

PUBLIC NOTICE

**Resolute FP US Inc.** has applied to the Tennessee Air Pollution Control Division (TAPCD) for an existing major source operating permit subject to the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations (also frequently referred to as Title V regulations). A major source (Title V) operating permit is required by both the Federal Clean Air Act and the Tennessee Air Pollution Control Regulations.

**The applicant is Resolute FP US Inc. with a site address of 5020 Highway 11 South, Calhoun, TN 37309. They seek to renew their major source operating permit for their Kraft pulp and paper mill producing newsprint, market pulp, and specialty grades**

EPA has agreed to treat this draft Part 70 permit as a proposed Part 70 permit and to perform its 45-day review provided by the law concurrently with the public notice period. If any substantive comments are received, EPA's 45-day review period will cease to be performed concurrently with the public notice period. EPA's 45-day review period will start once the public notice period has been completed and EPA receives notification from the Tennessee Air Pollution Control Division that comments have been received and resolved. Whether EPA's 45-day review period is performed concurrently with the public comment period or after the public comment period has ended, the deadline for citizen's petitions to the EPA Administrator will be determined as if EPA's 45-day review period is performed after the public comment period has ended (i.e., sequentially).

The status regarding EPA's 45-day review of this project and the deadline for submitting a citizen's petition can be found at the following website address:

<https://www.epa.gov/caa-permitting/tennessee-proposed-title-v-permits>

A copy of the application materials used by the TAPCD and a copy of the draft permit are available for public inspection during normal business hours at the following locations:

Division of Air Pollution Control  
Chattanooga Environmental Field Office  
1301 Riverfront Parkway, Suite 206  
Chattanooga, TN 37402

and

Tennessee Department of Environment and Conservation  
Division of Air Pollution Control  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 15th Floor  
Nashville, TN 37243

Also, if you require a copy of the draft/proposed permit it is available electronically by accessing the Air Pollution Control Public Participation Opportunity (APC PPO) page:

<https://www.tn.gov/environment/ppo-public-participation/ppo-public-participation/ppo-air.html>

Questions concerning the source(s) may be addressed to Jerry Swinea at (615) 532-0639 or by e-mail at [Jerry.Swinea@tn.gov](mailto:Jerry.Swinea@tn.gov)

Interested parties are invited to review these materials and comment. In addition, a public hearing may be requested at which written or oral presentations may be made. To be considered, written comments or requests for a public hearing must be received no later than 4:30 PM on **July 17, 2020**. To assure that written comments are received and addressed in a timely manner, written comments must be submitted using one of the following methods:

1. **Mail, private carrier, or hand delivery:** Address written comments to Ms. Michelle W. Owenby, Director, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 15<sup>th</sup> Floor, Nashville, Tennessee 37243.
2. **E-mail:** Submit electronic comments to [air.pollution.control@tn.gov](mailto:air.pollution.control@tn.gov).

A final determination will be made after weighing all relevant comments.

Individuals with disabilities who wish to review information maintained at the above-mentioned depositories should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such review. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the public comment period to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue 22<sup>nd</sup> Floor, Nashville, TN 37243, 1-(866)-253-5827. Hearing impaired callers may use the Tennessee Relay Service, 1-(800)-848-0298.

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(Do Not Publish Text Below The Dotted Line.)

For the McMinn County "Daily Post-Athenian" -- publish once during the time period of April 21, 2020, through April 28, 2020.

Air Pollution Control

DATE: APRIL 17, 2020

Assigned to – Jerry Swinea

**No alterations to the above are allowed:**

**Resolute FP US Inc. - Calhoun Operations. must pay to place this advertisement in the newspaper.**

Air Pollution Control must be furnished with an affidavit from the newspaper stating that the ad was run and the date of the ad or one complete sheet from the newspaper showing this advertisement, the name of the newspaper and the date of publication. Mail to Jerry Swinea, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 15th Floor, 312 Rosa L. Parks Avenue, Nashville, Tennessee 37243 or send a pdf copy of this information electronically to [air.pollution.control@tn.gov](mailto:air.pollution.control@tn.gov).

## TITLE V PERMIT STATEMENT

<u>Facility Name:</u>	<u>Resolute FP US Inc. - Calhoun Operations</u>
<u>City:</u>	<u>Calhoun</u>
<u>County:</u>	<u>McMinn</u>
<u>Date Application Received:</u>	<u>December 20, 2018</u>
<u>Date Application Deemed Complete:</u>	<u>December 20, 2018</u>
<u>Emission Source Reference No.:</u>	<u>54-0012</u>
<u>Permit No.:</u>	<u>575960</u>

### INTRODUCTION

This narrative is being provided to assist the reader in understanding the content of the attached Title V operating permit. This Title V Permit Statement is written pursuant to Tennessee Air Pollution Control Rule 1200-03-09-.02(11)(f)1.(v). The primary purpose of the Title V operating permit is to consolidate and identify existing state and federal air requirements applicable to Resolute Forest Products, Inc. and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the Title V Operating Permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the compliance status with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

#### Acronyms

<u>PSD</u>	<u>Prevention of Significant Deterioration</u>
<u>NESHAP</u>	<u>National Emission Standards for Hazardous Air Pollutants</u>
<u>NSPS</u>	<u>New Source Performance Standards</u>
<u>MACT</u>	<u>Maximum Achievable Control Technology</u>
<u>NSR</u>	<u>New Source Review</u>

**I. Identification Information**

**A. Source Description**

<u>Emission Source Number</u>	<u>Description</u>
<u>54-0012-10, 11, 12</u>	<u>Power Boilers F1, F2, &amp; F3</u>
<u>54-0012-19</u>	<u>Coal Handling</u>
<u>54-0012-20</u>	<u>1,500 ADTP/day Thermo mechanical (TMP) System &amp; Turpentine Recovery</u>
<u>54-0012-21</u>	<u>Wood Handling Facility</u>
<u>54-0012-22</u>	<u>Lime Slaker</u>
<u>54-0012-23</u>	<u>Kraft Pulp Mill with LVHC &amp; HVLC systems</u>
<u>54-0012-24</u>	<u>Chlorine Dioxide Plant</u>
<u>54-0012-26</u>	<u>No. 3 Recovery Furnace</u>
<u>54-0012-27</u>	<u>No. 3 Smelt Tank</u>
<u>54-0012-28</u>	<u>Bleach Plant</u>
<u>54-0012-30</u>	<u>Lime Kiln</u>
<u>54-0012-31</u>	<u>Stripper Off-Gas (SOG) Incinerator</u>
<u>54-0012-32</u>	<u>Paper Mill</u>
<u>54-0012-33</u>	<u>Causticizing Area</u>
<u>54-0012-35</u>	<u>Recycle Mill</u>
<u>54-0012-36</u>	<u>Chemical Recovery</u>
<u>54-0012-37</u>	<u>Wastewater Treatment Plant</u>
<u>54-0012-38</u>	<u>Industrial Landfill #1 – General Mill</u>
<u>54-0012-39</u>	<u>Industrial Landfill #2 – Recycle Mill Sludge</u>
<u>54-0012-40</u>	<u>950 ADTP/day TMP System</u>
<u>54-0012-41</u>	<u>Fluidized Bed Multi-fuel Boiler</u>
<u>54-0012-42</u>	<u>Two Fixed-Roof Liquor Storage Tanks</u>
<u>54-0012-43</u>	<u>Three Pulp Refiners</u>
<u>54-0012-44</u>	<u>TMP Bleach Plant</u>
<u>54-0012-45</u>	<u>Tissue Machine #1</u>
<u>54-0012-46, 47, 48</u>	<u>Converting Facility</u>

**B. Facility Classification**

1. Attainment or Non-Attainment Area Location: The facility is located in an attainment area (McMinn County) for all criteria pollutants.
2. The facility is located in a Class II area.

C. Regulatory Status

1. PSD/NSR: This facility is a major source under PSD. The facility is an existing major source of greenhouse gases under the Tailoring Rule.
2. Title V Major Source Status by Pollutant, including Greenhouse Gases

<u>Pollutant</u>	<u>Is the pollutant emitted?</u>	<u>If emitted, what is the facility's status? (Major Source or Non-Major Source)</u>
<u>PM</u>	<u>Yes</u>	<u>Major Source</u>
<u>PM<sub>10</sub></u>	<u>Yes</u>	<u>Major Source</u>
<u>SO<sub>2</sub></u>	<u>Yes</u>	<u>Major Source</u>
<u>VOC</u>	<u>Yes</u>	<u>Major Source</u>
<u>NO<sub>x</sub></u>	<u>Yes</u>	<u>Major Source</u>
<u>CO</u>	<u>Yes</u>	<u>Major Source</u>
<u>Individual HAP</u>	<u>Yes</u>	<u>Major Source</u>
<u>Total HAPs</u>	<u>Yes</u>	<u>Major Source</u>
<u>CO<sub>2e</sub></u>	<u>Yes</u>	<u>Major Source</u>

3. MACT Standards - the following MACT standards apply to this facility:

<u>40 CFR 63 Subpart</u>	<u>Description</u>
<u>S</u>	<u>Pulp and Paper Industry</u>
<u>MM</u>	<u>Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills</u>
<u>DDDDD</u>	<u>Industrial, Commercial, and Institutional Boilers and Process Heaters</u>
<u>JJJJ</u>	<u>Sfc Coating - Paper &amp; Other Web Processes</u>
<u>ZZZZ</u>	<u>Stationary Reciprocating Internal Combustion Engines</u>

4. Program Applicability: Are the following programs applicable to the facility?

PSD: Yes  
NESHAP: 40 CFR 61 – Yes  
40 CFR 63 – Yes  
NSPS: 40 CFR 60 - Yes

<u>40 CFR 60 Subpart</u>	<u>Description</u>
<u>BB</u>	<u>Kraft Pulp Mill</u>
<u>Kb</u>	<u>VOC Liquid Storage Vessel</u>
<u>Y</u>	<u>Coal Preparation</u>
<u>Db</u>	<u>Large steam generating Commercial Boilers</u>
<u>III</u>	<u>Stationary Compression Ignition Internal Combustion Engines</u>

<u>40 CFR 61 Subpart</u>	<u>Description</u>
<u>E</u>	<u>Mercury</u>

**II. Compliance Information**

Is the facility currently in compliance with all applicable requirements? Yes  
Are there any applicable requirements that will become effective during the permit term? No.

**III. Other Requirements**

A. Emissions Trading

This facility is not involved in an emissions trading program (the CAIR NO<sub>x</sub> Ozone Season Trading Program was superseded by TAPCR 1200-03-27-.12).

B. Acid Rain Requirements

This facility is not subject to any requirements in Title IV of the Clean Air Act.

C. Prevention of Accidental Releases

This facility is subject to the accidental release requirements of Section 112(r) of the Clean Air Act.

**IV. Public Participation Procedures**

Notification of this draft permit was mailed to the following environmental agencies:

1. EPA Region IV
2. Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch
3. North Carolina Department of Environment and Natural Resources, Division of Air Quality
4. Chattanooga-Hamilton County Air Pollution Control Bureau
5. Knox County Department of Air Quality Management
6. Eastern Band of Cherokee Indians

**ADDENDUM TO TITLE V PERMIT STATEMENT: PUBLIC COMMENTS**

<b><u>Facility Name:</u></b>	<b><u>Resolute FP US Inc. - Calhoun Operations</u></b>
<b><u>City:</u></b>	<b><u>Calhoun</u></b>
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<b><u>Date Application Received:</u></b>	<b><u>December 20, 2018</u></b>
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<b><u>Emission Source Reference No.:</u></b>	<b><u>54-0012</u></b>
<b><u>Permit No.:</u></b>	<b><u>575960</u></b>

<b><u>Date of Public Notice:</u></b>	<b><u>tbd</u></b>
<b><u>Date of Public Hearing:</u></b>	<b><u>None Requested</u></b>

**Comment Summary**

The public notice for this renewal permit published in the Daily Post-Athenian on May 6, 2014. The following comments were received during the comment period :

<b><u>Commenter</u></b>	<b><u>Comment</u></b>	<b><u>Response</u></b>
<b><u>Resolute FP, US, Inc.</u></b>	<b><u>Condition E24-1 has a typographical error in the maximum heat input – should be 877 MMBtu/hr.</u></b>	<b><u>Corrected in final permit.</u></b>
<b><u>Resolute FP, US, Inc.</u></b>	<b><u>Condition E14-1 has an error in the calculation:  <u>Solids fed to kiln in ton/day should be</u> <u>=[(lime mud gal/min) x (8.345 lb/gal) x</u> <u>(1.22 lb slurry/ft3) x (% solids) x (1,440</u> <u>min/day)](2,000 lb/ton)</u></u></b>	<b><u>Corrected in final permit.</u></b>

## Changes to Title V Operating Permit 546314 since First Issuance

**Minor Modification #1 (Issued May 27, 2011):** The purpose of this addendum is to address the changes made by Minor Modification #1 to Bowater Newsprint - Calhoun Operations' Title V Permit No. 546374.

