no reasonable potential to exceed any applicable water quality criteria. Therefore, TRC monitoring is not required as part of this permit.

6.3.8. Effluent Temperature

Temperature will be limited according to the State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [Chapter 0400-40-03-.03(3)(e)]. It is recognized that the temperature of the cooling water discharge will be greater than the temperature of the water prior to its use for cooling or other purposes. This discharge must not cause the temperature change in receiving stream to exceed 3°C relative to an upstream control point. Also, this discharge must not cause the temperature of receiving stream to exceed 30.5°C (except as a result of natural causes), and this discharge must not cause the maximum rate of

temperature change in receiving stream to exceed 2°C per hour (except as a result of natural causes).

Considering that Outfall 001 discharges to a receiving stream with a large critical low flow proportional to the effluent flow rate and process wastewater discharges to a basin prior to discharge to the receiving water, there is no reasonable potential to exceed any applicable water quality criteria. Therefore, temperature monitoring is not required as part of this permit.

6.3.9. Biomonitoring

The discharge of industrial wastewater from Outfall 001 may contain several pollutants, the combined effect of which has a reasonable potential to exceed the narrative water quality criterion “no toxics in toxic amounts”.

In cases where a discharger has characterized its effluent via toxicity test methods acceptable to the Division, reasonable potential to exceed the criterion is evaluated using the following rationale.

EPA’s [Technical Support Document for Water Quality Based Toxics Control](#) (TSD) recommends that the evaluation of both acute and chronic toxicity be based on the number of observations in the data set, the coefficient of variation and an uncertainty factor. The uncertainty factor value is taken from a chart in the technical support document and the coefficient of variation (C.V.) is based on the following numbers:

Less than ten observations: C.V. = 0.6
More than ten observations: C.V. = Standard Deviation / Mean

The result of each biomonitoring test is converted to toxic units using the equations listed below:

Acute biomonitoring: $TU_a = 100 / LC_{50}$
Chronic biomonitoring: $TU_c = 100 / IC_{25}$

The highest numerical value of the acute data set (in TU_a) is multiplied by the uncertainty factor (U.F.) and the dilution factor to derive the final acute value. The highest numerical value of the chronic data set (in TU_c) is also multiplied by the uncertainty factor and the dilution factor to derive the final chronic value.

Dilution Ratio (DR) = Waste Flow / 1Q10
Final Acute Value = $TU_a * \text{Uncertainty Factor} * \text{Dilution Ratio}$

$$\text{Final Chronic Value} = \text{TUc} * \text{Uncertainty Factor} * \text{Dilution Ratio}$$

The final acute value is compared to the criteria maximum concentration (CMC) for acute toxicity (CMC = 0.3 TUa). The CMC is defined as the highest instream concentration of an effluent to which organisms can be exposed to for a brief period of time without causing an acute effect. The final chronic value is compared to the criteria continuous concentration (CCC) for chronic toxicity (CCC = 1.0 TUc). The CCC is defined as the highest instream concentration of an effluent to which organisms can be exposed indefinitely without causing an unacceptable effect. In the absence of chronic data, an acute to chronic ratio (ACR) of 4.4 is assumed (TSD Appendix A.3).

In this case, 2 observations of acute are available.

2	=	number of acute test samples
8.93	=	maximum value, acute toxicity (TUa _{max})
0.6	=	acute coefficient of variation (CVa) (for n<10, CV = 0.6)
3.8	=	acute uncertainty factor (UFa)
0.01	=	Dilution Ratio at 1Q10 conditions

$$\begin{aligned} \text{Potential instream toxicity after mixing} &= 8.93 * 3.8 * 0.01 = 0.34 \\ \text{(Final acute value)} &= (\text{TUa}_{\text{max}} * \text{UFa} * \text{DF}) \end{aligned}$$

The potential instream toxicity after mixing, expressed as TUa, exceeds the CMC of 0.3. Therefore, acute whole effluent toxicity testing is required.

Since the receiving stream is the facility's water source, the following equations are used to determine whole effluent toxicity limits.

The following calculation is the required dilution at which acute toxicity testing must meet permit requirements:

$$\text{Dilution Factor} = \frac{\text{Stream Low Flow}}{\text{Waste Flow}} = \frac{1187.3}{8.568} = 138.57$$

$$\text{LC}_{50} \% \geq \frac{100\%}{0.3 * \text{Dilution Factor}} \geq \frac{100\%}{0.3 * 138.57} \geq 2.4\%$$

(LC₅₀ = 100% when the Dilution Factor ≤ 3.33)

Where:

1187.38	=	1Q10 Low Flow (MGD)
8.568	=	Waste Flow (MGD)

0.3 = Conversion factor to toxic units, acute
LC₅₀ = Lethality concentration to 50% of organisms

The acute toxicity endpoint (LC₅₀) is a *calculated* effluent concentration based on the dilution afforded to the effluent by the receiving stream at an assumed, worst-case condition (facility design flow discharging into the stream low flow). The calculated endpoint is taken to be an effluent concentration having the reasonable potential to cause acute toxicity when mixed into the receiving stream at its low flow. Because the low flow condition provides the least amount of effluent dilution, the endpoint based on it will be the *highest* concentration of an effluent ever *available* to provide acutely toxic exposure. Therefore, to demonstrate the *absence* of acutely toxic exposure, an effluent solution causing lethality in 50% or more of the organisms in a laboratory test must require an effluent concentration *in excess* of the acutely toxic concentration *available* at the condition of least dilution. Reasonable potential for toxicity will be demonstrated if the LC₅₀ established in the laboratory is *less than or equal to* the endpoint.

6.3.10. Total Organic Carbon

Total Organic Carbon (TOC) is a general indicator of the quality of a wastewater and will be monitored in this permit. In the absence of water quality criteria and federal or state treatability standards, TOC at Outfall 001 shall be monitored on a report only basis. Measurement frequency will be set at once per month and the sample type will be grab.

7. OTHER PERMIT REQUIREMENTS AND CONDITIONS

7.1. PERMIT TERM

In order to meet the target reissuance date for the Cumberland-Lower-Sycamore (Cheatham Lake) watershed and following the directives for the Watershed Management Program initiated in January 1996, the permit will be issued to expire in 2030.

7.2. ELECTRONIC REPORTING

The [NPDES Electronic Reporting Rule \(eRule\)](#), which became effective on December 21, 2016, replaces most paper-based reporting requirements with electronic reporting requirements. NetDMR allows NPDES permittees to submit DMRs electronically to EPA through a secure internet application and has been approved by Tennessee as the official electronic reporting tool for DMRs. The permittee has been reporting electronically via NetDMR since August 15, 2016.

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Reports (DMRs) based on the effluent limits in **section 1.1** of the permit. DMRs and DMR attachments, including laboratory data and overflow reports, shall be submitted electronically in [NetDMR](#) or other electronic reporting tool approved by the State, no later than the 15th of the month following the end of the monitoring period. All NPDES program reports must be signed and certified by a responsible official or a duly authorized representative, as defined in 40 CFR § 122.22.

According to 40 CFR § 127.15, states have the flexibility to grant temporary or episodic waivers from electronic reporting to NPDES permittees who are unable to meet the electronic reporting requirements. To obtain an electronic reporting waiver, an electronic reporting waiver request must be submitted by email to DWRwater.compliance@tn.gov or by mail to the following address:

*Division of Water Resources
Compliance and Enforcement Unit – NetDMR Waivers
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, TN 37243*

For contact and training information about NetDMR electronic reporting, visit the Division’s website [here](#).

The permit language has been modified to accommodate the implementation of the MyTDEC Forms electronic reporting tool. For more information, visit EPA’s website on [eReporting requirements](#).

7.3. ANTIDegradation Statement / Water Quality Status

Tennessee’s Antidegradation Statement is found in the Rules of the Tennessee Department of Environment and Conservation, Chapter [0400-40-03-.06](#). It is the purpose of Tennessee’s standards to fully protect existing uses of all surface waters as established under the Act.

Stream determinations for this permit action are associated with the waterbody segment identified by the Division as segment ID# TN05130201001_1000.

Outfall 001: Cumberland River; TN05130201001_1000				
Designated Use	Fully	Not	Not	Causes
	Supporting	Assessed	Assessed	
Domestic Water Supply	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fish and Aquatic Life	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Recreation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Livestock Watering & Wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Irrigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Industrial Water Supply	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Navigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Assessment Date: 11/17/2022				

The Division has made a water quality assessment of the receiving waters associated with the subject discharge(s) and has found the receiving stream to be neither an exceptional nor outstanding national resource water.

7.4. COMPLIANCE WITH CWA SECTION 316(B) – COOLING WATER INTAKE

Section 316(b) of the Clean Water Act requires that facilities minimize adverse environmental impacts resulting from the operation of cooling water intake structures (CWIS) by using the “best technology available” (BTA). Based on information provided in the permit application and the discussion and analysis shown below, the Division has determined that the permittee’s facility *does not meet the applicable conditions in EPA rules at 40 CFR § 125, Subpart J*. The discussion below provides the rationale for this determination. Because TDEC finds that the CWIS is not subject to requirements of §§ 125.94 through 125.99, this rationale includes a Best Professional Judgment analysis of requirements for Best Technology Available (BTA) under Section 316(b) in accordance with § 125.90(b):

“Cooling water intake structures not subject to requirements under §§ 125.94 through 125.99 or subparts I or N of this part must meet requirements under Section 316(b) of the CLA established by the Director on a case-by-case, best professional judgment (BPJ) basis.”

The permittee’s cooling water intake structure does not meet the applicability requirement for rules under CWA Section 316(b). The facility’s intake from Old Hickory Lake (Cumberland River) is 7.12 MGD. As shown in the flow diagram only 0.0715 MGD from the intake is used for cooling water which is well below 25% threshold requirement. All other cooling water is sourced through stormwater or steam reuse.

APPENDIX 1 – PREVIOUS PERMIT LIMITS

Effluent Limits- IMP 01A

Description: External Outfall, Number: 01A, Monitoring: Effluent Gross, Season: All Year							
<u>Code</u>	<u>Parameter</u>	<u>Qualifier</u>	<u>Value</u>	<u>Unit</u>	<u>Sample Type</u>	<u>Monitoring Frequency</u>	<u>Statistical Base</u>
00310	BOD, 5-day, 20 C	<=	291.5	lb/d	Composite	Twice Per Month	Daily Maximum
00310	BOD, 5-day, 20 C	<=	129.4	lb/d	Composite	Twice Per Month	Monthly Average
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00530	Total Suspended Solids (TSS)	<=	527.5	lb/d	Composite	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	183.1	lb/d	Composite	Weekly	Monthly Average
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Daily Maximum
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Monthly Average

Effluent Limits- IMP 01B

Description: External Outfall, Number: 01B, Monitoring: Effluent Gross, Season: All Year							
<u>Code</u>	<u>Parameter</u>	<u>Qualifier</u>	<u>Value</u>	<u>Unit</u>	<u>Sample Type</u>	<u>Monitoring Frequency</u>	<u>Statistical Base</u>
00310	BOD, 5-day, 20 C	<=	2942.1	lb/d	Composite	Twice Per Month	Daily Maximum
00310	BOD, 5-day, 20 C	<=	1609.9	lb/d	Composite	Twice Per Month	Monthly Average
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00530	Total Suspended Solids (TSS)	<=	2747.5	lb/d	Composite	Once Every Two Months	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	1346.0	lb/d	Composite	Once Every Two Months	Monthly Average
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum

50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
81017	Chemical Oxygen Demand (COD)	<=	7322.6	lb/d	Composite	Twice Per Month	Daily Maximum
81017	Chemical Oxygen Demand (COD)	<=	3938.9	lb/d	Composite	Twice Per Month	Monthly Average

Effluent Limits- Outfall 001

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year

<u>Code</u>	<u>Parameter</u>	<u>Qualifier</u>	<u>Value</u>	<u>Unit</u>	<u>Sample Type</u>	<u>Monitoring Frequency</u>	<u>Statistical Base</u>
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Daily Maximum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Monthly Average
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Daily Maximum
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Monthly Average
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
TAA3B	LC50 Static 48Hr Acute Ceriodaphnia	>=	2.8	%	Composite	1/Permit	Minimum
TAA6C	LC50 Static 48Hr Acute Pimephales promelas	>=	2.8	%	Composite	1/Permit	Minimum

APPENDIX 2 – DMR SUMMARY

**TN0002259 Sontara Old Hickory, In
Internal Outfall 01A-G**

Monitoring Period End Date	BOD, 5-day, 20		pH		Solids, total		Flow, in conduit or		Chemical	
	00310-1-0 Effluent		00400-1-0 Effluent		00530-1-0 Effluent		50050-1-0 Effluent		81017-1-0	
	Twice per Month		Weekly Grab		Weekly Composite		Continuous Recorder		Weekly	
	Monthly avg (lb/d)	Daily Max (lb/d)	Minimum (SU)	Maximum (SU)	Monthly avg (lb/d)	Daily Max (lb/d)	Monthly avg (MGD)	Daily max. (MGD)	Monthly avg (lb/d)	Daily Max (lb/d)
9/30/2025	20.6	47.8	7.2	7.5	14.4	26	0.42	0.77	< 242.7	121.1
8/31/2025	26.9	40.1	7.3	7.6	23.6	44.5	0.64	1.05	< 242.7	318.3
7/31/2025	24.5	32.7	6.8	7.8	27.9	34	0.8	1.14	< 242.7	372.7
6/30/2025	20.5	23.1	7.3	7.7	29.8	45.9	0.79	1.12	< 242.7	295
5/31/2025	33.7	57.5	7.4	7.7	22.2	34.2	0.78	1.06	< 242.7	347
4/30/2025	34.4	54.9	7	7.5	36.5	72.4	0.9	1.31	224.3	292.4
3/31/2025	33	40.3	7.3	7.3	19.1	21	0.86	1.13	< 185.1	266.1
2/28/2025	25.6	33.6	7.2	7.4	19.8	25.6	0.95	1.22	< 167.4	320.9
1/31/2025	26.6	39.9	7.3	7.4	72.1	242.3	0.85	1.09	< 159.2	247
12/31/2024	30.1	67.9	7.2	7.6	29	85.1	0.94	1.24	< 167.4	546.8
11/30/2024	24.8	33	7.3	7.5	31.4	49.5	0.84	1.1	< 167.4	198.6
10/31/2024	24.7	27.3	7.1	7.3	29.9	44.7	0.83	0.99	< 167.4	233.2
9/30/2024	42.7	63.1	7.1	7.3	28.9	50	0.77	1.2	< 167.4	281.8
8/31/2024	38.9	75.9	7.4	8	39.2	55	0.88	1.07	< 167.4	232.1
7/31/2024	31.7	40.4	7.3	7.4	23.4	29	0.99	1.29	< 148.9	180.9
6/30/2024	26.8	35.5	7.2	8.1	< 19.4	35.5	0.88	1.14	< 103.1	254.2
5/31/2024	27.4	30.6	7.4	8.2	< 19.4	30.6	0.87	1.31	< 103.1	256.6
4/30/2024	31.4	60.9	7.6	8.2	< 19.4	60.9	0.71	0.96	< 103.1	226.2
3/31/2024	26.2	32.3	8	8.4	< 19.4	32.3	0.7	1.07	< 103.1	197.5
2/29/2024	19.7	24	7.5	8.4	< 19.4	< 24	0.71	1.14	< 103.1	143.9
1/31/2024	19.1	27.7	7.4	7.7	< 19.4	< 27.7	0.67	1.5	< 103.1	166.2
12/31/2023	25.7	32.6	7.2	7.7	< 19.4	32.6	0.69	0.84	< 103.1	120.3
11/30/2023	27.9	57	7.2	8	< 19.4	57	0.7	0.9	< 103.1	149.4
10/31/2023	19.4	28.4	7.2	7.5	< 19.4	28.4	0.63	0.93	< 103.1	117.4
9/30/2023	< 20.6	< 23.9	7.2	7.8	< 24	40.3	0.67	1.03	< 123.4	< 143.4
8/31/2023	< 22.6	29	7.3	8	23.4	30.7	0.74	0.97	< 124.3	139.6
7/31/2023	< 20.5	27.3	7	7.5	< 22	32.5	0.85	1.22	< 119.5	< 152.5
6/30/2023	< 32.9	48.2	7.4	7.8	< 30	47.9	0.92	1.18	< 162.3	187.1
5/31/2023	< 26.1	39.2	6.7	8.1	< 25	38	0.84	1.03	< 139.7	168.6
4/30/2023	22.6	28.2	7.1	7.9	< 22.6	< 28.2	0.85	1.17	< 143.7	195
3/31/2023	< 34.7	49.3	7.1	7.6	< 39.7	78.8	1.1	1.83	< 172.4	< 266.4
2/28/2023	< 44	68.1	7	7.4	< 27.7	38.4	0.97	1.24	< 189.7	253.9
1/31/2023	34.5	45.8	7.4	7.6	30.9	36.7	0.92	1.14	< 160.5	173.5
12/31/2022	47.2	70.8	7.4	7.7	< 24.9	29.7	0.93	1.04	< 214.7	375.4
11/30/2022	< 71.4	135.1	7.2	7.9	41.2	51.3	1.03	1.22	< 192.6	247.6
10/31/2022	151.6	275.8	7	7.3	47.7	51.2	1.13	1.91	< 214	311.7
9/30/2022	36.2	41	7.4	7.5	54.1	100.5	0.77	1.21	< 144	181.1
8/31/2022	59.1	89.6	7.3	7.5	78.2	137.4	0.98	1.11	< 281.1	394.5
7/31/2022	< 23.5	< 28.7	7.5	7.6	< 20.6	< 26.6	0.86	1.01	195	357.9
6/30/2022	< 46.6	106.9	7.2	7.6	< 66	< 121	1.52	3.88	< 277.8	658.3
5/31/2022	< 47.3	80.1	7.3	7.7	< 21.8	34.3	0.55	0.98	96.3	105.4
4/30/2022	< 16.5	< 20.4	7.5	8	< 11.3	< 15.3	0.45	0.75	< 82.6	< 122.3
3/31/2022	< 13.1	16	7	7.6	< 11	13	0.44	0.78	< 100.5	154
2/28/2022	< 15	20.1	7.3	7.9	< 13.1	23.5	0.55	0.88	< 122	260
1/31/2022	< 28.8	76.1	7.3	7.6	16	26	0.55	0.88	190.1	504.4
12/31/2021	< 15	< 16.5	6.7	7.2	< 14	20.3	0.54	0.73	< 112.2	183
11/30/2021	< 16.4	< 21	7.1	7.4	< 14.4	20.1	0.8	6.66	< 98.2	< 125.9
10/31/2021	< 15.9	< 21.8	7.1	7.3	< 20	34	0.53	0.97	< 79	142
9/30/2021	< 18.9	< 26	7.2	7.8	< 25.5	37.6	0.6	0.94	14.8	24.2
Min:	19.10	16	6.70	7.2	14.40	13	0.42	0.73	14.80	24.2
Max:	151.6	275.8	8	8.4	78.2	242.3	1.52	6.66	224.3	658.3
Count:	49	49	49	49	49	49	49	49	49	49
Average:	33.78	53.65	7.24	7.68	33.58	47.88	0.79	1.27	144.10	247.79
Permit Limit:	129.4	291.5	6	9	183.1	527.5	Report	Report	Report	Report



TN0002259 Sontara Old Hickory, Inc.