### Greenhouse Gases

For this modification being issued on or after January 2, 2011, but before July 1, 2011, and which is not subject to PSD permitting for a regulated NSR pollutant other than GHGs, GHG emissions are not subject to PSD review.

### Changes in Minor Modification #1

Minor Modification #1 is a consolidation of the following three unrelated minor modification and two administrative amendment applications, each of which qualify for processing as a minor permit modification as stated under 1200-03-09-.02(11)(f)5(ii) of the Tennessee Air Pollution Control Regulations, being issued in a single permit modification. This is a minor permit modification to the Title V Permit #546374. This is not a modification under Title I of the Federal Act:

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<a href="#">2324</a>	<a href="#">Upgrade HVLC</a>	<a href="#">Minor Modification T5 Permit Only</a>
<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<a href="#">2480</a>	<a href="#">Review lists of HVLC burn boilers &amp; source test info pt 13</a>	<a href="#">Administrative Amendment T5 Permit Only</a>
<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<a href="#">3482</a>	<a href="#">Responsible official name change</a>	<a href="#">Administrative Amendment T5 Permit Only</a>
<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<a href="#">3757</a>	<a href="#">Blending diesel fuel</a>	<a href="#">Minor Modification T5 Permit Only</a>
<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<a href="#">4140</a>	<a href="#">Modify SO<sub>2</sub> and NO<sub>x</sub> emission limit - EPA Consent Decree</a>	<a href="#">Minor Modification T5 Permit Only</a>

The changes are as follows:

- The permit's cover page includes the date and description of Minor Modification #1, the revised responsible official, and the revised information relied upon.
- Condition E1(M1) revises allowable emissions values for Particulate Matter, SO<sub>2</sub>, VOC, NO<sub>x</sub> and TRS as follows:

<u>REGULATED POLLUTANTS</u>	<u>Previous Value (tons per AAP)</u>	<u>Revised Value (tons per AAP)</u>	<u>Change</u>
<u>PARTICULATE MATTER</u>	<a href="#">1,886.1</a>	<a href="#">1,883.0</a>	<a href="#">-3.1</a>
<u>SO<sub>2</sub></u>	<a href="#">22,230.7</a>	<a href="#">7,997.1</a>	<a href="#">-14,233.6</a>
<u>VOC</u>	<a href="#">2,341.7</a>	<a href="#">2,341.9</a>	<a href="#">+0.2</a>
<u>NO<sub>x</sub></u>	<a href="#">4,792.9</a>	<a href="#">5,727.6</a>	<a href="#">+934.7</a>
<u>TRS</u>	<a href="#">104.8</a>	<a href="#">68.7</a>	<a href="#">-36.1</a>

The Particulate Matter fee emissions decrease is due mostly to a decrease in the allowable limitation in Condition E14-2 (from 0.067 grains per dry standard cubic foot to 0.064 grains per dry standard cubic foot; new lower MACT standard), with the rest from rounding errors (in Conditions E7-2 and E11-1).

The SO<sub>2</sub> fee emissions decrease is due mostly to the reduction in the allowable emissions in Condition E4-3 from the Consent Decree (from 18,803 tons of SO<sub>2</sub> per year to 4,562 tons of SO<sub>2</sub> per year), with the rest from re-assigning SO<sub>2</sub> emissions from HVLC burning (91.5 pounds of SO<sub>2</sub> per hour) from the Power Boilers (which no longer burn HVLC) to the No. 3 Recovery Boiler, and one rounding error (in Condition E12-2).

The VOC fee emissions "increase" is due to one rounding error (in Condition E10-7).

The NO<sub>x</sub> fee emissions "increase" is not due to any emissions increase, but is due to emissions that are permitted but not included in the fee table (1,909.7 tons of NO<sub>x</sub> per year), and also takes into account the reduction in the allowable emissions of NO<sub>x</sub> from the Consent Decree (from 3,189 tons of NO<sub>x</sub> per year in former Condition E4-18 to 2,214 tons of NO<sub>x</sub> per year in new Condition E4-23). The NO<sub>x</sub> fee emissions "increase" has no practical effect, since the facility already had (and still has) total fee emissions of NO<sub>x</sub> above the 4,000 tons per year fee emissions cap. The NO<sub>x</sub> fee emissions "increase", in tons of NO<sub>x</sub> per year is calculated as follows:

<u>Existing Permit Condition E4-18</u>	<u>3189.0</u>
<u>Existing Permit Condition E11-5</u>	<u>2549.2</u>
<u>Existing Permit Condition E12-8</u>	<u>16.9</u>
<u>Existing Permit Condition E14-4</u>	<u>363.5</u>
<u>Existing Permit Condition E15-3</u>	<u>66.6</u>
<u>Existing Permit Condition E16-3</u>	<u>3.6</u>
<u>Existing Permit Condition E24-7</u>	<u>513.8</u>
<hr/> <u>Total Emissions from Permit Conditions</u>	<hr/> <u>6702.6</u>
 <u>Total Emissions from Permit Conditions (from above)</u>	 <u>6702.6</u>
<u>- Existing Fee Table Value from Permit Condition E1</u>	<u>-4792.9</u>
<hr/> <u>Emissions not included in Existing Fee Table</u>	<hr/> <u>1909.7</u>
 <u>Emissions not included in Existing Fee Table (from above)</u>	 <u>1909.7</u>
<u>Consent Decree: Remove limit in E4-18</u>	<u>-3189.0</u>
<u>Consent Decree: New limit to replace limit in E4-18</u>	<u>2214.0</u>
<hr/> <u>NO<sub>x</sub> Fee emissions "increase"</u>	<hr/> <u>+934.7</u>

The TRS fee emissions decrease is due to the removal from Condition E4-14 and from the fee table of TRS emissions from HVLC burning from the Power Boilers (which no longer burn HVLC). These emissions are accounted now (and were previously double-counted) in Condition E11-8 for the No. 3 Recovery Boiler.

Condition E1(M1) replaces Condition E1 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.

3. Condition E2(M1) removes deleted Conditions E4-10, E4-11, E4-12, from the list of conditions for which monitoring and recordkeeping are required to be included in the semiannual reports. It replaces Condition E2 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
4. The description for Source 54-0012-10, 11, 12 has been changed to remove references to requirements that no longer apply upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
5. Condition E3-6(M1), removes power boilers F2 and F3 from the list of boilers that may be used to combust high volume low concentration (HVLC) HAP gases. It replaces Condition E3-6 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.

6. Conditions E4-3(M1), and E4-18(M1) replace Conditions E4-3, and E4-18 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
7. Conditions E4-9(M1), E4-10(M1), E4-11(M1), E4-12(M1), E4-14(M1), E4-15(M1), and E4-16(M1) replace Conditions E4-9, E4-10, E4-11, E4-12, E4-14, E4-15, and E4-16 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service. Condition E4-17(M1) replaces the condition formerly mislabeled as E14-17 for Sources 54-0012-10, 11, 12 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
8. Condition E7-2(M1) revises the particulate matter tons per year value. The previous value of 32.2 tons per year is revised to 34.2 tons per year to correspond to the applicable requirement of 7.8 lbs./hr.
9. The description for Source 54-0012-23 has been changed to remove references to power boilers F2 and F3 that no longer apply upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
10. Condition E9-3(M1) removes power boilers F2 and F3 from the list of boilers that may be used to combust high volume low concentration (HVLC) HAP gases. It replaces Condition E9-3 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
11. Condition E9-6(M1) modifies former Condition E9-6 pursuant to a Consent Decree in *United States v. Bewater Incorporated* (1:09-CV-00223).
12. Condition E10-7(M1) revises the VOC tons per year value. The previous value of 0.3 tons per year is revised to 0.5 tons per year to correspond to the maximum value from the permit application.
13. Conditions E11-1(M1) and E11-5(M1) revise the particulate emissions tons per year value and the nitrogen oxide emissions lbs/hr and tons per year values. The previous particulate emissions value of 274.2 tons per year is revised to 274.4 tons per year to correspond to the value from the permit application. The previous nitrogen oxide emissions values of 584 lbs/hr and 2557.9 tons per year are revised to 582 lbs/hr and 2549.2 tons per year to correspond to the values from the permit application.
14. Condition E11-16(M1) removes power boilers F2 and F3 from the list of boilers incinerating High Volume Low Concentration (HVLC) Total Reduced Sulfur (TRS) gases, reduces the maximum SO<sub>2</sub> emissions expected (maximum actual emissions, there is no change in the allowable emissions) from 70.8 to 22.4 lbs/hr, adds the oxygen delignification system to the list of HVLC sources with exhausts routed for combustion and is the basis for which the emissions are included in the Fee Emissions Summary Table. It replaces Condition E11-16 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
15. Condition E11-18(M1) removes power boilers F2 and F3 from the list of boilers that must breakdown or shutdown before the Kraft mill must begin shutdown. It replaces Condition E11-18 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
16. Conditions E11-20(M1) and E11-21(M1) allow for burning up to 1.5 gallons of distillate oil (highway diesel fuel) for every 1000 gallons of black liquor, and replace Conditions E11-20 and E11-21 of Title V permit #546374.
17. Condition E12-2(M1) revises the SO<sub>2</sub> tons per year value. The previous value of 47.7 tons per year is revised to 47.5 tons per year to correspond to the maximum value from the permit application.
18. Conditions E13-1, E13-2 and E13-8 were modified to replace outdated information with relevant information from a more recent (September 17, 2001, as opposed to November 10-12, 1999) source test performed prior to permit issuance, specify the correct test method to be used if compliance testing is required by the Technical Secretary, specify the correct emission limitation from 40 CFR §63.445(c)(2), and specify the correct gas inlet scrubber air flow rate and ORP parameters based on information from the September 17, 2001, source test.

19. Conditions E14-2 was modified to insert the relevant standard of 0.064 grains per dry standard cubic foot. Compliance with this standard had been demonstrated prior to permit issuance, and no changes to the Compliance Method are required.
20. The description for Source 54-0012-41 has been changed to remove references to power boilers F2 and F3 that no longer apply upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
21. Condition E24-18(M1) removes power boilers F2 and F3 from the list of boilers incinerating High Volume Low Concentration (HVLC) Total Reduced Sulfur (TRS) gases, reduces the maximum sulfur dioxide emissions expected from 70.8 to 22.4 lbs/hr, adds the oxygen delignification system to the list of HVLC sources with exhausts routed for combustion and specifies that for fee purposes this has been previously accounted for and assigned to the No. 3 Recovery Boiler. It replaces Condition E24-18 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
22. Condition E24-20(M1) removes power boilers F2 and F3 from the list of boilers that must breakdown or shutdown before the Kraft mill must begin shutdown. It also includes the No. 3 recovery boiler in the list of boilers that must breakdown or shutdown before the Kraft mill must begin shutdown, for consistency with Condition E9-3 and Condition E11-18 of Title V permit #546374, as well as construction permit #954383P. Construction permit #954383P is also specified as a source of an applicable requirement.
- Construction permit #954383P, issued on July 22, 2001, allows for the incineration of High Volume Low Concentration (HVLC) Total Reduced Sulfur (TRS) gases in the No. 3 Recovery Boiler. This was the basis for Conditions E9-3 and E11-18 of the original Title V permit, specifying when the Kraft mill must begin shutdown in the case of breakdown or shutdown of boilers F2 and F3, the fluidized bed multi-fuel boiler No.1, and the No. 3 recovery boiler.
- Condition E24-20(M1) replaces Condition E24-20 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.
23. Condition E24-21(M1) specifies that for fee purposes this has been previously accounted for and assigned to the No. 3 Recovery Boiler. It replaces Condition E24-21 of Title V permit #546374 upon removal of power boilers F2 and F3 from high volume low concentration (HVLC) HAP gases combustion service.

**Minor Modification #2 (Issued August 3, 2011):** The purpose of this addendum is to address the changes made by Minor Modification #2 to Bowater Newsprint - Calhoun Operations' Title V Permit No. 546374.

### Greenhouse Gases

For each project included in this modification being issued on or after July 1, 2011, which is not subject to PSD permitting for a regulated NSR pollutant other than GHGs, and for which the sum of the GHG emissions increases on a CO<sub>2e</sub> basis for all units that have a CO<sub>2e</sub> emissions increase (without considering units that have a CO<sub>2e</sub> emissions decrease) is less than 75,000 TPY CO<sub>2e</sub>, GHG emissions are not subject to PSD review.