Internal Outfall 01B-G

Monitoring Period End Date	BOD, 5-day, 20		pH		Solids, total		Flow, in conduit or		Chemical Oxygen	
	00310-1-0		00400-1-0 Effluent		00530-1-0 Effluent		50050-1-0 Effluent		81017-1-0 Effluent	
	Twice per Month		Weekly Grab		Once per 2 Months		Continuous Recorder		Twice per Month	
	Monthly avg (lb/d)	Daily max. (lb/d)	Min. (SU)	Max. (SU)	Monthly avg (lb/d)	Daily max. (lb/d)	Monthly avg MGD	Daily max. MGD	Monthly avg (lb/d)	Daily max. (lb/d)
9/30/2025	< 100.9	< 139.9	7.6	7.9	< 293.7	< 931	3.03	3.68	< 581	< 728
8/31/2025	< 103.8	< 137	7.5	7.7	< 78	< 103	3.95	5.3	< 714	< 1354
7/31/2025	< 135	< 264	7	8	< 74.8	< 97	3.78	4.98	< 691	< 980
6/30/2025	< 94.8	< 115	7.4	7.9	< 70.9	< 86	3.49	5.61	< 807	< 1358
5/31/2025	< 132.2	< 227.2	7.2	7.9	< 79.8	< 101	3.38	5.03	< 862	< 1348
4/30/2025	< 132.7	< 299.4	7.3	7.9	< 127.5	< 283	3.09	3.26	< 527	< 544
3/31/2025	< 0	< 0	7.4	7.6	< 0	< 0	0	0	< 0	< 0
2/28/2025	< 98.9	< 145.4	7.4	7.7	< 110.7	< 169.8	3.06	5.22	< 547	< 731
1/31/2025	< 116.5	< 134	7.6	7.6	< 89.2	< 101	3.92	4.9	< 671	< 807
12/31/2024	< 136.2	< 203.6	7.7	7.9	< 88.8	< 98	3.91	5.05	< 710	< 783
11/30/2024	< 70.5	< 90	7.6	8	< 29	< 51.1	2.79	3.94	< 397	< 538
10/31/2024	< 116	< 164.3	8	8.3	< 81.7	< 172.4	3.5	4.26	< 437	< 661
9/30/2024	< 120.3	< 150.5	8	8.3	< 210.1	< 536.3	3.35	4.29	< 569	< 715
8/31/2024	< 156.6	< 339.8	7.3	8.3	< 87.2	< 135.3	3	4.63	< 525	< 732
7/31/2024	< 57.4	< 88	7.9	8.3	< 53.6	< 67.9	2.02	3.88	< 264	< 529
6/30/2024	< 78	< 103.7	8.1	8.2	< 55	< 72	2.19	3.81	< 423	< 579
5/31/2024	< 78	< 103.7	7.9	8.2	< 55	< 72	2.54	4.18	< 423	< 579
4/30/2024	< 78	< 103.7	8.1	8.2	< 55	< 72	1.71	2.22	< 423	< 579
3/31/2024	< 78	< 103.7	8.2	8.3	< 55	< 72	1.97	4.09	< 423	< 579
2/29/2024	< 78	< 103.7	8.1	8.2	< 55	< 72	2.43	4.4	< 423	< 579
1/31/2024	< 78	< 103.7	8.1	8.2	< 55	< 72	2.35	5.03	< 423	< 579
12/31/2023	< 78	< 103.7	7.5	8	< 55	< 72	1.86	2.9	< 423	< 579
11/30/2023	< 78	< 103.7	7	7.9	< 55	< 72	3.36	5.03	< 423	< 579
10/31/2023	< 78	< 103.7	7.4	8	< 55	< 72	2.49	5.12	< 423	< 579
9/30/2023	< 82	< 141.6	7.4	7.7	< 434	< 1550	2.12	3.04	< 375	< 470
8/31/2023	< 75	< 92.1	7.6	8	< 67	< 98	2.53	3.2	< 494	< 893
7/31/2023	< 83	< 95.5	7.6	7.8	< 62	< 88	2.7	4.34	< 453	< 528
6/30/2023	< 114	< 197.8	7.9	8.2	< 56	< 99	2.57	4.4	< 417	< 724
5/31/2023	< 85	< 114.8	7.7	8.4	< 53	< 62	2.75	3.2	< 419	< 498
4/30/2023	< 68	< 145	7	8	< 51	< 109	2.55	5.24	< 410	< 874
3/31/2023	< 82.5	< 127.3	6.8	7.6	< 68.4	< 88.9	2.39	3.04	< 410	< 469
2/28/2023	< 142.1	< 227.4	6.9	7.6	< 88.4	< 108	3.14	5.2	< 576	< 814
1/31/2023	129.1	< 171.3	7.4	7.8	< 76.4	< 89.4	2.69	4.1	< 421	< 473
12/31/2022	< 65.9	< 102	7.6	8	< 45.5	< 65.2	2.07	2.66	< 330	< 407
11/30/2022	158.1	< 248.4	7.8	8	< 143.5	< 344.7	3.2	5.22	< 588	< 817
10/31/2022	228.9	< 491	7.6	7.8	< 83.7	< 135.3	2.85	5.12	< 434	< 627
9/30/2022	129.3	< 206	7.9	8	90.9	100.7	2.56	4.69	< 592	< 1221
8/31/2022	219.1	< 663.8	7.8	8	< 266.4	< 848.4	3.33	4.88	< 539	< 755
7/31/2022	< 161.7	< 342.9	7.8	8	< 278.2	< 714.3	3.85	4.63	< 576	< 752
6/30/2022	< 142.5	< 187.1	7.7	8	301.5	418.3	4	4.71	< 728	< 766
5/31/2022	< 262.7	< 410	7.9	8.1	137.1	159.6	4.02	4.71	< 624	< 726
4/30/2022	< 377.9	< 1101.9	7.6	8.1	166.8	308.4	4	4.71	< 1260	< 3116
3/31/2022	< 140	< 169	7.9	8.1	< 193	267	5.1	6.84	< 863	< 1017
2/28/2022	< 178.8	253	7.8	8.1	176.7	250	4.72	7	< 873	1220
1/31/2022	< 194.4	< 409.8	7.5	8.1	140.9	158.5	4.79	7	< 731	< 815
12/31/2021	< 181.3	< 262.9	6.7	7.6	324.7	865.5	4.7	6.3	< 1037	< 1514
11/30/2021	< 105.6	< 130.4	7.1	7.8	< 113.9	< 192.8	3.91	6.06	< 580	< 671
10/31/2021	< 123.1	< 204.5	7.8	7.8	104.3	120	3.92	8.08	< 654	< 889
9/30/2021	< 155.1	< 284.3	7.7	8	< 204.7	< 478.8	4.35	6.22	< 895	< 1459
Min:	129.10	253.00	6.7	8.4	90.90	865.50	0.00	8.08	0.00	1220.00
Max:	228.90	253.00	8.2	8.4	324.70	865.50	5.10	8.08	0.00	1220.00
Count:	49.00	49.00	49.0	49.0	49.00	49.00	49.00	49.00	49.00	49.00
Average:	172.90	253.00	7.6	8.0	180.36	294.22	3.10	4.60	N/A	1220.00
Permit Limit:	1609.9	2942.1	6	9	1346	2747.5	Report	Report	3938.9	7322.6

External Outfall 001-T

LC50 Static 48Hr Acute Ceriodaphnia dubia							LC50 Static 48Hr Acute Pimephales promelas					
TAA3B-1-0 Effluent Gross							TAA6C-1-0 Effluent Gross					
Once per Permit Cycle Composite							Once per Permit Cycle Composite					
Monitoring Period End Date	Monthly average or total ()	Weekly avg or Daily max. ()	Monthly avg or Min. (%)	Weekly average or geo. mean (%)	Daily max. (%)	Percent exceedance	Monthly average or total ()	Weekly avg or Daily max. ()	Monthly avg or Min. (%)	Weekly average or geo. mean (%)	Daily max. (%)	Percent exceedance
8/31/2025			> 11.2						> 11.2			

Violations Report Summary

NPDES ID(s): TN0002259
 State: TN
 Major/Minor Indicator: Major
 Violation Date: 09/01/2021 -
 Violation Type(s):

Environmental Protection Agency Integrated Compliance Information System Violations Report

Created Date: 09/15/2010
 Refresh Date: 11/14/2025
 t Version 1.5, Modified: 1/4/2017

TN0002259

Permittee Name: Sontara Old Hickory, Inc.	Primary SIC Code: 2297	Permit Issued: 08/23/2021
Permittee Address: 326 Sw inging Bridge Road Old Hickory, TN 37138	Primary SIC Desc: Nonw oven Fabrics	Permit Effective: 09/01/2021
Major/Minor Indicator: Major	Primary NAICS: 313230	Permit Expired: 08/31/2025
Compliance Track. Status: On	Primary NAICS Desc: Nonw oven Fabric Mills	Permit Status: Admin Continued
DMR Non Receipt Flag: On	Cognizant Official: Lee Guthrie	
RNC Tracking Flag: On	Cognizant Offcl. Ph.: 615-526-2283	
	Receiving Body: Cumberland-Low er-Sycamore (Cheatham Lake)	

Facility Information

Facility Name: SONTARA OLD HICKORY F.K.A. E. I. DUPONT DE NEMOURS	County: Davidson Region: n4	FRS ID: 110000370544
Facility Location: 326 SWINGING BRIDGE ROAD OLD HICKORY, TN 37138	State-Region:	Federal Facility Type of Ownership: N Privately Ow ned Facility

Effluent Violations

Violation Code	Monitoring Period End Date	Limit Set	Parameter	Mon. Loc.	Seas. ID	SNC Group	EA Identifier	Value Type/ Stat. Base	Reported Value/Units	% Exceed.	Limit Value/Units	RNC Det. Code/ RNC Det. Date	RNC Res. Code/ RNC Res. Date
E90	10/31/2022	01A-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		Q1 MO AVG	151.6 lb/d	17%	<=129.4 lb/d		

APPENDIX 3 – METALS & TOXICS CALCULATIONS

The following procedure is used to calculate the allowable instream concentrations for pass-through guidelines and permit limitations:

- a) The most recent background conditions of the receiving stream segment are compiled. This information includes:
 - 1Q10 of receiving stream (1187.25 MGD, USGS)
 - Calcium hardness (90.58 mg/L, stream average background)
 - Total suspended solids (10.47 mg/L, stream average background)
 - Background metals concentrations (½ water quality criteria or stream average background)
 - Other dischargers impacting this segment (none)
 - Downstream water supplies, if applicable
- b) The chronic water quality criteria are converted from total recoverable metal at lab conditions to dissolved lab conditions for the following metals: cadmium, copper, trivalent chromium, lead, nickel, and zinc. Then translators are used to convert the dissolved lab conditions to total recoverable metal at ambient conditions.
- c) The acute water quality criteria are converted from total recoverable metal at lab conditions to dissolved lab conditions for the following metals: cadmium, copper, trivalent chromium, lead, nickel, zinc, and silver. Then translators are used to convert the dissolved lab conditions to total recoverable metal at ambient conditions for the following metals: cadmium, copper, lead, nickel, and silver.
- d) The resulting allowable trivalent and hexavalent chromium concentrations are compared with the effluent values characterized as total chromium on permit applications. If reported total chromium exceeds an allowable trivalent or hexavalent chromium value, then the calculated value will be applied in the permit for that form of chromium unless additional effluent characterization is received to demonstrate reasonable potential does not exist to violate the applicable state water quality criteria for chromium.
- e) A standard mass balance equation determines the total allowable concentration (permit limit) for each pollutant. This equation also includes a percent stream allocation of no more than 90%.

The following formulas are used to evaluate water quality protection:

$$C_m = \frac{Q_s C_s + Q_w C_w}{Q_s + Q_w}$$

Where:

C_m = resulting instream concentration after mixing
 C_w = concentration of pollutant in wastewater
 C_s = stream background concentration
 Q_w = wastewater flow
 Q_s = stream low flow

To protect water quality:

$$C_w \leq \frac{(S_A)[C_m(Q_s + Q_w) - Q_s C_s]}{Q_w}$$

Where: S_A = the percent "Stream Allocation"

Calculations for this permit have been done using a standardized spreadsheet, titled "Water Quality Based Effluent Calculations". Division policy dictates the following procedures in establishing these permit limits:

- 1) The critical low flow values are determined using USGS data:

Fish and Aquatic Life protection:

7Q10 – Low flow under natural conditions
 1Q10 – Regulated low flow conditions

Other than Fish and Aquatic Life protection:

30Q5 – Low flow under natural conditions

- 2) Fish and Aquatic Life water quality criteria for certain metals are developed through application of hardness dependent equations. These criteria are combined with dissolved fraction methodologies in order to formulate the final effluent concentrations.
- 3) For criteria that are hardness dependent, chronic and acute concentrations are based on a hardness of 25 mg/L and Total Suspended Solids (TSS) of 10 mg/L unless available ambient monitoring information substantiates a different value. Minimum and maximum limits on the hardness value used for water quality calculations are 25 mg/L and 400 mg/L respectively. The minimum limit on the TSS value used for water quality calculations is 10 mg/L.

- 4) Background concentrations are determined from the Division database, results of sampling obtained from the permittee, and/or obtained from nearby stream sampling data. If this background data is not sufficient, one-half of the chronic “In-stream Allowable” water quality criteria for fish and aquatic life is used. If the measured background concentration is greater than the chronic “In-stream Allowable” water quality criteria, then the measured background concentration is used in lieu of the chronic “In-stream Allowable” water quality criteria for the purpose of calculating the appropriate effluent limitation (C_w). Under these circumstances, and in the event the “stream allocation” is less than 100%, the calculated chronic effluent limitation for fish and aquatic life should be equal to the chronic “In-stream Allowable” water quality criteria. These guidelines should be strictly followed where the industrial source water is not the receiving stream. Where the industrial source water is the receiving stream, and the measured background concentration is greater than the chronic “In-stream Allowable” water quality criteria, consideration may be given as to the degree to which the permittee should be required to meet the requirements of the water quality criteria in view of the nature and characteristics of the receiving stream.

The spreadsheet has 15 data columns, all of which may not be applicable to any particular characteristic constituent of the discharge. A description of each column is as follows:

Column 1: The “stream background” concentrations of the effluent characteristics.

Column 2: The “chronic” Fish and Aquatic Life water quality criteria. For cadmium, copper, trivalent chromium, lead, nickel, and zinc, this value represents the criteria for the dissolved form at laboratory conditions. The Criteria Continuous Concentration (CCC) is calculated using the equation:

$$CCC = (\exp\{m_c[\ln(\text{stream hardness})] + b_c\}) * (CCF)$$

CCF = Chronic Conversion Factor

This equation and the appropriate coefficients for each metal are from Tennessee Rule [0400-40-03-.03](#) and the EPA guidance contained in *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996). Values for other metals are in the total form and are not hardness dependent; no chronic criterion exists for silver. Published criteria are used for non-metal parameters.

Column 3: The “Acute” Fish and Aquatic Life water quality criteria. For cadmium, copper, trivalent chromium, lead, nickel, silver, and zinc, this value represents the

criteria for the dissolved form at laboratory conditions. The Criteria Maximum Concentration (CMC) is calculated using the equation:

$$CMC = (\exp\{m_A[\ln(\text{stream hardness})] + b_A\}) * (ACF)$$

ACF = Acute Conversion Factor

This equation and the appropriate coefficients for each metal are from Tennessee Rule 0400-40-03-.03 and the EPA guidance contained in *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996). Values for other metals are in the total form and are not hardness dependent. Published criteria are used for non-metal parameters.

Column 4: The "Fraction Dissolved" converts the value for dissolved metal at laboratory conditions (columns 2 & 3) to total recoverable metal at in-stream ambient conditions (columns 5 & 6). This factor is calculated using the linear partition coefficients found in *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007, June 1996) and the equation:

$$\frac{C_{\text{diss}}}{C_{\text{total}}} = \frac{1}{1 + \{[K_{\text{po}}][SS^{(1+a)}][10^{-6}]\}}$$

ss = in-stream suspended solids concentration (mg/L)

Linear partition coefficients for streams are used for unregulated (7Q10) receiving waters, and linear partition coefficients for lakes are used for regulated (1Q10) receiving waters. For those parameters not in the dissolved form in columns 2 & 3 (and all non-metal parameters), a Translator of 1 is used.

Column 5: The "Chronic" Fish and Aquatic Life water quality criteria at in-stream ambient conditions. This criteria is calculated by dividing the value in column 2 by the value in column 4.

Column 6: The "Acute" Fish and Aquatic Life water quality criteria at in-stream ambient conditions. This criteria is calculated by dividing the value in column 3 by the value in column 4.

Column 7: The "Chronic" Calculated Effluent Concentration for the protection of fish and aquatic life. *This is the chronic limit.*

- Column 8:** The "Acute" Calculated Effluent Concentration for the protection of fish and aquatic life. *This is the acute limit.*
- Column 9:** The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Organism Consumption (Recreation).
- Column 10:** The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Water and Organism Consumption. These criteria are only to be applied when the stream use classification for the receiving stream includes both "Recreation" and "Domestic Water Supply".
- Column 11:** The In-Stream Water Quality criteria for the protection of Human Health associated with the stream use classification of Domestic Water Supply.
- Column 12:** The Calculated Effluent Concentration associated with Organism Consumption.
- Column 13:** The Calculated Effluent Concentration associated with Water and Organism Consumption.
- Column 14:** The Calculated Effluent Concentration associated with Domestic Water Supply.
- Column 15:** The Effluent Limited criteria. This upper level of allowable pollutant loading is established if (a) the calculated water quality value is greater than accepted removal efficiency values, (b) the treatment facility is properly operated, *and* (c) full compliance with the pretreatment program is demonstrated. This upper level limit is based upon EPA's 40 POTW Survey on levels of metals that should be discharged from a POTW with a properly enforced pretreatment program and considering normal coincidental removals.