### Changes in Minor Modification #2

Minor Modification #2 is a consolidation of the following three unrelated minor modification and one administrative amendment applications, each of which qualify for processing as a minor permit modification as stated under 1200-03-09-.02(11)(f)5(ii) of the Tennessee Air Pollution Control Regulations, being issued in a single permit modification. This is a minor permit modification to the Title V Permit #546374. This is not a modification under Title I of the Federal Act:

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<u>3480</u>	<u>MODIFICATIONS TO THE PULP MILL TO INCREASE THROUGHPUT &amp; REDU</u>	<u>Minor Modification T5 Permit Only</u>

The changes for this project are as follows:

1. Conditions E9-8 through E9-11 are new conditions of Title V permit #546374. They address project emissions from modifying the Kraft mill digester liquor delivery system with changes in piping, valves, etc.

These changes are expected to increase Kraft pulp production to approximately 462,000 air dried short tons of unbleached pulp on an annual basis. The increased Kraft pulp production will generate some additional black liquor, as well as requiring some additional white liquor. However, no modifications to the liquor recovery loop (evaporator set, recovery furnace, smelt dissolving tank, lime kiln, lime slaker, and causticizing) are required to support this Kraft mill production level.

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
	<u>MODIFICATIONS TO THE LIME KILN TO REDUCE NEED TO PURCHASE LIME</u>	<u>Minor Modification T5 Permit Only</u>

The changes for this project are as follows:

1. Conditions E14-20 through E14-23 are new conditions of Title V permit #546374. They address project emissions from modifying the lime kiln to reduce purchased make-up lime at the facility. The modifications include changes to the lime conveyor system to reduce air in-leakage, improvements to the duct system to minimize plugging and increase flow, and burner tip modifications to accommodate additional fuel.

These changes are not expected to increase Kraft pulp production. Historically, the mill purchases over 70 tons per day of fresh make-up lime to support the Kraft pulp mill. This project is expected to increase lime kiln production by approximately 50 tons per day. This will reduce the amount of purchased lime; however the mill still anticipates purchasing 20 tons per day of fresh make-up lime.

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
4616	<u>install a rotary type rail car dumper/chip handling</u>	<u>Minor Modification T5 Permit Only</u>

The changes for this project are as follows:

1. Conditions E7-8 through E7-11 are new conditions of Title V permit #546374. They address project emissions from modifying the woodyard to lower cost, reduce waste, and increase safety and reliability.

The woodyard optimization project includes making several modifications to the woodyard to lower cost, reduce waste, and increase safety and reliability. The installation of a rotary type rail car dumper and associated chip handling equipment will allow the mill to cost effectively receive wood chips by rail from outside of the traditional mill wood procurement area served by trucks.

A scalping screen and associated rechipper (with cyclone) will be installed on the south log line to allow processing oversize hardwood chips for pulping. Oversize hardwood chips are currently burned as fuel in the multi-fuel boiler.

The four kraft chip screens and associated four rechippers (with cyclones) will be replaced with one shaker screen and associated rechipper (with cyclone). This will mitigate an existing fire hazard due to housekeeping issues related to the design and layout of the current screens, as well as increasing the reliability of the Kraft chip screening system.

The improved woodyard reliability may increase Kraft pulp production; however, no modifications to the Kraft mill or related equipment are required to process the additional chips from the woodyard.

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
4726	<u>Name Change</u>	<u>Administrative Amendment T5 Permit Only</u>

The changes for this "project" are as follows:

1. Name Change to AbiBow US Inc. - Calhoun Operations. Name changed in permit cover page, Condition E3-6 and Condition E3-7.

**Administrative Permit Amendment #1 (Issued September 13, 2012):** The purpose of this addendum is to list the changes contained in the Administrative Permit Amendment #1 to Title V Permit No. 546374.

#### **Change in Administrative Permit Amendment #1**

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<u>6959</u>	<u>Name change</u>	<u>Administrative Amendment T5 Permit Only</u>

The change is as follows:

1. As requested in letters dated June 5, 2012, and July 19, 2012, the name of the permittee was changed from AbiBow US Inc. to Resolute FP US Inc.

**Minor Modification #3 (Issued January 15, 2013):** The purpose of this addendum is to list the changes contained in the Minor Modification #3 to Title V Permit No. 546374.

#### **Change in Minor Modification #3**

<u>LOG</u>	<u>COMMENTS</u>	<u>TYPE DESCRIPTION</u>
<u>7592</u>	<u>Delay of RATA</u>	<u>Minor Modification T5 Permit Only</u>

The change is as follows:

1. As requested in an application dated November 9, 2012, Condition E4-3(M1) was replaced with Condition E4-3(M3) as follows:

**E4-3(M1).** Sulfur dioxide emissions from this fuel burning installation shall not exceed 4,562 tons during any period of 12 consecutive calendar months, including any sulfur dioxide emissions from incineration of Total Reduced Sulfur (TRS) gases.  
Paragraphs 11, 13, 14, 16, 19, and Appendix A, *United States v. Bowater Incorporated* (1:09-CV-00223), as modified by:  
1. EPA letter to Lori Chalker, Environmental Manager, AbitibiBowater, dated May 17, 2010, and signed by Beverly A. Spagg; and  
2. EPA letter to Lori Chalker, Environmental Manager, AbitibiBowater, dated September 22, 2010, and signed by Beverly A. Spagg.  
, and TAPCR 1200-03-14-.01(3) and construction permit #997215F issued pursuant to a Jan. 13, 1989 agreement letter and PSD

**Compliance Method:** By November 22, 2010, an SO<sub>2</sub> continuous emission monitor (CEM) shall be acquired, installed, calibrated, certified, and operational on the common stack serving Power Boilers F1, F2 and F3. The SO<sub>2</sub> CEM shall be calibrated and certified as required by 40 C.F.R. Part 75, and maintained and operated at all times on the common stack serving Power Boilers F1, F2 and F3. By December 22, 2010, a hardcopy of the results from the calibration and certification of the SO<sub>2</sub> CEM shall be submitted to EPA and to the Compliance Validation Section of the Division of Air Pollution Control.

E4-3(M3). Sulfur dioxide emissions from this fuel burning installation shall not exceed 4,562 tons during any period of 12 consecutive calendar months, including any sulfur dioxide emissions from incineration of Total Reduced Sulfur (TRS) gases.

Paragraphs 11, 13, 14, 16, 19, and Appendix A, *United States v. Bowater Incorporated* (1:09-CV-00223), as modified by:

3. EPA letter to Lori Chalker, Environmental Manager, AbitibiBowater, dated May 17, 2010, and signed by Beverly A. Spagg; and

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If the facility has not burned coal in six (6) months and plans not to burn coal in the next six (6) months, SO<sub>2</sub> and Flow compliance assurance monitoring, as required by 40 C.F.R. Part 75, will be deferred.

The facility will notify the Compliance Validation Section of the Division of Air Pollution Control within 15 days of initiation of burning any coal and will commence compliance assurance monitoring as required by 40 C.F.R. Part 75 within 45 days of the initiation date.

**Administrative Permit Amendment #2 (Issued August 14, 2013):** Title V Permit 546374 was amended to change the Responsible Official listed on the cover page..

**Compliance Assurance Monitoring (40 CFR 64) Applicability for Renewal Permit**

CAM plans were submitted as Appendix C of the application and are included in Attachment 3 of the permit. Specific comments are noted below:

- Boiler MACT applicability for PM emissions may supersede CAM plans for affected sources after the compliance date. CAM does not apply to Power Boilers 1, 2, 3 and Bubbling Fluidized Boiler (BFB). These sources are subject to Boiler MACT (40 CFR 63 Subpart DDDDD for particulate.
- CAM does not apply to the SOG incinerator for TRS – the source has an NSPS parameter limit (§60.283(a)(1)(iii) – minimum incinerator temperature of 1,200° F) that meets the definition of “emission limitation or standard” in 40 CFR §64.1 (“An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement”). However, the SOG incinerator is also subject to 40 CFR 63 Subpart S for methanol (§63.443(d)(2) – maximum concentration of 20 ppm at 10% oxygen). The SOG incinerator complies with Subpart S by maintaining a minimum combustion zone temperature of 1,437° F established during Subpart S performance testing. Since the minimum temperature is subject to a MACT requirement, the SOG incinerator is exempt from CAM pursuant to §64.2(b)(1)(i) (emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act).
- CAM does not apply to the lime kiln for PM – the source is subject to a PM emission limit established by §63.862(a)(1)(C) (0.064 grains/dscf PM) and is exempt from CAM pursuant to §64.2(b)(1)(i).
- CAM does not apply for recovery boiler PM – the PSD limit is more stringent than MACT, but the monitoring is established by Subpart MM.
- CAM does not apply for the smelt dissolving tank (PM) – PSD limit is more stringent than MACT, but the monitoring is established by Subpart MM.
- CAM does not apply for the smelt dissolving tank (TRS) – the scrubber monitoring is established by 40 CFR 63 Subpart MM is equivalent to the NSPS BB monitoring for TRS (see below).

<b>MACT S Requirement</b>	<b>NSPS BB Requirement</b>
<p>§63.864(e)(10): The owner or operator of each affected... kraft or soda smelt dissolving tank equipped with a wet scrubber must install, calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in §63.8(c), as well as the procedures in paragraphs (e)(10)(i) and (ii) of this section:</p> <p>(i) The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure); and</p> <p>(ii) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.</p>	<p>§60.284(b)(2): For any... smelt dissolving tank using a scrubber emission control device:</p> <p>(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).</p> <p>(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.</p>

- For the multi-fuel boiler ash handling system, only the pneumatic conveying system baghouse is subject to CAM. See flow rates and emission rates below

<u>Ash Handling System - PM Emission Rates</u>		
	<u>Design flow rate (dscf/min)</u>	<u>PM (lb/hr at 0.02 grains/dscf)</u>
<u>Pneumatic ash conveying system</u>	<u>2,600</u>	<u>0.45</u>
<u>Ash storage silo bin vent</u>	<u>200</u>	<u>0.034</u>
<u>Ash weigh hoppers &amp; ash loading hopper</u>	<u>400</u>	<u>0.069</u>

<u>Total</u>		<u>0.55</u>
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The paper mill starch silo is not subject to CAM. Material captured by the silo filter vent would be returned to the source, and the source should emit mostly when they are filling the silo. Most emissions would be TSP, and PM<sub>10</sub> emissions from the silo vent would be < 100 tons/year.