The most stringent water quality effluent concentration from Columns 7, 8, 12, 13, 14, and 15 is applied if the receiving stream is designated for domestic water supply. Otherwise, the most stringent effluent concentration is chosen from columns 7, 8, 12, and 15 only.

Water Quality Based Effluent Calculations:

2019 WQC

WATER QUALITY CALCULATIONS FOR METALS AND OTHER TOXIC SUBSTANCES			
WATER QUALITY BASED EFFLUENT CALCULATIONS			
OUTFALL 001			
FACILITY:	PERMIT #:	DATE:	CALC BY:
Glatfelter Sontara	TN0002259	4/15/2025	T. Swaney

regulated stream worksheet (1Q10)

Stream (1Q10)	Stream (30Q5)	Waste Flow	Ttl. Susp. Solids	Hardness (as CaCO3)	Margin of Safety
[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
1,187.25	3,079.17	8.57	10.471	90.58	50

PARAMETER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Reported Application
	Stream	Fish/Aqua. Life (F & AL) WQC			F & AL- instream allowable			Calc. Effluent Concentration		Human Health Water Quality Criteria *					
	Bckgrmd.	lab conditions		Fraction	ambient conditions (Tot)		based on F & AL		In-Stream Criteria			Calc. Effluent Concentration **			
	Conc.	Chronic	Acute	Dissolved	Chronic	Acute	Chronic	Acute	Orgs	Water/Orgs	DWS	Orgs	Water/Orgs	DWS	
[ug/l]	[ug/l]	[ug/l]	[Fraction]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/L]
Copper (a,b)	0.778	8.230	12.243	0.217	37.894	56.373	2590.35	3879.82	N/A	N/A	N/A	N/A	N/A	N/A	<10
Chromium III	34.173	68.346	525.417	0.076	899.420	6914.391	60394.65	480123.58	N/A	N/A	N/A	N/A	N/A	N/A	NA
Chromium VI	5.500	11.000	16.000	1.000	11.000	16.000	386.54	735.45	N/A	N/A	N/A	N/A	N/A	N/A	NA
Chromium, Total	1.436	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100.0	N/A	N/A	17760.08	<10
Nickel (a,b)	1.137	47.831	430.640	0.204	234.529	2111.561	16286.84	147267.44	4600.0	610.0	100.0	828628.53	109706.14	17813.81	<10
Cadmium (a,b)	0.106	0.667	1.642	0.192	3.469	8.542	234.71	588.72	N/A	N/A	5.0	N/A	N/A	881.86	<2
Lead (a,b)	0.291	2.259	57.977	0.143	15.768	404.637	1080.15	28215.68	N/A	N/A	5.0	N/A	N/A	848.62	<5
Mercury (T) (c)	0.037	0.770	1.400	1.000	0.770	1.400	51.17	95.13	0.051	0.05	2.0	2.54	2.36	353.71	<0.2
Silver (a,b,e)	1.357	N/A	2.713	1.000	NA	2.713	N/A	95.35	N/A	N/A	N/A	N/A	N/A	N/A	<5
Zinc (a,b)	2.937	108.639	107.758	0.123	880.170	873.029	61215.43	60717.10	26000.0	7400.0	N/A	4684179.57	1332812.05	N/A	<50
Cyanide (d)	2.600	5.200	22.000	1.000	5.200	22.000	182.73	1355.05	140.0	140.0	200.0	24758.18	24758.18	35569.04	<5
Toluene	500.000								15000.0	1300.0	1000.0	2612875.22	144394.84	90340.52	<1
Benzene	2.500								510.0	22.0	5.0	91443.13	3514.78	451.70	<1
1,1,1-trichloroethane	100.000								N/A	N/A	200.0	N/A	N/A	18068.10	<1
Ethylbenzene	265.000								2100.0	530.0	700.0	330764.73	47880.48	78511.26	<1
Carbon Tetrachloride	1.150								16.0	2.3	5.0	2676.26	207.78	694.27	<1
Chloroform	28.500								4700.0	57.0	N/A	841730.02	5149.41	N/A	10.6
Tetrachloroethylene	2.500								33.0	6.9	5.0	5496.77	794.05	451.70	<1
Trichloroethylene	2.500								300.0	25.0	5.0	53605.11	4055.32	451.70	<1
trans-1,2-dichloroethylene	50.000								10000.0	140.0	100.0	N/A	16241.29	9034.05	<1
Methylene chloride	2.500								5900.0	46.0	5.0	1062618.99	7839.13	N/A	<2.5
Total phenols	5000.000								860000.0	10000.0	N/A	154057297.56	903405.25	N/A	<10
Naphthalene	0.000								N/A	N/A	N/A	N/A	N/A	N/A	<1
Total phthalates	0.000								N/A	N/A	N/A	N/A	N/A	N/A	<3
Chlorine (T. Res.)	5.500	11.000	19.000	1.000	11.000	19.000	773.09	1889.58	N/A	N/A	N/A	N/A	N/A	N/A	<100

- a Denotes metals for which Fish & Aquatic Life Criteria are expressed as a function of total hardness.
- b The criteria for this metal is in the dissolved form at lab conditions. The calculated effluent concentration is in the total recoverable form.
- c The chronic criteria for mercury is not converted to dissolved, since it is based on fish tissue data rather than toxicity.
- d The criteria for this parameter is in the total form.
- e Silver limit is daily max if column 8 is most stringent.
- f When columns 7 or 8 result in a negative number, use results from columns 5 or 6, respectively.
- g When columns 12, 13 or 14 result in a negative number, use results from columns 9, 10 or 11, respectively, as applicable.

* Domestic supply included in river use so pick from columns 7,8,12,13,14,15 or Domestic supply not included in river use so pick from columns 7, 8, 12 or 15.
** Water Quality criteria for stream use classifications other than Fish & Aquatic Life are based on the 30Q5 flow.

WATER QUALITY BASED EFFLUENT CALCULATIONS OUTFALL 001 FACILITY: Glatfelter Sontara PERMIT: TN0002259 DATE: 11/14/2025																
2019 WQC	Stream (1Q10)	Stream (30Q5)	Waste Flow	Ttl. Susp. Solids	Hardness (as CaCO3)	Margin of Safety										
	[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]										
	1187.25	3079.17	8.57	10.471	90.58	50										
PARAMETER	Stream Bckgrnd. Conc.	Detection Levels		Fish/Aqua. Life Water Quality Criteria		Calculated Effluent Concentration		Human Health Water Quality Criteria (30Q5)						Application Reported effluent		
		Scan	WQC RDL	Chronic	Acute	Chronic	Acute	In-Stream Criteria		Calculated Effluent Concentration						
	[µg/l]	[µg/l]	*EPA MDL	[µg/l]	[µg/l]	[µg/l]	[µg/l]	Organisms	Water/Org	DWS	Organisms	Water/Org	DWS	ug/l		
Antimony	2.8	3.8	3.0													
Arsenic	0.755	1.0	1.0	150.0	340.0	10414.8	23673.1	10.0	10.0	10.0	1666.2	1666.2	1666.2	<10		
Beryllium		2.0	1.0							4.0				720.7		
Selenium (f)	0.627	5.0	2.0	1.5	3.1	20.0	61.2	172.9	1352.2	4200.0	170.0	50.0	756647.7	30518.1	8896.4	<10
Thallium		5.0	*							0.47	0.24	2.0	84.7	43.2	360.4	<10
Acrolein	0.0	50.0	1.0	3.000	3.000	209.3	209.3	9.0	6.0		1621.6	1081.1				<50
Acrylonitrile	0.0	50.0	1.0					2.5	0.51		450.5	91.9				<10
Benzene	0.0	1.0	1.0					510.0	22.0	5.0	91892.3	3964.0		900.9		<1
Bromoform	0.0	1.0	1.0					1400.0	43.0		252253.5	7747.8				<1
Carbon tetrachloride	0.0	1.0	1.0					16.0	2.3	5.0	2882.9	414.4		900.9		<1
Chlorobenzene	0.0	1.0	*					1600.0	130.0	100.0	288289.7	23423.5		18018.1		<1
Chlorodibromomethane	0.0	1.0	*					130.0	4.0		23423.5	720.7				1.1
Chloroethane	0.0	1.0	*													<5
2-chloroethylvinyl ether	0.0	1.0	*													<50
Chloroform	0.0	5.0	0.5					4700.0	57.0		846850.9	10270.3				10.6
Dichlorobromomethane	0.0	1.0	1.0					170.0	5.5		30630.8	991.0				<1
1,1-dichloroethane	0.0	1.0	1.0					NA	NA	NA	NA	NA	NA	NA		<1
1,2-dichloroethane	0.0	1.0	1.0					370.0	3.8	5.0	66667.0	684.7		900.9		<1
1,1-dichloroethylene	0.0	1.0	1.0					7100.0	300.0	7.0	1279285.5	54054.3		1261.3		<1
1,2-dichloropropane	0.0	1.0	*					150.0	5.0	5.0	27027.2	900.9		900.9		<1
1,3-dichloropropylene	0.0	1.0	1.0					210.0	3.4		37838.0	612.6				<1
Ethylbenzene	0.0	1.0	1.0					2100.0	530.0	700.0	378380.2	95496.0		126126.7		<1
Methyl bromide	0.0	1.0	*					1500.0	47.0		270271.6	8468.5				<5
Methyl chloride	0.0	1.0	1.0													<2.5
Methylene chloride	0.0	5.0	1.0					5900.0	46.0	5.0	1063068.2	8288.3		900.9		<5
1,1,2,2-tetrachloroethane	0.0	1.0	0.5					40.0	1.7		7207.2	306.3				<1
Tetrachloroethylene	0.0	1.0	0.5					33.0	6.9	5.0	5946.0	1243.2		900.9		<1
Toluene	0.0	1.0	1.0					15000.0	1300.0	1000.0	2702715.7	234235.4		180181.0		<1
1,2-trans-dichloroethylene	0.0	1.0	*					10000.0	140.0	100.0	1801810.5	25225.3		18018.1		<1
1,1,1-trichloroethane	0.0	1.0	1.0							200.0					36036.2	<1
1,1,2-trichloroethane	0.0	1.0	0.2					160.0	5.9	5.0	28829.0	1063.1		900.9		<1
Trichloroethylene	0.0	1.0	1.0					300.0	25.0	5.0	54054.3	4504.5		900.9		<1
Vinyl chloride	0.0	1.0	2.0					24.0	0.3	2.0	4324.3	45.0		360.4		<1
2-chlorophenol	0.0	10.0	*					150.0	81.0		27027.2	14594.7				<10
2,4-dichlorophenol	0.0	10.0	*					290.0	77.0		52252.5	13873.9				<1
2,4-dimethylphenol	0.0	10.0	*					850.0	380.0		153153.9	68468.8				<10
4,6-dinitro-o-cresol	0.0	10.0	24.0					280.0	13.0		50450.7	2342.4				<10
2,4-dinitrophenol	0.0	10.0	42.0					5300.0	69.0		954959.6	12432.5				<10
2-nitrophenol	0.0	10.0	*													<10
4-nitrophenol	0.0	10.0	*													<10
p-chloro-m-cresol	0.0	10.0	*													<10
Pentachlorophenol	0.0	10.0	5.0	15.000	19.000	1046.711	1325.8	30.0	2.7	1.0	5405.4	486.5		180.2		<1
Phenol	0.0	10.0	*					860000.0	10000.0		154955702.8	1801810.5				<1
2,4,6-trichlorophenol	0.0	10.0	2.7					24.0	14.0		4324.3	2522.5				<1

Acenaphthene	0.0	10.0	*				990.0	670.0		178379.2	120721.3		<1
Acenaphthylene	0.0	10.0	2.3										<1
Anthracene	0.0	10.0	0.7				40000.0	8300.0		7207242.0	1495502.7		<1
Benzidine	0.0	50.0	*				0.002	0.00086		0.4	0.2		<20
Benzo (a) anthracene	0.0	10.0	0.3				0.18	0.038		32.4	6.8		<1
Benzo (a) pyrene	0.0	10.0	0.3				0.18	0.038	0.2	32.4	6.8	36.0	<1
3,4-benzofluoranthene	0.0	10.0	0.3				0.18	0.038		32.4	6.8		<1
Benzo (ghi) perylene	0.0	10.0	*										<1
Benzo (k) fluoranthene	0.0	10.0	0.3				0.18	0.038		32.4	6.8		<1
Bis (2-chloroethoxy) methane	0.0	10.0	*										<1
Bis (2-chloroethyl) ether	0.0	10.0	1.0				5.3	0.30		955.0	54.1		<10
Bis (2-chloroisopropyl) ether	0.0	10.0	*				65000.0	1400.0		11711768.2	252253.5		<10
Bis (2-ethylhexyl) phthalate	0.0	10.0	2.5				22.0	12.0	6.0	3964.0	2162.2	1081.1	<3
4-bromophenyl phenyl ether	0.0	10.0	*										<10
Butyl benzyl phthalate	0.0	10.0	*				1900.0	1500.0		342344.0	270271.6		<3
2-chloronaphthalene	0.0	10.0	*				1600.0	1000.0		288289.7	180181.0		<1
4-chlorophenyl phenyl ether	0.0	10.0	*										<10
Chrysene	0.0	10.0	2.5				0.18	0.038		32.4	6.8		<1
Dibenzo (a,h) anthracene	0.0	10.0	*				0.18	0.038		32.4	6.8		<1
1,2-dichlorobenzene	0.0	1.0	2.0				1300.0	420.0		234235.4	75676.0		<1
1,3-dichlorobenzene	0.0	5.0	2.0				960.0	320.0		172973.8	57657.9		<1
1,4-dichlorobenzene	0.0	5.0	2.0				190.0	63.0		34234.4	11351.4		<1
3,3-dichlorobenzidine	0.0	10.0	*				0.28	0.21		50.5	37.8		<10
Diethyl phthalate	0.0	10.0	1.9				44000.0	17000.0		7927966.2	3063077.8		<3
Dimethyl phthalate	0.0	10.0	1.6				110000.0	27000.0		198199154.8	48648883.4		<3
Di-n-butyl phthalate (84-74-2)	0.0	10.0					4500.0	2000.0		810814.7	360362.1		<3
2,4-dinitrotoluene	0.0	10.0	1.0				34.0	1.1		6126.2	198.2		<10
2,6-dinitrotoluene	0.0	10.0	*										<10
Di-n-octyl phthalate (117-84-0)	0.0	10.0	*										<3
1,2-diphenylhydrazine (as azobenzene)	0.0	10.0	*				2.0	0.36		360.4	64.9		<10
Fluoranthene	0.0	10.0	2.2				140.0	130.0		25225.3	23423.5		<1
Fluorene	0.0	10.0	0.3				5300.0	1100.0		954959.6	198199.2		<1
Hexachlorobenzene	0.0	10.0	1.9				0.0029	0.0028	1.0	0.5	0.5	180.2	<1
Hexachlorobutadiene	0.0	10.0	5.0				180.0	4.4		32432.6	792.8		<10
Hexachlorocyclopentadiene	0.0	10.0	*				1100.0	40.0	50.0	198199.2	7207.2	9009.1	<10
Hexachloroethane	0.0	10.0	0.5				33.0	14.0		5946.0	2522.5		<10
Indeno (1,2,3-cd) pyrene	0.0	10.0	*				0.18	0.038		32.4	6.8		<1
Isophorone	0.0	10.0	*				9600.0	350.0		1729738.1	63063.4		<10
Naphthalene	0.0	10.0	*										<1
Nitrobenzene	0.0	10.0	10.0				690.0	17.0		124324.9	3063.1		<10
N-nitrosodimethylamine	0.0	10.0	*				30.0	0.0069		5405.4	1.2		<10
N-nitrosodi-n-propylamine	0.0	10.0	*				5.1	0.05		918.9	9.0		<10
N-nitrosodiphenylamine	0.0	10.0	*				60.0	33.0		10810.9	5946.0		<10
Phenanthrene	0.0	10.0	0.7										<1
Pyrene	0.0	10.0	0.3				4000.0	830.0		720724.2	149550.3		<1
1,2,4-trichlorobenzene	0.0		*				70.0	35.0	70.0	12612.7	6306.3	12612.7	<10

- a. Columns 7-8, and 12-14 are the effluent concentrations allowable to prevent exceedence of water quality criteria.
- b. Potential to exceed criteria exists if the measured quantity in column 15 exceeds, or could exceed, the calculated allowable concentrations in columns 7-8, and 12-14.
- c. Additional testing is required if the detection level used in the scan is higher than the state RDL and/or the MDL of the approved EPA scan method and industry is known to have that pollutant.
- d. All background concentrations for these volatile organic, acid-extractable, and base-neutral compounds are assumed zero in the absence of supporting monitoring data.
- e. Other metals for which data were provided on the application are evaluated on the Metals & Toxics spreadsheet.
- f. **The Water Quality Criteria CCC Value for Selenium is 1.5 µg/l (lotic - Still water aquatic ecosystems such as ponds, lakes, or reservoirs) and 3.1 µg/l (lotic - Flowing water aquatic ecosystems such as streams and rivers).**

Reasonable potential does not exist for the following reason(s):

APPENDIX 4 – APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

OUTFALL 01A

TITLE 40-PROTECTION OF ENVIRONMENT
CHAPTER I-ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 414-ORGANIC CHEMICALS, PLASTICS, AND SYNTHETIC FIBERS--Table of Contents

Subpart C-Other Fibers

Sec. 414.31

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

Except as provided in 40 CFR 125.30 through 125.32, and in 40 CFR 414.11(i) for point sources with production in two or more subcategories, any existing point source subject to this subpart must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart times the concentration listed in the following table.

	BPT effluent limitations \1\	
Effluent characteristics	Maximum for any one day	Maximum for monthly average
BOD5.....	48	18
TSS.....	115	36
pH.....	(\2\)	(\2\)

\1\ All units except pH are milligrams per liter.

\2\ Within the range of 6.0 to 9.0 at all times.