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<u>Cover Page</u>	<u>Changed “Post or File at Installation Address” to “Post at Installation Address”</u>																																																								
<u>B6</u>	<u>Updated delivery information for compliance certification (new address and e-mail)</u>																																																								
<u>B10 (old permit)</u>	<u>Condition B10 of the old permit was deleted (underlying applicable requirement has been removed from TAPCR).</u>																																																								
<u>E1</u>	<u>Updated fee emissions</u>																																																								
<u>E2(a)</u>	<u>Updated semiannual reporting requirements to reflect conditions that have been renumbered, added, or deleted.</u>																																																								
<u>E2(c), E3-3 (old permit)</u>	<u>Moved accidental release certification requirement from Condition E3-3 of the old permit to Condition E2(c) of the renewal.</u>																																																								
<u>Section E</u>	<p><u>Permit conditions were renumbered as shown below. All changes in this table reference the new permit conditions unless otherwise noted.</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><u>Old Permit Condition</u></th> <th style="width: 50%;"><u>New Permit Condition</u></th> </tr> </thead> <tbody> <tr> <td><u>E3-1, E3-2</u></td> <td><u>No changes</u></td> </tr> <tr> <td><u>E3-3</u></td> <td><u>E2(c)</u></td> </tr> <tr> <td><u>E3-4</u></td> <td><u>E3-3</u></td> </tr> <tr> <td><u>E3-5</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E3-6 through E3-12</u></td> <td><u>E3-4 through E3-10</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>New conditions E3-11 through E3-13</u></td> </tr> <tr> <td><u>E4-1 through E4-4</u></td> <td><u>E4-1 through E4-4</u></td> </tr> <tr> <td><u>E4-5 through E4-7</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E4-8</u></td> <td><u>E4-5</u></td> </tr> <tr> <td><u>E4-9 through E4-12, E4-14 through E4-17</u></td> <td><u>Deleted in previous modification</u></td> </tr> <tr> <td><u>E4-13</u></td> <td><u>E4-6</u></td> </tr> <tr> <td><u>E4-18</u></td> <td><u>E4-7</u></td> </tr> <tr> <td><u>E4-19</u></td> <td><u>Deleted in renewal</u></td> </tr> </tbody> </table> <table border="1" style="width: 50%; margin-left: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><u>Old Permit Condition</u></th> <th style="width: 50%;"><u>New Permit Condition</u></th> </tr> </thead> <tbody> <tr> <td><u>E8-4</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E9-1 through E9-3</u></td> <td><u>No changes</u></td> </tr> <tr> <td><u>E9-4</u></td> <td><u>Deleted in renewal (redundant with E15-9)</u></td> </tr> <tr> <td><u>E9-5 and E9-6</u></td> <td><u>E9-4 and E9-5</u></td> </tr> <tr> <td><u>E9-7</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E10-1 through E10-6</u></td> <td><u>No changes</u></td> </tr> <tr> <td><u>E10-7</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E11-1 through E11-8</u></td> <td><u>No changes</u></td> </tr> <tr> <td><u>E11-9 through E11-11</u></td> <td><u>Deleted in renewal</u></td> </tr> <tr> <td><u>E11-12</u></td> <td><u>E11-9</u></td> </tr> <tr> <td><u>E11-13</u></td> <td><u>Combined with E11-9</u></td> </tr> <tr> <td><u>E11-14 through E11-17</u></td> <td><u>E11-10 through E11-13</u></td> </tr> <tr> <td><u>E11-18</u></td> <td><u>Deleted in renewal</u></td> </tr> </tbody> </table>	<u>Old Permit Condition</u>	<u>New Permit Condition</u>	<u>E3-1, E3-2</u>	<u>No changes</u>	<u>E3-3</u>	<u>E2(c)</u>	<u>E3-4</u>	<u>E3-3</u>	<u>E3-5</u>	<u>Deleted in renewal</u>	<u>E3-6 through E3-12</u>	<u>E3-4 through E3-10</u>	<u>N/A</u>	<u>New conditions E3-11 through E3-13</u>	<u>E4-1 through E4-4</u>	<u>E4-1 through E4-4</u>	<u>E4-5 through E4-7</u>	<u>Deleted in renewal</u>	<u>E4-8</u>	<u>E4-5</u>	<u>E4-9 through E4-12, E4-14 through E4-17</u>	<u>Deleted in previous modification</u>	<u>E4-13</u>	<u>E4-6</u>	<u>E4-18</u>	<u>E4-7</u>	<u>E4-19</u>	<u>Deleted in renewal</u>	<u>Old Permit Condition</u>	<u>New Permit Condition</u>	<u>E8-4</u>	<u>Deleted in renewal</u>	<u>E9-1 through E9-3</u>	<u>No changes</u>	<u>E9-4</u>	<u>Deleted in renewal (redundant with E15-9)</u>	<u>E9-5 and E9-6</u>	<u>E9-4 and E9-5</u>	<u>E9-7</u>	<u>Deleted in renewal</u>	<u>E10-1 through E10-6</u>	<u>No changes</u>	<u>E10-7</u>	<u>Deleted in renewal</u>	<u>E11-1 through E11-8</u>	<u>No changes</u>	<u>E11-9 through E11-11</u>	<u>Deleted in renewal</u>	<u>E11-12</u>	<u>E11-9</u>	<u>E11-13</u>	<u>Combined with E11-9</u>	<u>E11-14 through E11-17</u>	<u>E11-10 through E11-13</u>	<u>E11-18</u>	<u>Deleted in renewal</u>
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<u>Condition or Section</u>	<u>Description of Change</u>																																																			
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**Changes Made in Title V Renewal Permit 563810 (Issued June 20, 2014)**

<b><u>Condition or Section</u></b>	<b><u>Description of Change</u></b>			
	<a href="#">E15-11</a>	<a href="#">E15-10</a>	<a href="#">E24-21 through E24-25</a>	<a href="#">E24-15 through E24-19</a>
	<a href="#">E16-1 through E16-6</a>	<a href="#">No changes</a>	<a href="#">Section E25, E26, E27</a>	<a href="#">No changes</a>
	<a href="#">E16-7</a>	<a href="#">Deleted in renewal</a>		
<a href="#">E3-1, E3-2</a>	<a href="#">Updated the language of the general maintenance and recordkeeping requirements, but there are no changes to the underlying applicable requirements.</a>			
<a href="#">E3-3</a>	<a href="#">Added Boiler MACT (Subpart DDDDD) applicability. Deleted Boiler MACT shell condition from the old permit.</a>			
<a href="#">Old permit (E3-5)</a>	<a href="#">Deleted MACT ZZZZ shell condition, since there are no affected sources.</a>			
<a href="#">E3-4, E3-5</a>	<a href="#">Updated general information and tables for MACT Subparts S and MM (these are changes to permit language, not changes in applicability).</a>			
<a href="#">E3-9, Attachment 4</a>	<a href="#">Updated language regarding emission standards not expressed in lb/hr or tons/year. Moved tons/year equivalent emissions to a summary table in Attachment 4. Equivalent emission rates were deleted from individual permit conditions.</a>			
<a href="#">E3-10</a>	<a href="#">Added averaging period for lb/hr emission limits (daily average except as otherwise indicated in the permit).</a>			
<a href="#">E3-11</a>	<a href="#">Added clarifying language for operational availability requirement (95% requirement is based on SAR period, unless a different period is specifically identified in the permit).</a>			
<a href="#">E3-12</a>	<a href="#">Moved language regarding magnitude and frequency of opacity excursions to Condition E3-11 and deleted this language from individual opacity limits to avoid redundancy.</a>			
<a href="#">E3-13</a>	<a href="#">Added a general condition addressing specific recordkeeping requirements for minor modifications subject to TAPCR 1200-03-09-.01(4)(a)11 (moved from source specific requirements). Added the modifications requested in two applications dated December 13, 2013 (including revisions dated February 17, 2014).</a>			
<a href="#">E3-14, Attachment 3</a>	<a href="#">Added CAM plans and CAM general requirements (40 CFR 64).</a>			
<a href="#">E4-2</a>	<a href="#">Updated compliance method to reference CAM requirements.</a>			
<a href="#">Old permit (E4-4, E4-5, E4-6, E4-7)</a>	<a href="#">Move COMS requirements to Attachment 3 (CAM).</a>			
<a href="#">E4-7</a>	<a href="#">Moved NOX emission limit to E4-9</a>			
<a href="#">Old permit (E4-19)</a>	<a href="#">Deleted NOX SIP Call requirements.</a>			
<a href="#">Old permit (E4-22)</a>	<a href="#">Deleted fee emissions condition (see E3-9).</a>			
<a href="#">E4-9</a>	<a href="#">Updated language for NO<sub>x</sub> emissions limit (no change to underlying requirement).</a>			
<a href="#">E4-13, Attachment 6</a>	<a href="#">Added CAIR requirements.</a>			
<a href="#">E6-1</a>	<a href="#">Deleted "excluding downtime" from daily production limit, because "one day" is presumably midnight to midnight.</a>			
<a href="#">Section E9</a>	<a href="#">The following language was added to the source description:</a>			

<u>Changes Made in Title V Renewal Permit 563810 (Issued June 20, 2014)</u>	
<u>Condition or Section</u>	<u>Description of Change</u>
	<u>“The application from the permittee dated December 13, 2013, requested a minor modification to Title V permit 546374 to replace the eight existing RDH batch digesters with a single vapor phase continuous digester in the fourth quarter of 2014. The Division has determined that the requested changes qualify as a minor permit modification as stated under TAPCR 1200-03-09-.02(11)(f)5(ii) and are not a modification under Title I of the Federal Act. The requested changes were submitted as a minor permit modification to the Title V Permit #546374 and have been combined into this renewal.”</u>
<u>E9-2</u>	<u>Added a statement that compliance with the requirement to operate the SOG incinerator is assured by compliance with Conditions E14-10 and E15-9.</u>
<u>E11-5</u>	<u>Deleted reference to previous testing in compliance method (compliance is based on AP-42).</u>
<u>E11-8</u>	<u>Added CAM requirements for TRS.</u>
<u>Old permit (E11-9, E11-10, E11-11)</u>	<u>Moved TRS CEMS requirements to Attachment 3 (CAM).</u>
<u>E14-1</u>	<u>Combined recordkeeping requirements of this condition and E14-13 (old permit) into a single condition.</u>
<u>E14-7</u>	<u>Added CAM requirements for TRS.</u>
<u>Old permit (E14-8, E14-9, E14-10, E14-11)</u>	<u>Moved TRS CEMS requirements to Attachment 3 (CAM).</u>
<u>Section E16</u>	<u>The following language was added to the source description:</u>  <u>“The application from the permittee dated December 13, 2013, requested a minor modification to Title V permit 546374 for physical changes to this emission source (upgrades to wet end sheet production, sheet drying modifications, dry sheet profiling upgrades, control system upgrades, and winder upgrades). The Division has determined that the requested changes qualify as a minor permit modification as stated under TAPCR 1200-03-09-.02(11)(f)5(ii) and are not a modification under Title I of the Federal Act. The requested changes were submitted as a minor permit modification to the Title V Permit #546374 and have been combined into this renewal.”</u>
<u>E24-6</u>	<u>Updated compliance method to reference CAM.</u>
<u>Old permit (E24-13, E24-14, E24-15, E24-16, E24-17)</u>	<u>Moved COMS requirements to Attachment 3 (CAM).</u>
<u>Section E26</u>	<u>The following language was added to the source description:</u>  <u>“The application from the permittee dated December 13, 2013, requested a minor modification to Title V permit 546374 for physical changes to this emission source. The Division has determined that the requested changes qualify as a minor permit modification as stated under TAPCR 1200-03-09-.02(11)(f)5(ii) and are not a modification under Title I of the Federal Act. The requested changes were submitted as a minor permit modification to the Title V Permit #546374 and have been combined into this renewal.”</u>
<u>Attachment 1</u>	<u>Updated opacity matrix decision trees to most current version (September 11, 2013).</u>

<u>Changes Made in Title V Renewal Permit 563810 (Issued June 20, 2014)</u>	
<u>Condition or Section</u>	<u>Description of Change</u>
<u>Attachment 2 of old permit</u>	<u>Removed table of General Provisions applicability for Subparts S and MM (General Provisions applicability is listed as an applicable requirement in Conditions E3-4 and E3-5).</u>
<u>Miscellaneous</u>	<u>CISWI does not apply – see 40 CFR §241.4(a)(4) (“The following non-hazardous secondary materials are not solid wastes when used as a fuel in a combustion unit... Scrap tires that are not discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires... Dewatered pulp and paper sludges that are not discarded and are generated and burned on-site by pulp and paper mills that burn a significant portion of such materials where such dewatered residuals are managed in a manner that preserves the meaningful heating value of the materials.”)</u>

<u>Changes Made to Title V Operating Permit 563810 Since Renewal Issuance</u>			
<u>Permit Modification</u>	<u>Issue Date</u>	<u>Condition or Section</u>	<u>Modification</u>
<u>Operational Flexibility #1</u>	<u>October 10, 2014</u>	<u>Section E14</u>	<u>TDEC-APC approved a request from the permittee to allow the addition of hydrogen peroxide to lime mud. The change qualifies as an operational flexibility change, and there were no changes to the existing permit conditions.</u>
<u>Minor Modification #1 (MM1)</u>	<u>June 8, 2015</u>	<b><u>General Information:</u></b>	<u>The change described in the requested modification upgrades the hardwood kraft refiner (new screw press; new stock chest pump; new press filtrate pump; new hardwood leveling chest pump; new chutes, conveyors, and piping; new motors) to supply additional hardwood kraft to the paper machines.</u>
		<u>Cover page, E3-15</u>	<u>Moved Responsible Official &amp; technical contact information from cover page to new permit condition.</u>
		<u>B6, E2</u>	<u>Updated the mailing address for the Chattanooga EFO.</u>
		<u>E1</u>	<u>Updated fee emissions.</u>
		<u>E3-13</u>	<u>Updated Table E3-13 to show that "reasonable possibility" recordkeeping does not apply.</u>
		<u>E19-3</u>	<u>Corrected Subpart S reference in paragraph (b) of the compliance method from "\$63.443(i)" to "\$63.446(c)."</u>
		<u>E26-1</u>	<u>Increased the stated design capacity for the kraft pulp refiner (54-0012-43) from 36,667 lb/hr to 50,500 lb/hr.</u>
		<u>E26-3</u>	<u>Increased allowable VOC emissions for 54-0012-43 from 4.0 tons/12 months to 5.6 tons/12 months and updated the calculations in the compliance method.</u>
		<u>Attachment 4</u>	<u>Updated summary of facility emissions to include increased VOC emissions.</u>
<u>Notifications</u>	<u>Initial notification to EPA and affected States: May 15, 2015</u> <u>Draft permit sent to EPA: May 27, 2015</u> <u>Additional information requested by EPA: None requested, sent correction to condition E19-3 June 8, 2015. Discussed with EPA June 8, and EPA is not targeting this modification for review.</u>		
<u>MM2</u>	<u>July 27, 2015</u>	<b><u>General Information:</u></b>	<u>The change described in the requested modification adds tissue machine No. 1 and three new converting lines (insignificant emission units 54-0012-46, 47, and 48).</u>
		<u>E3-13</u>	<u>Updated Table E3-13 to require "reasonable possibility" recordkeeping for NO<sub>x</sub>, PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.</u>
		<u>E28-1 through E28-4</u>	<u>Added permit conditions (stated input capacity, PM emission limit, visible emissions) for tissue machine No. 1. Added requirement to use ultra-low-NO<sub>x</sub> burners for the Yankee Dryer.</u>  <u><b>Note to Condition E28-2:</b> This condition establishes a PM emission limit based on TAPCR 1200-03-07-.01(5) (mutual agreement for PM emissions). Agreed limits are typically requested in a letter, but since Resolute proposed a limit in the application and cited the correct rule, the application is sufficient to establish mutual agreement for PM emissions.</u>
		<u>Attachment 4</u>	<u>Updated summary of facility emissions to include new source 45.</u>
		<u>Notifications</u>	<u>Initial notification to EPA and affected States: May 27, 2015</u> <u>Draft permit sent to EPA: June 12, 2015</u>

<u>Changes Made to Title V Operating Permit 563810 Since Renewal Issuance</u>			
<u>Permit Modification</u>	<u>Issue Date</u>	<u>Condition or Section</u>	<u>Modification</u>
			Additional information requested by EPA: <u>None requested</u>
<u>Administrative Amendment #1 (AA1)</u>	<u>January 27, 2017</u>	<u>A12</u>	<u>Updated A12(a) to clarify the deadlines for submittal of a renewal application.</u>
		<u>B5, E2-1</u>	<u>Removed the requirement for the ACC to state whether compliance method provide continuous or intermittent data (underlying applicable requirement no longer exists).</u>
<u>Administrative Amendment #1 (AA1)</u>	<u>January 27, 2017</u>	<u>E1</u>	<u>Updated fee table to allow mixed basis fee payment (actual and allowable emissions). Added calculation methods and other requirements for actual emissions analysis.</u>
		<u>E11-1</u>	<u>Corrected PM test date and added lb/hr emission rate.</u>
		<u>E14-2</u>	<u>Added lb/hr emission rate.</u>
<u>Significant Modification #1 (SM1)</u>	<u>October 9, 2017</u>	<b><u>General Information</u></b>	<u>This modification adds the requirements of construction permit 972548 for Tissue Machine #1 (54-0012-45) and the converting facility (54-0012-46, 47, and 48).</u>
		<u>A8, E1</u>	<u>Updated fee requirements. Updated annual account period (AAP) requirements to allow fee payment on a fiscal year or calendar year basis.</u>
		<u>E1</u>	<u>Updated fee emissions summary table by updating source 45 and adding sources 46-48.</u>
		<u>E2(d)</u>	<u>Updated MACT reporting requirement to add Subpart JJJJ.</u>
		<u>E28-1</u>	<u>Increased the stated design input capacity for 54-0012-45 (tissue machine) from 580,000 lb/day to 600,000 lb/day.</u>
		<u>Section E29</u>	<u>Added requirements for 54-0012-46, 47, 48 (converting facility).</u>
		<b><u>Public Comments</u></b>	<u>The public notice for this modification was published in the <i>Daily Post-Athenian</i> on August 15, 2017. There were no comments received during the public comment period.</u>
<u>MM3</u>	<u>March 16, 2020</u>	<b><u>General Information</u></b>	<u>The change described in the requested minor modification to Title V permit 563810 to replace the digester blow tank in the Kraft pulp mill due to the equipment nearing the end of its' useful service life. Also, the responsible official was updated in Condition E3-15. The Division has determined that the requested changes qualify as a minor permit modification</u>
		<u>Conditions</u>	<u>No changes required in any conditions</u>
		<u>Comments</u>	<u>No comments from EPA or Affected States</u>

<u>Changes Made in Title V Renewal Permit 575690 (Issued TBD)</u>	
<u>Condition or Section</u>	<u>Description of Change</u>
<u>B10</u>	<u>Changed to Reserved</u>
<u>D11-D14</u>	<u>These conditions were added</u>
<u>E1, E2, and E3-15</u>	<u>updated</u>
<u>E3-3</u>	<u>Update and add Boiler MACT Language</u>

**STATE OF TENNESSEE  
 AIR POLLUTION CONTROL BOARD  
 DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 NASHVILLE, TENNESSEE 37243**

**OPERATING PERMIT (TITLE V) Issued Pursuant to Tennessee Air Quality Act**

This permit fulfills the requirements of Title V of the Federal Clean Air Act (42 U.S.C. 7661a-7661e) and the federal regulations promulgated thereunder at 40 CFR Part 70. (FR Vol. 57, No. 140, Tuesday, July 21, 1992 p.32295-32312). This permit is issued in accordance with the provisions of paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations. The permittee has been granted permission to operate an air contaminant source in accordance with emissions limitations and monitoring requirements set forth herein.

**Issue Date:** Draft **Permit Number:** 575960

**Expiration Date:** Draft Date + 5 years

**Issued To:** Resolute FP US Inc. - Calhoun Operations  
**Installation Address:** 5020 Highway 11 South  
 Calhoun

**Installation Description: Pulp and paper mill producing newsprint, market pulp and specialty grades**

54-0012-10, 11, 12	Power Boilers F1, F2, & F3	54-0012-33	Causticizing Area
54-0012-19	Coal Handling	54-0012-35	Recycle Mill
54-0012-20	1,500 ADTP/day TMP & Turpentine Rec.	54-0012-36	Chemical Recovery
54-0012-21	Wood Handling Facility	54-0012-37	Wastewater Treatment Plant
54-0012-22	Lime Slaker	54-0012-38	Industrial Landfill #1 – General Mill
54-0012-23	Kraft Pulp Mill with LVHC & HVLC systems	54-0012-39	Industrial Landfill #2 – Recycle Mill Sludge
54-0012-24	Chlorine Dioxide Plant	54-0012-40	950 ADTP/day TMP Pulp System
54-0012-26	No. 3 Recovery Furnace	54-0012-41	Fluidized Bed Multi-Fuel Boiler
54-0012-27	No. 3 Smelt Tank	54-0012-42	Two Fixed-Roof Liquor Storage Tanks
54-0012-28	Bleach Plant	54-0012-43	Three Pulp Refiners
54-0012-30	Lime Kiln	54-0012-44	TMP Bleach Plant
54-0012-31	Stripper Off-Gas (SOG) Incinerator	54-0012-45	Tissue Machine #1
54-0012-32	Paper Mill	54-0012-46, 47, 48	Converting Facility

**Emission Source Reference No.:** 54-0012

**Renewal Application Due Date:** Between 9 and 6 months prior to permit expiration date **Primary SIC:** 26

**Information Relied Upon:** Title V renewal applications dated December 19, 2018  
 (continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

**POST AT INSTALLATION ADDRESS**

(Rev.2-13)

RDA-1298

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**SECTION A**

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**GENERAL PERMIT CONDITIONS**

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A permit issued under the provisions of paragraph 1200-03-09-.02(11) is a permit issued pursuant to the requirements of Title V of the Federal Act and its implementing Federal regulations promulgated at 40 CFR, Part 70.

- A1. Definitions.** Terms not otherwise defined in the permit shall have the meaning assigned to such terms in the referenced regulation.

TAPCR 1200-03

- A2. Compliance requirement.** All terms and conditions in a permit issued pursuant to paragraph 1200-03-09-.02(11) including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act.

The permittee shall comply with all conditions of its permit. Except for requirements specifically designated herein as not being federally enforceable (State Only), non-compliance with the permit requirements is a violation of the Federal Act and the Tennessee Air Quality Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Non-compliance with permit conditions specifically designated herein as not being federally enforceable (State Only) is a violation of the Tennessee Air Quality Act and may be grounds for these actions.

TAPCR 1200-03-09-.02(11)(e)2(i) and 1200-03-09-.02(11)(e)1(vi)(I)

- A3. Need to halt or reduce activity.** The need to halt or reduce activity is not a defense for noncompliance. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this item shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations.

TAPCR 1200-03-09-.02(11)(e)1(vi)(II)

- A4. The permit.** The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

TAPCR 1200-03-09-.02(11)(e)1(vi)(III)

- A5. Property rights.** The permit does not convey any property rights of any sort, or any exclusive privilege.

TAPCR 1200-03-09-.02(11)(e)1(vi)(IV)

- A6. Submittal of requested information.** The permittee shall furnish to the Technical Secretary, within a reasonable time, any information that the Technical Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or termination of the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Technical Secretary copies of records required to be kept by the permit. If the permittee claims that such information is confidential, the Technical Secretary may review that claim and hold the information in protected status until such time that the Board can hear any contested proceedings regarding confidentiality disputes. If the information is desired by EPA, the permittee may mail the information directly to EPA. Any claims of confidentiality for federal purposes will be determined by EPA.

TAPCR 1200-03-09-.02(11)(e)1(vi)(V)

**A7. Severability clause.** The requirements of this permit are severable. A dispute regarding one or more requirements of this permit does not invalidate or otherwise excuse the permittee from their duty to comply with the remaining portion of the permit.

TAPCR 1200-03-09.02(11)(e)1(v)

**A8. Fee payment.**

(a) The permittee shall pay an annual Title V emission fee based upon the responsible official's choice of actual emissions, allowable emissions, or a combination of actual and allowable emissions; and on the responsible official's choice of annual accounting period. An emission cap of 4,000 tons per year per regulated pollutant per major source SIC Code shall apply to actual or allowable based emission fees. A Title V annual emission fee will not be charged for emissions in excess of the cap. Title V annual emission fees will not be charged for carbon monoxide or for greenhouse gas pollutants solely because they are greenhouse gases.

(b) Title V sources shall pay allowable based emission fees until the beginning of the next annual accounting period following receipt of their initial Title V operating permit. At that time, the permittee shall begin paying their Title V fee based upon their choice of actual or allowable based fees, or mixed actual and allowable based fees. Once permitted, the Responsible Official may revise their existing fee choice by submitting a written request to the Division no later than December 31 of the annual accounting period for which the fee is due.

(c) When paying annual Title V emission fees, the permittee shall comply with all provisions of 1200-03-26-.02 and 1200-03-09-.02(11) applicable to such fees.

(d) Where more than one (1) allowable emission limit is applicable to a regulated pollutant, the allowable emissions for the regulated pollutants shall not be double counted. Major sources subject to the provisions of paragraph 1200-03-26-.02(9) shall apportion their emissions as follows to ensure that their fees are not double counted.

1. Sources that are subject to federally promulgated hazardous air pollutant under 40 CFR 60, 61, or 63 will place such regulated emissions in the regulated hazardous air pollutant (HAP) category.

2. A category of miscellaneous HAPs shall be used for hazardous air pollutants listed at part 1200-03-26-.02(2)(i)12 that are not subject to federally promulgated hazardous air pollutant standards under 40 CFR 60, 61, or 63.

3. HAPs that are also in the family of volatile organic compounds, particulate matter, or PM<sub>10</sub> shall not be placed in either the regulated HAP category or miscellaneous HAP category.

4. Sources that are subject to a provision of chapter 1200-03-16 New Source Performance Standards (NSPS) or chapter 0400-30-39 Standards of Performance for New Stationary Sources for pollutants that are neither particulate matter, PM<sub>10</sub>, sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), or hazardous air pollutants (HAPs) will place such regulated emissions in an NSPS pollutant category.

5. The regulated HAP category, the miscellaneous HAP category, and the NSPS pollutant category are each subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i).

6. Major sources that wish to pay annual emission fees for PM<sub>10</sub> on an allowable emission basis may do so if they have a specific PM<sub>10</sub> allowable emission standard. If a major source has a total particulate emission standard, but wishes to pay annual emission fees on an actual PM<sub>10</sub> emission basis, it may do so if the PM<sub>10</sub> actual emission levels are proven to the satisfaction of the Technical Secretary. The method to demonstrate the actual PM<sub>10</sub> emission levels must be made as part of the source's major source operating permit in advance in order to exercise this option. The PM<sub>10</sub> emissions reported under these options shall not be subject to fees under the family of particulate emissions. The 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) shall also apply to PM<sub>10</sub> emissions.

TAPCR 1200-03-26-.02 and 1200-03-09-.02(11)(e)1(vii)

**A9. Permit revision not required.** A permit revision will not be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or process for changes that are provided for in the permit.

TAPCR 1200-03-09-.02(11)(e)1(viii)

**A10. Inspection and entry.** Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Technical Secretary or an authorized representative to perform the following for the purposes of determining compliance with the permit applicable requirements:

(a) Enter upon, at reasonable times, the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(d) As authorized by the Clean Air Act and Chapter 1200-03-10 of TAPCR, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(e) "Reasonable times" shall be considered to be customary business hours unless reasonable cause exists to suspect noncompliance with the Act, Division 1200-03 or any permit issued pursuant thereto and the Technical Secretary specifically authorizes an inspector to inspect a facility at any other time.