[52 FR 42568, Nov. 5, 1987, as amended at 57 FR 41844, Sept. 11, 1992

OUTFALLS 01A & 01B

TITLE 40--PROTECTION OF ENVIRONMENT
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 430--THE PULP, PAPER, AND PAPERBOARD POINT SOURCE CATEGORY--Table of Contents

Subpart L--Tissue, Filter, Non-Woven, and Paperboard from Purchased Pulp Subcategory

Sec. 430.122 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT), except that non-continuous dischargers shall not be subject to the maximum day and average of 30 consecutive days limitations but shall be subject to annual average effluent limitations:

Subpart L

[BPT effluent limitations for non-integrated mills where filter and non-woven papers are produced from purchased pulp]

Pollutant or pollutant property	Kg/kkg (or pounds per 1,000 lb) of product		
	Continuous dischargers		
	Maximum for any 1 day	Average of daily values for 30 consecutive days	Non-continuous dischargers (annual average)
BOD5.....	29.6	16.3	9.1
TSS.....	26.6	13.0	7.4
pH.....	(1\)	(1\)	(1\)

1\ Within the range of 5.0 to 9.0 at all times.

OUTFALL 01B

TITLE 40-PROTECTION OF ENVIRONMENT
CHAPTER I-ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 410-TEXTILE MILLS POINT SOURCE CATEGORY--Table of Contents

Subpart H-Nonwoven Manufacturing Subcategory

Sec. 410.82

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

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

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5.....	4.4	2.2
COD.....	40.0	20.0
TSS.....	6.2	3.1
Sulfide.....	0.046	0.023
Phenol.....	0.023	0.011
Total chromium.....	0.023	0.011
pH.....	(1\1)	(1\1)

\1\ Within the range 6.0 to 9.0 at all times.

40 CFR EFFLUENT GUIDELINES: Parts 414, 410, & 430

414 - Organic Chemicals, Plastics, and Synthetic Fibers

430 - Pulp, Paper, and Paperboard

410 - Textile Mills Point Source Category

EFFLUENT CHARACTERISTIC	414.31 SUBPART C - Other Fibers				430.122 SUBPART L - Tissue, Filter, Non-Woven, and Paperboard from Purchased Pulp				410.82 SUBPART H - Nonwoven Manufacturing Subcategory			
	BPT		BAT		BPT		BAT		BPT		BAT	
	§414.31		§414.31		§430.122		§430.122		§410.82		§410.82	
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE*	DAILY MAXIMUM*	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
(mg/L)	(mg/L)	(mg/L)	(mg/L)	(lb/1000 lb)	(lb/1000 lb)	(mg/L)	(mg/L)	(lb/1000 lb *)	(lb/1000 lb *)	(lb/1000 lb *)	(lb/1000 lb *)	
BOD5	18	48	--	--	16.3	29.6	--	--	2.2	4.4	--	--
COD									20	40.0	--	--
TSS	36	115	--	--	13	26.6	--	--	3.1	6.2	--	--
Sulfide							--	--	0.023	0.046	--	--
Phenol									0.011	0.023	--	--
Total Chromium									0.011	0.023	--	--
pH	Range 6.0 - 9.0		--	--	Range 5.0 - 9.0		--	--	Range 6.0 - 9.0		--	--

*ELG for Continuous Discharger

IMP 01A - Flow Allocation Table: Typical Hydraulic Load

Applicable ELGs: 414.31 Subpart C and 430.122 Subpart L

	SUBPART C	SUBPART L	
Long-Term Average Flow *			
[MGD]	67.2	14.9	%
0.704	0.473	0.105	MGD

*Based on the flow diagram submitted on 02/2025

CFR 443.31 and 430.122-BASED EFFLUENT LIMITS CALCULATIONS FOR BOD5 and TSS			
MONTHLY			
	Fiberweb-Subpart C	Sontara-BPJ Subpart L	TOTAL
EFFLUENT CHARACTERISTIC	AVG. AMNT.	AVG. AMNT.	AVG. AMNT.
	(lb/day)	(lb/day)	(lb/day)
BOD5	71.0	55.1	126.1
TSS	142.0	43.0	185.0

DAILY			
	SUBPART C	Sontara-BPJ Subpart L	TOTAL
EFFLUENT CHARACTERISTIC	MAX AMNT.	MAX AMNT.	MAX. AMT.
	(lb/day)	(lb/day)	(lb/day)
BOD5	189.3	98.0	287.3
TSS	453.6	88.1	541.7

IMP 01A example calculation for Subpart C:

Flow allocation for SUBPART C: 67.2 % of 0.704 MGD = 0.473 MGD

Loading for SUBPART C = 18 mg/L * 8.34 * 0.473 MGD = **71 lb/day of BOD (monthly avg.)**

IMP 01A example calculation for Subpart L:

IMP 01A discharges 0.10476 MGD of SL-1/SL-2

Based on 77,700 lbs/day of paper used (2024 production) & IMP 01A of SL-1/SL-2	In 1000 lbs.	Flow (MGD)	Percent
	77.0	2.437	100%
	3.3	0.10476	4.3%

Total Production-based Loading = ELG Pollutant Allocation * Reported Production Rate

BOD5 **Monthly Average**: 16.3 lb BOD5/1000lb * 77,000 lb/day = 1,255.1 lb/day of BOD (monthly average)

Total Loading to IMP 01A = Total Production-based Loading x 4.3%

BOD5 **Monthly Average**: 1255.1 lb BOD5/day * 4.3% = **55.13 lb/day of BOD (monthly avg)**

Note: SL-1 and SL-2 represent "Lines 1 and 2" for Glatfelter Sontara on the flow diagram. See Appendix 5 for flow diagram.

IMP 01B - Flow Allocation Table: Typical Hydraulic Load
Applicable ELGs: 430.122 Subpart L and 410.82 Subpart H

CFR 443.31 and 430.122-BASED EFFLUENT LIMITS CALCULATIONS			
MONTHLY			
EFFLUENT CHARACTERISTIC	Subpart L	Subpart H	TOTAL
	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)	AVG. AMNT. (lb/day)
BOD5	1172.4	101.4	1273.8
COD	2344.8	922.0	3266.8
TSS	957.0	142.9	1099.9
Sulfide	-	1.1	1.1
Phenols	-	0.5	0.5
Chromium (Total)	-	0.5	0.5

DAILY			
EFFLUENT CHARACTERISTIC	Subpart L	Subpart H	TOTAL
	MAX. AMNT. (lb/day)	MAX. AMNT. (lb/day)	MAX. AMT. (lb/day)
BOD5	2181.1	202.8	2383.9
COD	4362.2	1844.0	6206.2
TSS	1960.1	285.8	2245.9
Sulfide	-	2.1	2.1
Phenols	-	1.1	1.1
Chromium (Total)	-	1.1	1.1

IMP 01B example calculation for Subpart H:

IMP 01B discharges 2.3325 MGD of SL-1/SL-2

<u>Based on 77,700 lbs/day of paper used</u>	<u>In 1000 lbs. 77.0</u>	<u>Flow (MGD) 2.437</u>	<u>Percent 100%</u>
IMP 01B of SL-1/SL-2*	73.7	2.3325	95.7%

Total Production-based Loading = ELG Pollutant Allocation * Reported Production Rate
BOD5 **Monthly Average**: 16.3 lb BOD5/1000lb * 77,000 lb/day = 1,255.1 lb/day of BOD (monthly average)

Total Loading to IMP 01B = Total Production-based Loading x 95.7%
BOD5 **Monthly Average**: 1225.1 lb BOD5/day * 95.7% = **1172.42 lb/day of BOD (monthly average) for IMP 01B**

*4.3% of Lines 1 and 2 is routed to IMP 01A

IMP 01B example calculation for Subpart L (BOD & TSS):

<u>Based on 46,100 lbs/day of product (2025 production)</u>	<u>In 1000 lbs. 46.1</u>	<u>Percent production 100%</u>
---	------------------------------	------------------------------------

IMP 01B example calculation for Monthly Average BOD5 limitation:

Total Production-based Loading = ELG Pollutant Allocation * Reported Production Rate
BOD5 **Monthly Average Example**: 2.2 lb BOD5/1000lb * 46,100 lb/day = 101.42 lb/day of BOD (monthly Average)

IMP 01B example calculation for Subpart L (COD):

COD **Monthly Average Example**: 2 x BOD Monthly Average for Subpart L
COD **Monthly Average Example**: 2 x 1172.4 lb/day = 2344.8 lb/day for COD Subpart L

Note: SL-1 and SL-2 represent "Lines 1 and 2" for Glatfelter Sontara on the flow diagram. See Appendix 5 for flow diagram.

APPENDIX 5 – FACILITY DISCHARGES AND LOW FLOW DETERMINATION

FACILITY DISCHARGES AND RECEIVING WATERS																					
<table border="1"> <thead> <tr> <th colspan="2">IMP01A</th> </tr> <tr> <th>LONGITUDE</th> <th>LATITUDE</th> </tr> </thead> <tbody> <tr> <td>36-16-34</td> <td>-86-39-21</td> </tr> </tbody> </table>		IMP01A		LONGITUDE	LATITUDE	36-16-34	-86-39-21														
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* Reference: IMP - Internal Monitoring Point																					

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Program SWStat U.S. GEOLOGICAL SURVEY Seq 00002
Ver. 5.0 Log-Pearson & Pearson Type III Statistics Run Date / Time
03/13/2018 based on USGS Program A193 5/19/2025 11:14 AM

Notice -- Log-Pearson Type III or Pearson Type III distributions are used for these computations. Users are responsible for assessment and interpretation.

Description: 03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TW), TN
Year Boundaries: April 1 - March 31
Period in report: April 1, 1976 - March 31, 2007
Parameter: 7-day low
Non-zero values: 31
Zero values: 0
Negative values: 0 (ignored)

Input time series (zero and negative values not included in listing.)