TAPCR 1200-03-09-.02(11)(e)3.(ii)

**A11. Permit shield.**

(a) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date of permit issuance, provided that:

1. Such applicable requirements are included and are specifically identified in the permit; or
2. The Technical Secretary, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(b) Nothing in this permit shall alter or affect the following:

1. The provisions of section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section. Similarly, the provisions of T.C.A. §68-201-109 (emergency orders) including the authority of the Governor under the section;
2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
3. The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Act; or
4. The ability of EPA to obtain information from a source pursuant to section 114 of the Federal Act.

(c) Permit shield is granted to the permittee.

TAPCR 1200-03-09-.02(11)(e)6

**A12. Permit renewal and expiration.**

(a) An application for permit renewal must be submitted at least 180 days, but no more than 270 days prior to the expiration of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted.

(b) If the permittee submits a timely and complete application for permit renewal the source will not be considered to be operating without a permit until the Technical Secretary takes final action on the permit application, except as otherwise noted in paragraph 1200-03-09-.02(11).

(c) This permit, its shield provided in Condition A11, and its conditions will be extended and effective after its expiration date provided that the source has submitted a timely, complete renewal application to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)2 and 3, 1200-03-09-.02(11)(d)1(i)(III), and 1200-03-09-.02(11)(a)2

**A13. Reopening for cause.**

(a) A permit shall be reopened and revised prior to the expiration of the permit under any of the circumstances listed below:

1. Additional applicable requirements under the Federal Act become applicable to the sources contained in this permit provided the permit has a remaining term of 3 or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the permit expiration date of this permit, unless the original has been extended pursuant to 1200-03-09-.02(11)(a)2.
2. Additional requirements become applicable to an affected source under the acid rain program.
3. The Technical Secretary or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
4. The Technical Secretary or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(b) Proceedings to reopen and issue a permit shall follow the same proceedings as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists, and not the entire permit. Such reopening shall be made as expeditiously as practicable.

(c) Reopenings for cause shall not be initiated before a notice of such intent is provided to the permittee by the Technical Secretary at least 30 days in advance of the date that the permit is to be reopened except that the Technical Secretary may provide a shorter time period in the case of an emergency. An emergency shall be established by the criteria of T.C.A. 68-201-109 or other compelling reasons that public welfare is being adversely affected by the operation of a source that is in compliance with its permit requirements.

**(d)** If the Administrator finds that cause exists to terminate, modify, or revoke and reissue a permit as identified in A13, he is required under federal rules to notify the Technical Secretary and the permittee of such findings in writing. Upon receipt of such notification, the Technical Secretary shall investigate the matter in order to determine if he agrees or disagrees with the Administrator's findings. If he agrees with the Administrator's findings, the Technical Secretary shall conduct the reopening in the following manner:

1. The Technical Secretary shall, within 90 days after receipt of such notification, forward to EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate. If the Administrator grants additional time to secure permit applications or additional information from the permittee, the Technical Secretary shall have the additional time period added to the standard 90 day time period.
2. EPA will evaluate the Technical Secretary's proposed revisions and respond as to their evaluation.
3. If EPA agrees with the proposed revisions, the Technical Secretary shall proceed with the reopening in the same manner prescribed under Condition A13 (b) and Condition A13 (c).
4. If the Technical Secretary disagrees with either the findings or the Administrator that a permit should be reopened or an objection of the Administrator to a proposed revision to a permit submitted pursuant to Condition A13(d), he shall bring the matter to the Board at its next regularly scheduled meeting for instructions as to how he should proceed. The permittee shall be required to file a written brief expressing their position relative to the Administrator's objection and have a responsible official present at the meeting to answer questions for the Board. If the Board agrees that EPA is wrong in their demand for a permit revision, they shall instruct the Technical Secretary to conform to EPA's demand, but to issue the permit under protest preserving all rights available for litigation against EPA.

TAPCR. 1200-03-09-.02(11)(f)6 and 7.

- A14. Permit transference.** An administrative permit amendment allows for a change of ownership or operational control of a source where the Technical Secretary determines that no other change in the permit is necessary, provided that the following requirements are met:
- (a) Transfer of ownership permit application is filed consistent with the provisions of 1200-03-09-.03(6), and
  - (b) written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Technical Secretary.

TAPCR 1200-03-09-.02(11)(f)4(i)(IV) and 1200-03-09-.03(6)

- A15. Air pollution alert.** When the Technical Secretary has declared that an air pollution alert, an air pollution warning, or an air pollution emergency exists, the permittee must follow the requirements for that episode level as outlined in TAPCR 1200-03-09-.03(1) and TAPCR 1200-03-15-.03.

- A16. Construction permit required.** Except as exempted in TAPCR 1200-03-09-.04, or excluded in subparagraph TAPCR 1200-03-02-.01(1)(aa) or subparagraph TAPCR 1200-03-02-.01(1)(cc), this facility shall not begin the construction of a new air contaminant source or the modification of an air contaminant source which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such air contaminant source.

TAPCR 1200-03-09-.01(1)(a)

- A17. Notification of changes.** The permittee shall notify the Technical Secretary 30 days prior to commencement of any of the following changes to an air contaminant source which would not be a modification requiring a construction permit.
- (a) change in air pollution control equipment
  - (b) change in stack height or diameter
  - (c) change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

TAPCR 1200-03-09-.02(7)

- A18. Schedule of compliance.** The permittee will comply with any applicable requirement that becomes effective during the permit term on a timely basis. If the permittee is not in compliance the permittee must submit a schedule for coming into compliance which must include a schedule of remedial measure(s), including an enforceable set of deadlines for specific actions.

TAPCR 1200-03-09-.02(11)(d)3 and 40 CFR Part 70.5(c)

**A19. Title VI.**

- (a) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.
  2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.
  3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.
- (b) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- (c) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program(SNAP) promulgated pursuant to 40 CFR, Part 82, Subpart G, Significant New Alternatives Policy Program.

- A20. 112 (r).** Sources which are subject to the provisions of Section 112(r) of the federal Clean Air Act or any federal regulations promulgated thereunder, shall annually certify in writing to the Technical Secretary that they are properly following their accidental release plan. The annual certification is due in the office of the Technical Secretary no later than January 31 of each year. Said certification will be for the preceding calendar year.

TAPCR 1200-03-32-.03(3)

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## SECTION B

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# GENERAL CONDITIONS for MONITORING, REPORTING, and ENFORCEMENT

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**B1. Recordkeeping.** Monitoring and related record keeping shall be performed in accordance with the requirements specified in the permit conditions for each individual permit unit. In no case shall reports of any required monitoring and record keeping be submitted less frequently than every six months.

- (a) Where applicable, records of required monitoring information include the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
  2. The date(s) analyses were performed;
  3. The company or entity that performed the analysis;
  4. The analytical techniques or methods used;
  5. The results of such analyses; and
  6. The operating conditions as existing at the time of sampling or measurement.

(b) Digital data accumulation which utilizes valid data compression techniques shall be acceptable for compliance determination as long as such compression does not violate an applicable requirement and its use has been approved in advance by the Technical Secretary.

TAPCR 1200-03-09-.02(11)(e)1(iii)

**B2. Retention of monitoring data.** The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

TAPCR 1200-03-09-.02(11)(e)1(iii)(II)II

**B3. Reporting.** Reports of any required monitoring and record keeping shall be submitted to the Technical Secretary in accordance with the frequencies specified in the permit conditions for each individual permit unit. Reports shall be submitted within 60 days of the close of the reporting period unless otherwise noted. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. Reports required under "State only requirements" are not required to be certified by a responsible official.

TAPCR 1200-03-09-.02(11)(e)1(iii)

**B4. Certification.** Except for reports required under "State Only" requirements, any application form, report or compliance certification submitted pursuant to the requirements of this permit shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

TAPCR 1200-03-09-.02(11)(d)4

**B5. Annual compliance certification.** The permittee shall submit annually compliance certifications with terms and conditions contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (a) The identification of each term or condition of the permit that is the basis of the certification;
- (b) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (c) The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in B5(b) above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion\* or exceedance\*\* as defined below occurred; and
- (d) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

\* "Excursion" shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

\*\* "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667

**B6. Submission of compliance certification.** The compliance certification shall be submitted to:

The Tennessee Department of Environment and Conservation Environmental Field Office specified in Section E of this permit	and	Air Enforcement Branch US EPA Region IV 61 Forsyth Street, SW Atlanta, Georgia 30303
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TAPCR 1200-03-09-.02(11)(e)3(v)(IV)

**B7. Emergency provisions.** An emergency constitutes an affirmative defense to an enforcement action brought against this source for noncompliance with a technology based emission limitation due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

(a) The affirmative defense of the emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the permittee can identify the probable cause(s) of the emergency. "Probable" must be supported by a credible investigation into the incident that seeks to identify the causes and results in an explanation supported by generally accepted engineering or scientific principles.

2. The permitted source was at the time being properly operated. In determining whether or not a source was being properly operated, the Technical Secretary shall examine the source's written standard operating procedures which were in effect at the time of the noncompliance and any other code as detailed below that would be relevant to preventing the noncompliance. Adherence to the source's standard operating procedures will be the test of adequate preventative maintenance, careless operation, improper operation or operator error to the extent that such adherence would prevent noncompliance. The source's failure to follow recognized standards of practice to the extent that adherence to such a standard would have prevented noncompliance will disqualify the source from any claim of an emergency and an affirmative defense.

3. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

4. The permittee submitted notice of the emergency to the Technical Secretary according to the notification criteria for malfunctions in rule 1200-03-20-.03. For the purposes of this condition, "emergency" shall be substituted for "malfunction(s)" in rule 1200-03-20-.03 to determine the relevant notification threshold. The notice shall include a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) The provisions of this condition are in addition to any emergency, malfunction or upset requirement contained in Division 1200-03 or other applicable requirement.

TAPCR 1200-03-09-.02(11)(e)7

**B8. Excess emissions reporting.**

(a) The permittee shall promptly notify the Technical Secretary when any emission source, air pollution control equipment, or related facility breaks down in such a manner to cause the emission of air contaminants in excess of the applicable emission standards contained in Division 1200-03 or any permit issued thereto, or of sufficient duration to cause damage to property or public health. The permittee must provide the Technical Secretary with a statement giving all pertinent facts, including the estimated duration of the breakdown. Violations of the visible emission standard which occur for less than 20 minutes in one day (midnight to midnight) need not be reported. Prompt notification will be within 24 hours of the malfunction and shall be provided by telephone to the Division's Nashville office. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected. In attainment and unclassified areas if emissions other than from sources designated as significantly impacting on a nonattainment area in excess of the standards will not and do not occur over more than a 24-hour period (or will not recur over more than a 24-hour period) and no damage to property and or public health is anticipated, notification is not required.

(b) Any malfunction that creates an imminent hazard to health must be reported by telephone immediately to the Division's Nashville office at (615) 532-0554 and to the State Civil Defense.

(c) A log of all malfunctions, startups, and shutdowns resulting in emissions in excess of the standards in Division 1200-03 or any permit issued thereto must be kept at the plant. All information shall be entered in the log no later than twenty-four (24) hours after the startup or shutdown is complete, or the malfunction has ceased or has been corrected. Any later discovered corrections can be added in the log as footnotes with the reason given for the change. This log must record at least the following:

1. Stack or emission point involved
2. Time malfunction, startup, or shutdown began and/or when first noticed
3. Type of malfunction and/or reason for shutdown
4. Time startup or shutdown was complete or time the air contaminant source returned to normal operation
5. The company employee making entry on the log must sign, date, and indicate the time of each log entry

The information under items 1. and 2. must be entered into the log by the end of the shift during which the malfunction or startup began. For any source utilizing continuous emission(s) monitoring, continuous emission(s) monitoring collection satisfies the above log keeping requirement.

TAPCR 1200-03-20-.03 and .04

**B9. Malfunctions, startups and shutdowns - reasonable measures required.** The permittee must take all reasonable measures to keep emissions to a minimum during startups, shutdowns, and malfunctions. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment and/or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Failures that are caused by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions. This provision does not apply to standards found in 40 CFR, Parts 60(Standards of performance for new stationary sources), 61(National emission standards for hazardous air pollutants) and 63(National emission standards for hazardous air pollutants for source categories).

TAPCR 1200-03-20-.02

**B10.** Reserved.

**B11. Report required upon the issuance of a notice of violation for excess emissions.** The permittee must submit within twenty (20) days after receipt of the notice of violation, the data required below. If this data has previously been available to the Technical Secretary prior to the issuance of the notice of violation no further action is required of the violating source. However, if the source desires to submit additional information, then this must be submitted within the same twenty (20) day time period. The minimum data requirements are:

- (a) The identity of the stack and/or other emission point where the excess emission(s) occurred;
- (b) The magnitude of the excess emissions expressed in pounds per hour and the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
- (c) The time and duration of the emissions;
- (d) The nature and cause of such emissions;
- (e) For malfunctions, the steps taken to correct the situation and the action taken or planned to prevent the recurrence of such malfunctions;
- (f) The steps taken to limit the excess emissions during the occurrence reported, and
- (g) If applicable, documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good operating practices for minimizing emissions.

Failure to submit the required report within the twenty (20) day period specified shall preclude the admissibility of the data for determination of potential enforcement action.

TAPCR 1200-03-20-.06(2), (3) and (4)

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## SECTION C

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# PERMIT CHANGES

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- C1. Operational flexibility changes.** The source may make operational flexibility changes that are not addressed or prohibited by the permit without a permit revision subject to the following requirements:
- (a) The change cannot be subject to a requirement of Title IV of the Federal Act or Chapter 1200-03-30.
  - (b) The change cannot be a modification under any provision of Title I of the federal Act or Division 1200-03.
  - (c) Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
  - (d) The source must provide contemporaneous written notice to the Technical Secretary and EPA of each such change, except for changes that are below the threshold of levels that are specified in Rule 1200-03-09-.04.
  - (e) Each change shall be described in the notice including the date, any change in emissions, pollutants emitted, and any applicable requirements that would apply as a result of the change.
  - (f) The change shall not qualify for a permit shield under the provisions of part 1200-03-09-.02(11)(e)6.
  - (g) The permittee shall keep a record describing the changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes. The records shall be retained until the changes are incorporated into subsequently issued permits.

TAPCR 1200-03-09-.02(11)(a)4 (ii)

- C2. Section 502(b)(10) changes.**
- (a) The permittee can make certain changes without requiring a permit revision, if the changes are not modifications under Title I of the Federal Act or Division 1200-03 and the changes do not exceed the emissions allowable under the permit. The permittee must, however, provide the Administrator and Technical Secretary with written notification within a minimum of 7 days in advance of the proposed changes. The Technical Secretary may waive the 7 day advance notice in instances where the source demonstrates in writing that an emergency necessitates the change. Emergency shall be demonstrated by the criteria of TAPCR 1200-03-09-.02(11)(e)7 and in no way shall it include changes solely to take advantages of an unforeseen business opportunity. The Technical Secretary and EPA shall attach each such notice to their copy of the relevant permit.
  - (b) The written notification must be signed by a facility Title V responsible official and include the following:
    - 1. a brief description of the change within the permitted facility;
    - 2. the date on which the change will occur;
    - 3. a declaration and quantification of any change in emissions;
    - 4. a declaration of any permit term or condition that is no longer applicable as a result of the change; and
    - 5. a declaration that the requested change is not a Title I modification and will not exceed allowable emissions under the permit.
  - (c) The permit shield provisions of TAPCR 1200-03-09-.02(11)(e)6 shall not apply to Section 502(b)(10) changes.

TAPCR 1200-03-09-.02(11)(a)4 (i)

- C3. Administrative amendment.**
- (a) Administrative permit amendments to this permit shall be in accordance with 1200-03-09-.02(11)(f)4. The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.
  - (b) The permit shield shall be extended as part of an administrative permit amendment revision consistent with the provisions of TAPCR 1200-03-09-.02(11)(e)6 for such revisions made pursuant to item (c) of this condition which meet the relevant requirements of TAPCR 1200-03-09-.02(11)(e), TAPCR 1200-03-09-.02(11)(f) and TAPCR 1200-03-09-.02(11)(g) for significant permit modifications.
  - (c) Proceedings to review and grant administrative permit amendments shall be limited to only those parts of the permit for which cause to amend exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)4

- C4. Minor permit modifications.**
- (a) The permittee may submit an application for a minor permit modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(ii).
  - (b) The permittee may make the change proposed in its minor permit modification immediately after an application is filed with the Technical Secretary.
  - (c) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.
  - (d) Minor permit modifications do not qualify for a permit shield.

TAPCR 1200-03-09-.02(11)(f)5(ii)

**C5. Significant permit modifications.**

(a) The permittee may submit an application for a significant modification in accordance with TAPCR 1200-03-09-.02(11)(f)5(iv).

(b) Proceedings to review and modify permits shall be limited to only those parts of the permit for which cause to modify exists, and not the entire permit.

TAPCR 1200-03-09-.02(11)(f)5(iv)

**C6. New construction or modifications.**

Future construction at this facility that is subject to the provisions of TAPCR 1200-03-09-.01 shall be governed by the following:

(a) The permittee shall designate in their construction permit application the route that they desire to follow for the purposes of incorporating the newly constructed or modified sources into their existing operating permit. The Technical Secretary shall use that information to prepare the operating permit application submittal deadlines in their construction permit.

(b) Sources desiring the permit shield shall choose the administrative amendment route of TAPCR 1200-03-09-.02(11)(f)4 or the significant modification route of TAPCR 1200-03-09-.02(11)(f)5(iv).

(c) Sources desiring expediency instead of the permit shield shall choose the minor permit modification procedure route of TAPCR 1200-03-09-.02(11)(f)5(ii) or group processing of minor modifications under the provisions of TAPCR 1200-03-09-.02(11)(f)5(iii) as applicable to the magnitude of their construction.

TAPCR 1200-03-09-.02(11)(d) 1(i)(V)

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**SECTION D**

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**GENERAL APPLICABLE REQUIREMENTS**

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- D1. Visible emissions.** With the exception of air emission sources exempt from the requirements of TAPCR Chapter 1200-03-05 and air emission sources for which a different opacity standard is specifically provided elsewhere in this permit, the permittee shall not cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that for fuel burning installations with fuel burning equipment of input capacity greater than 600 million btu per hour, the permittee shall not cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six minute period per one (1) hour of not more than forty (40) percent opacity. Sources constructed or modified after July 7, 1992 shall utilize 6-minute averaging.

Consistent with the requirements of TAPCR Chapter 1200-03-20, due allowance may be made for visible emissions in excess of that permitted under TAPCR 1200-03-05 which are necessary or unavoidable due to routine startup and shutdown conditions. The facility shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or an authorized representative upon request.

TAPCR 1200-03-05-.01(1), TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.02(1)

- D2. General provisions and applicability for non-process gaseous emissions.** Any person constructing or otherwise establishing a non-portable air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

TAPCR 1200-03-06-.03(2)

- D3. Non-process emission standards.** The permittee shall not cause, suffer, allow, or permit particulate emissions from non-process sources in excess of the standards in TAPCR 1200-03-06.

- D4. General provisions and applicability for process gaseous emissions.** Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

TAPCR 1200-03-07-.07(2)

- D5. Particulate emissions from process emission sources.** The permittee shall not cause, suffer, allow, or permit particulate emissions from process sources in excess of the standards in TAPCR 1200-03-07.

- D6. Sulfur dioxide emission standards.** The permittee shall not cause, suffer, allow, or permit Sulfur dioxide emissions from process and non-process sources in excess of the standards in TAPCR 1200-03-14. Regardless of the specific emission standard, new process sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

- D7. Fugitive Dust.**

(a) The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, material stock piles, and other surfaces which can create airborne dusts;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

(b) The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in Chapter 1200-03-20.

TAPCR 1200-03-08

**D8. Open burning.** The permittee shall comply with the TAPCR 1200-03-04 for all open burning activities at the facility.

TAPCR 1200-03-04

**D9. Asbestos.** Where applicable, the permittee shall comply with the requirements of TAPCR 1200-03-11-.02(2)(d) when conducting any renovation or demolition activities at the facility.

TAPCR 1200-03-11-.02(2)(d) and 40 CFR, Part 61

**D10. Annual certification of compliance.** The generally applicable requirements set forth in Section D of this permit are intended to apply to activities and sources that are not subject to source-specific applicable requirements contained in State of Tennessee and U.S. EPA regulations. By annual certification of compliance, the permittee shall be considered to meet the monitoring and related record keeping and reporting requirements of TAPCR 1200-03-09-.02(11)(e)1.(iii) and 1200-03-10-.04(2)(b)1 and compliance requirements of TAPCR 1200-03-09-.02(11)(e)3.(i). The permittee shall submit compliance certification for these conditions annually.

**D11. Emission Standards for Hazardous Air Pollutants.** When applicable, the permittee shall comply with the TAPCR 0400-30-38 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-38

**D12. Standards of Performance for New Stationary Sources.** When applicable, the permittee shall comply with the TAPCR 0400-30-39 for all emission sources subject to a requirement contained therein.

TAPCR 0400-30-39

**D13. Gasoline Dispensing Facilities.** When applicable, the permittee shall comply with the TAPCR 1200-03-18-.24 for all emission sources subject to a requirement contained therein.

**D14. Internal Combustion Engines.**

- (a) All stationary reciprocating internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-38-.01.
- (b) All stationary compression ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.01.
- (c) All stationary spark ignition internal combustion engines, including engines deemed insignificant activities and insignificant emission units, shall comply with the applicable provisions of TAPCR 0400-30-39-.02.

TAPCR 0400-30-38 and 39

**SECTION E**

**SOURCE SPECIFIC EMISSION STANDARDS, OPERATING LIMITATIONS, and MONITORING, RECORDKEEPING and REPORTING REQUIREMENTS**

<b>54-0012</b>	<b>Facility Description:</b>	Kraft pulp and paper mill producing newsprint, market pulp, and specialty grades
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Conditions E1 through E3-14 apply to all sources in Section E of this permit unless otherwise noted.

**E1. Fee payment**

**FEE EMISSIONS SUMMARY TABLE FOR MAJOR SOURCE 54-0012**

REGULATED POLLUTANTS	ALLOWABLE EMISSIONS (tons per AAP)	ACTUAL EMISSIONS (tons per AAP)	COMMENTS
PARTICULATE MATTER (PM)	681 SM1	AEAR	Actual emissions basis for Power Boilers F1, F2, F3; No. 3 Recovery Furnace; and Lime Kiln. Allowable emissions basis for other sources.
PM <sub>10</sub>	N/A	N/A	PM <sub>10</sub> is included in value of PM above
SO <sub>2</sub>	1,042 AA1	AEAR	Actual emissions basis for Power Boilers F1, F2, F3; No. 3 Recovery Furnace; and Lime Kiln. Allowable emissions basis for other sources.
VOC	912 SM1	AEAR	Actual emissions basis for No. 3 Recovery Furnace and Lime Kiln. Allowable emissions basis for other sources.
NO <sub>x</sub>	1,172 AA1	AEAR	Actual emissions basis for Power Boilers F1, F2, F3, and Lime Kiln. Allowable emissions basis for other sources.
<b>CATEGORY OF MISCELLANEOUS HAZARDOUS AIR POLLUTANTS (HAP WITHOUT A STANDARD)*</b>			
VOC FAMILY GROUP	N/A	N/A	Included in VOC above
NON-VOC GASEOUS GROUP	245.2	N/A	Emissions are primarily HCl and HF from coal burning and recovery furnace
PM FAMILY GROUP	0.6	N/A	HAP metals from boilers not included in PM above
<b>CATEGORY OF SPECIFIC HAZARDOUS AIR POLLUTANTS (HAP WITH A STANDARD)</b>			
VOC FAMILY GROUP		N/A	
Chloroform	141.8		Chloroform emissions from bleach plant, methanol emissions from Kraft mill, SOG incinerator, lime kiln, and weak black liquor storage tanks. Fee emissions are not included in VOC above.
Methanol	85.4		
NON-VOC GASEOUS GROUP		N/A	
Chlorine	25.9		Chlorine from bleach plant and ClO <sub>2</sub> plant
PM FAMILY GROUP		N/A	
Mercury	1.3		Mercury from multi-fuel boiler. Fee emissions are not included in PM above
<b>CATEGORY OF NSPS POLLUTANTS NOT LISTED ABOVE</b>			
EACH NSPS POLLUTANT NOT LISTED ABOVE TRS	64.5	N/A	

\*NOTES

**AAP** The **Annual Accounting Period (AAP)** is a twelve (12) consecutive month period that **either (a) begins each July 1st and ends June 30<sup>th</sup> of the following year if fees are paid on a fiscal year basis, or (b) begins January 1<sup>st</sup> and ends December 31<sup>st</sup> of the same year if paying on a calendar year basis.** The **Annual Accounting Period began July 1, 2019 and ends June 30, 2020.** The next Annual Accounting Period begins **July 1, 2020** and ends **June 30, 2021** unless a request to change the annual accounting period is submitted by the responsible official as required by subparagraph 1200-03-26-.02(9)(b) of the TAPCR and approved by the Technical Secretary. If the permittee wishes to revise their annual accounting period or their annual emission fee basis as allowed by subparagraph 1200-03-26-.02(9)(b) of the TAPCR, the responsible official must submit the request the Division in writing on or before December 31 of the annual accounting period for which the fee is due. If a change in fee basis from allowable emissions to actual emissions for any pollutant is requested, the request from the responsible official must include the methods that will be used to determine actual emissions.