2941.400	3128.600	3705.700	9562.900	2714.300	4332.900	7191.400	4512.900
3338.600	5231.400	4951.400	4314.300	2824.300	5614.300	5035.700	4431.400
5484.300	4720.000	4947.100	6711.400	6435.700	4751.400	5115.700	4254.300
4082.900	4740.000	5245.700	7784.300	9307.100	4501.400	4550.000	

LOG PEARSON TYPE III Frequency Curve Parameters
(based on logs of the non-zero values)

Mean (logs)	3.682
Variance (logs)	0.018
Standard Deviation (logs)	0.135
Skewness (logs)	0.289
Standard Error of Skewness (logs)	0.421
Serial Correlation Coefficient (logs)	0.049
Coefficient of Variation (logs)	0.037

Frequency Curve - Parameter values at selected probabilities

Non-exceedance Probability	Recurrence Interval	Parameter Value	Variance of Estimate	95-Pct Confidence Intervals	
				Lower	Upper
0.1000	10.00	3269.300	1.004	2760.900	3684.100
0.2000	5.00	3694.100	1.015	3239.600	4152.400

Program SWStat U.S. GEOLOGICAL SURVEY Seq 00003
Ver. 5.0 Log-Pearson & Pearson Type III Statistics Run Date / Time
03/13/2018 based on USGS Program A193 5/19/2025 11:14 AM

Notice -- Log-Pearson Type III or Pearson Type III distributions are used for these computations. Users are responsible for assessment and interpretation.

Description: 03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TW), TN
Year Boundaries: April 1 - March 31
Period in report: April 1, 1976 - March 31, 2007
Parameter: 30-day low
Non-zero values: 31
Zero values: 0
Negative values: 0 (ignored)

Input time series (zero and negative values not included in listing.)

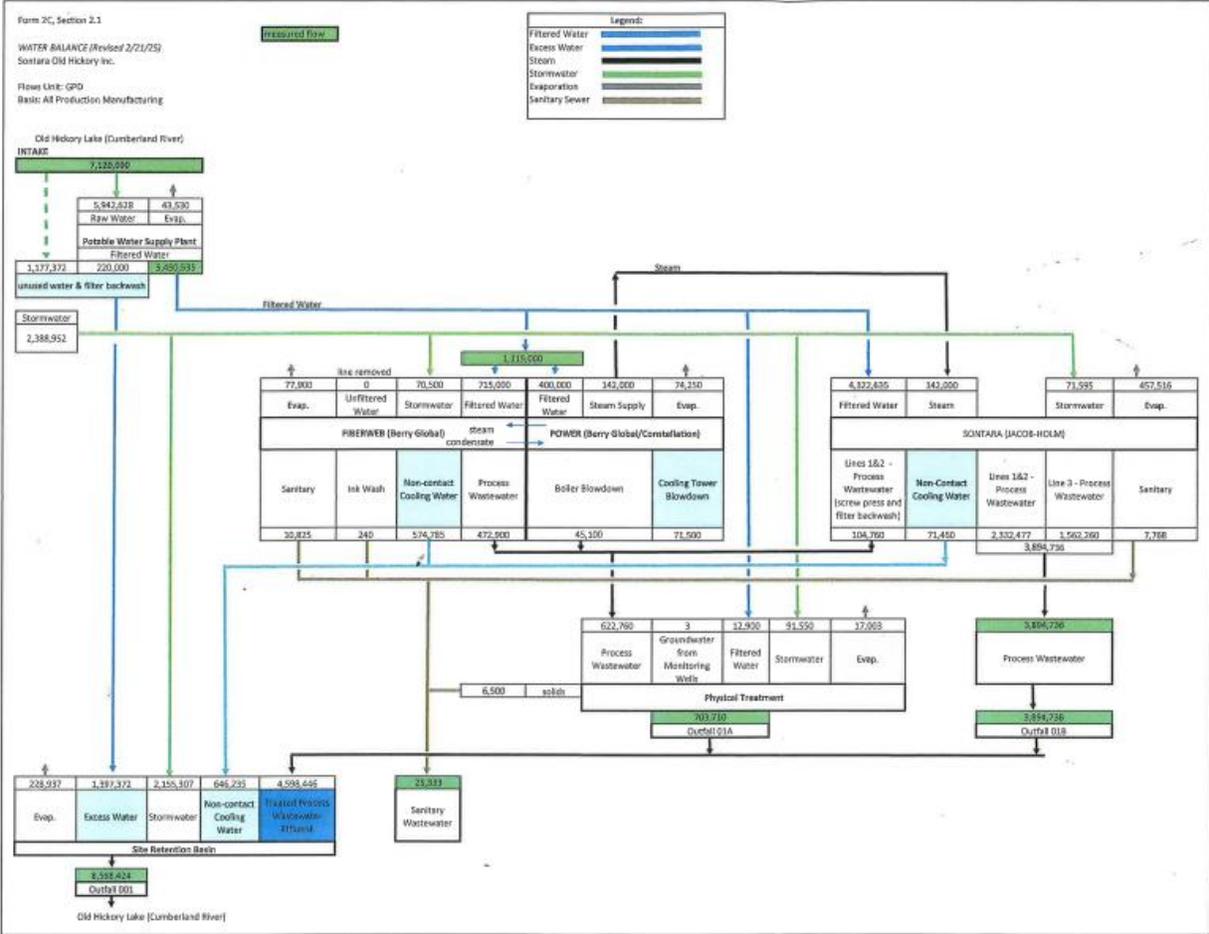
5145.300	6220.300	4913.300	12902.000	3297.700	7500.000	9969.000	5946.000
4865.000	5949.700	6204.000	5104.300	3298.000	12964.000	6020.300	5269.700
6817.300	6066.700	6438.000	8079.000	8455.300	6525.700	6594.300	4870.000
5029.300	5446.700	6737.700	13271.000	14977.000	4686.300	7535.000	

LOG PEARSON TYPE III Frequency Curve Parameters
(based on logs of the non-zero values)

Mean (logs)	3.815
Variance (logs)	0.025
Standard Deviation (logs)	0.160
Skewness (logs)	0.619
Standard Error of Skewness (logs)	0.421
Serial Correlation Coefficient (logs)	-0.132
Coefficient of Variation (logs)	0.042

Frequency Curve - Parameter values at selected probabilities

Non-exceedance Probability	Recurrence Interval	Parameter Value	Variance of Estimate	95-Pct Confidence Intervals	
				Lower	Upper
0.1000	10.00	4204.500	1.009	3538.200	4755.900
0.2000	5.00	4764.300	1.031	4164.700	5440.200



APPENDIX 6 – NEW PERMIT LIMITS

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00400	pH	<=	9	SU	Grab	Weekly	Maximum
00400	pH	>=	6	SU	Grab	Weekly	Daily Minimum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Monthly Average
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Monthly	Daily Maximum
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Monthly Average
00680	Carbon, Total Organic (TOC)	Report	-	mg/L	Grab	Weekly	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum

Description: External Outfall, Number: 001, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
TAA3B	LC50 Static 48Hr Acute Ceriodaphnia Dubia	>=	2.4	%	Composite	Once Every Permit Cycle	Minimum
TAA6C	LC50 Static 48Hr Acute Pimephales Promelas	>=	2.4	%	Composite	Once Every Permit Cycle	Minimum

Description: Internal Monitoring Point, Number: 01A, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	129.4	lb/d	Composite	Twice Per Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	291.5	lb/d	Composite	Twice Per Month	Daily Maximum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum

00530	Total Suspended Solids (TSS)	<=	183.1	lb/d	Composite	Weekly	Monthly Average
00530	Total Suspended Solids (TSS)	<=	527.5	lb/d	Composite	Weekly	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Monthly Average
81017	Chemical Oxygen Demand (COD)	Report	-	lb/d	Composite	Weekly	Daily Maximum

Description: Internal Monitoring Point, Number: 01B, Monitoring: Effluent Gross, Season: All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	1609.9	lb/d	Composite	Twice Per Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	2942.1	lb/d	Composite	Twice Per Month	Daily Maximum
00400	pH	<=	9.0	SU	Grab	Weekly	Maximum
00400	pH	>=	6.0	SU	Grab	Weekly	Daily Minimum
00530	Total Suspended Solids (TSS)	<=	1346	lb/d	Composite	Once Every 2 Months	Monthly Average
00530	Total Suspended Solids (TSS)	<=	2747.5	lb/d	Composite	Once Every 2 Months	Daily Maximum
00745	Sulfide, total (as S)	<=	1.1	lb/d	Composite	Annual	Monthly Average
00745	Sulfide, total (as S)	<=	2.1	lb/d	Composite	Annual	Daily Maximum
01034	Chromium, total (as Cr)	<=	0.5	lb/d	Composite	Annual	Monthly Average
01034	Chromium, total (as Cr)	<=	1.1	lb/d	Composite	Annual	Daily Maximum
34694	Phenol	<=	0.5	lb/d	Composite	Annual	Monthly Average
34694	Phenol	<=	1.1	lb/d	Composite	Annual	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	MGD	Recorder	Continuous	Monthly Average

81017	Chemical Oxygen Demand (COD)	<=	3938.9	lb/d	Composite	Twice Per Month	Monthly Average
81017	Chemical Oxygen Demand (COD)	<=	7322.6	lb/d	Composite	Twice Per Month	Daily Maximum