**N/A** N/A indicates that no emissions are specified for fee computation.

**AEAR** If paying annual emission fees on an actual emissions basis, **AEAR** indicates that an **Actual Emissions Analysis** is Required to determine the actual emissions of:

- (1) **each regulated pollutant** (Particulate matter, SO<sub>2</sub>, VOC, NO<sub>x</sub> and so forth. See TAPCR 1200-03-26-.02(2)(i) for the definition of a regulated pollutant.),
- (2) **each pollutant group** (VOC Family, Non-VOC Gaseous, and Particulate Family),
- (3) **the Miscellaneous HAP Category**
- (4) **the Specific HAP Category, and**
- (5) **the NSPS Category**

under consideration during the **Annual Accounting Period.**

Actual emissions for this facility shall be calculated as follows:

<b>Emission Unit Description</b>	<b>Pollutant</b>	<b>Calculation Method</b>
Power Boilers F1, F2, F3 (54-0012-10, 11, 12)	PM	Calculate emissions from AP-42 emission factor for natural gas combustion and actual natural gas usage.
	SO <sub>2</sub>	
	NO <sub>x</sub>	
No. 3 Recovery Furnace (54-0012-26)	PM	PM emissions = (25.7 lb/hr)(actual operating hours)/(2,000 lb/ton)  The hourly emission rate is based on the July 27, 2004 stack test result (0.0143 gr/dscf at 8% O <sub>2</sub> ).
	SO <sub>2</sub>	SO <sub>2</sub> emissions = (1.0 lb/hr)(actual operating hours) / (2,000 lb/ton)  The hourly emission rate is assumed, based on the February 22, 1995 stack test. This stack test indicated negligible SO <sub>2</sub> emissions (0 ppmv at 8% O <sub>2</sub> ).
	VOC	(0.07 lb/ton BLS)(tons BLS)/(2,000 lb/ton)  The emission factor is based on NCASI Technical Bulletin #1020.
Lime Kiln (54-0012-30)	PM	PM emissions = (14.7 lb/hr)(actual operating hours)/(2,000 lb/ton)  The hourly emission rate is based on the September 5, 2005 stack test.
	SO <sub>2</sub>	SO <sub>2</sub> emissions = (0.5 lb/hr)(actual operating hours)/(2,000 lb/ton)  The hourly emission rate is based on the November 15, 1990 stack test.
	NO <sub>x</sub>	NO <sub>x</sub> emissions = (5.8 lb/hr)(actual operating hours)/(2,000 lb/ton)  The hourly emission rate is based on the November 15, 1990 stack test.

	VOC	VOC emissions = (0.02 lb/ton CaO produced)(tons CaO)/(2,000 lb/ton) The emission factor is based on NCASI Technical Bulletin #1020.
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\* **Category Of Miscellaneous HAP (HAP Without A Standard):** This category is made-up of hazardous air pollutants that do not have a federal or state standard. Each HAP is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, the **Miscellaneous HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

\*\* **Category Of Specific HAP (HAP With A Standard):** This category is made-up of hazardous air pollutants (HAP) that are subject to Federally promulgated Hazardous Air Pollutant Standards that can be imposed under Chapter 1200-03-11 or Chapter 1200-03-31. Each individual hazardous air pollutant is classified into one of three groups, the **VOC Family** group, the **Non-VOC Gaseous** group, or the **Particulate (PM) Family** group. **For fee computation**, each individual hazardous air pollutant of the **Specific HAP Category** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

\*\*\* **Category Of NSPS Pollutants Not Listed Above:** This category is made-up of each New Source Performance Standard (NSPS) pollutant whose emissions are not included in the **PM, SO<sub>2</sub>, VOC** or **NO<sub>x</sub>** emissions from each source in this permit. **For fee computation**, each **NSPS pollutant not listed above** is subject to the 4,000 ton cap provisions of subparagraph 1200-03-26-.02(2)(i) of the TAPCR.

#### END NOTES

- The permittee shall:**
- (1) Pay Title V **annual emission fees**, on the emissions and year bases requested by the responsible official and approved by the Technical Secretary, for each annual accounting period (AAP) by the payment deadline(s) established in TAPCR 1200-03-26-.02(9)(g). Fees may be paid on an **actual, allowable**, or **mixed** emissions basis; and on either a **state fiscal year** or a **calendar year**, provided the requirements of TAPCR 1200-03-26-.02(9)(b) are met. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8).
  - (2) Sources paying annual emissions fees on an allowable emissions basis: pay annual allowable based emission fees for each annual accounting period no later than April 1 of each year pursuant to TAPCR 1200-03-26-.02(9)(d).
  - (3) Sources paying annual emissions fees on an actual emissions basis: prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
    - (a) the completed **Fee Emissions Summary Table**,
    - (b) each **actual emissions analysis** required, and
    - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. These calculations must be based on the annual fee basis approved by the Technical Secretary (a state fiscal year [July 1 through June 30] or a calendar year [January 1 through December 31]). These records shall be used to complete the **actual emissions analyses** required by the above **Fee Emissions Summary Table**.
  - (4) Sources paying annual emissions fees on a mixed emissions basis: for all pollutants and all sources for which the permittee has chosen an actual emissions basis, prepare an **actual emissions analysis** for each AAP and pay **actual based emission fees** pursuant to TAPCR 1200-03-26-.02(9)(d). The **actual emissions analysis** shall include:
    - (a) the completed **Fee Emissions Summary Table**,
    - (b) each **actual emissions analysis** required, and
    - (c) the actual emission records for each pollutant and each source as required for actual emission fee determination, or a summary of the actual emission records required for fee determination, as specified by the Technical Secretary or the Technical Secretary's representative. These calculations must be based on the fee bases approved by the Technical Secretary (payment on an actual or mixed emissions basis) and payment on a state fiscal year (July 1 through June 30) or a calendar year (January 1 through December 31). These records shall be used to complete the **actual emissions analysis**.

For all pollutants and all sources for which the permittee has chosen an allowable emissions basis, pay allowable based emission fees pursuant to TAPCR 1200-03-26-.02(9)(d).

- (5) When paying on an actual or mixed emissions basis, submit the **actual emissions analyses** at the time the fees are paid in full.

The annual emission fee due dates are specified in TAPCR 1200-03-26-.02(9)(g) and are dependent on the Responsible Official’s choice of fee bases as described above. If any part of any fee imposed under TAPCR 1200-03-26-.02 is not paid within fifteen (15) days of the due date, penalties shall at once accrue as specified in TAPCR 1200-03-26-.02(8). Emissions for regulated pollutants shall not be double counted as specified in Condition A8(d) of this permit.

**Payment of the fee due and the actual emissions analysis (if required) shall be submitted to The Technical Secretary at the following address:**

Payment of Fee to:  
 The Tennessee Department of Environment and Conservation  
 Division of Fiscal Services  
 Consolidated Fee Section – APC  
 William R. Snodgrass Tennessee Tower  
 312 Rosa L. Parks Avenue, 10th Floor  
 Nashville, Tennessee 37243

Actual Emissions Analyses to:  
 The Tennessee Department of Environment and Conservation  
 Division of Air Pollution Control  
 East Tennessee Permit Program  
 William R. Snodgrass Tennessee Tower  
 312 Rosa L. Parks Avenue, 15th Floor  
 Nashville, Tennessee 37243

or  
 An electronic copy (PDF) of actual emissions analysis can also be submitted to: [apc.inventory@tn.gov](mailto:apc.inventory@tn.gov)

**E2. Reporting requirements.**

- (a) **Semiannual reports.** Semiannual reports shall cover the six-month periods from **April 1** to **September 30** and **October 1** to **March 31** and shall be submitted within 60 days after the end of each six-month period. Subsequent reports shall be submitted within 60 days after the end of each 6-month period following the first report. The first semiannual report following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
560438	April 1, 2020	day before new permit issuance
575960	Issuance Date of new permit (with year)	September 30, 2020

These semiannual reports of this facility shall include:

- (1) Any monitoring and recordkeeping required by Conditions **E3-13, E4-10, E4-12, E5-1, E6-2, E7-1, E8-2, E9-2, E9-3, E10-3, E10-4, E11-9, E11-13, E11-14, E11-15, E12-4, E14-1, E14-9, E15-2, E16-1, E17-1, E18-1, E23-1, E24-3, E24-8, E24-14, E24-16, E25-3, E25-4, and E27-1** of this permit. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (2) The visible emission evaluation readings from Conditions **E5-4, E5-5, E6-4, E7-4, E7-5, E7-6, E7-7, E8-3, E9-4, E10-6, E12-5, E13-7, E14-8, E15-6, E16-6, E17-4, E18-4, E19-1, E20-2, E21-5, E22-5, E23-4, E23-5, E24-12, E25-5, E26-4, and E27-2** of this permit if required. However, a summary report of this data is acceptable provided there is sufficient information to enable the Technical Secretary to evaluate compliance.
- (3) Identification of all instances of deviations from **ALL PERMIT REQUIREMENTS.**

**These reports must be certified by a responsible official consistent with condition B4 of this permit and shall be submitted to The Technical Secretary at the address in Condition E2(b) of this permit.**

TAPCR 1200-03-09-.02(11)(e)1.(iii)

- (b) **Annual compliance certification.** The permittee shall submit annually compliance certifications with each term or condition contained in Sections A, B, D and E of this permit, including emission limitations, standards, or work practices. This compliance certification shall include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

- (1) The identification of each term or condition of the permit that is the basis of the certification;
- (2) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period; Such methods and other means shall include, at a minimum, the methods and means required by this permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Act, which prohibits knowingly making a false certification or omitting material information;
- (3) The status of compliance with each term or condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in E2(b)2 above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion\* or exceedance\*\* as defined below occurred; and
- (4) Such other facts as the Technical Secretary may require to determine the compliance status of the source.

\* “Excursion” shall mean a departure from an indicator range established for monitoring under this paragraph, consistent with any averaging period specified for averaging the results of the monitoring.

\*\* “Exceedance” shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

Annual compliance certifications shall cover the 12-month period from **April 1, 2019** of each calendar year to **March 31, 2020** of the following calendar year and shall be submitted within 60 days after the end of each 12-month period. The first annual compliance certification following issuance of this permit shall cover the following permits and reporting periods:

Permit Number	Reporting Period Begins	Reporting Period Ends
563810	1 <sup>st</sup> day of ACC period (with year)	day before new permit issuance (with year)
575960	Issuance Date of new permit (with year)	end of ACC period (with year)

**These certifications shall be submitted to: TN APCD and EPA**

Division of Air Pollution Control  
 Chattanooga Environmental Field Office  
 1301 Riverfront Parkway, Suite 206  
 Chattanooga, TN 37402  
 Or

and Air Enforcement Branch  
 US EPA Region IV  
 61 Forsyth Street, SW  
 Atlanta, Georgia 30303

**E-mail (signed PDF copy):**  
[APC.ChattEFO@tn.gov](mailto:APC.ChattEFO@tn.gov)

40 CFR Part 70.6(c)(5)(iii) as amended in the Federal Register Vol. 79, No.144, July 28, 2014, pages 43661 through 43667  
 TAPCR 1200-03-09-.02(11)(e)3.(v)

- (c) **Retention of Records** All records required by any condition in Section E of this permit must be retained for a period of not less than five years. Additionally, these records shall be kept available for inspection by the Technical Secretary or a Division representative.
- (d) The permittee shall submit the MACT reports required by 40 CFR 63 Subpart S (Condition **E3-4**), 40 CFR 63 Subpart MM (Condition **E3-5**), 40 CFR Subpart DDDDD (Condition E3-3) and 40 CFR 63 Subpart JJJJ (Condition **E29-7**). MACT reports shall cover the six-month periods from **January 1** to **June 30** and from **July 1** through **December 31** of each calendar year. Reports shall be submitted within 30 days after the end of each six-month reporting period.

**These reports must be certified by a responsible official consistent with condition B4 of this permit and submitted to:**

**The Technical Secretary  
Division of Air Pollution Control  
Tennessee Permit Program  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 15<sup>th</sup> Floor  
Nashville, TN 37243  
e-mail: [Air.Pollution.Control@tn.gov](mailto:Air.Pollution.Control@tn.gov)**

**Note:**

**Public Notices, Draft or Proposed Title V Permits**

When you are sending Public Notices, or Draft or Proposed Title V permits to EPA, the notification letter shall be addressed as follows:

Heather Ceron, Chief  
Air Permitting Section  
ATTN: Operating Permit Program  
US EPA Region IV  
61 Forsyth Street, SW  
Atlanta, GA 30303

However, the e-mail notifications to EPA which actually contain the letter and draft permit shall be sent to R4TitleVTN@epa.gov.

**E3. General Permit Requirements.**

**E3-1.** Routine maintenance as required to comply with the specified emission limits shall be performed on the air pollution control devices, including baghouses, electrostatic precipitators, scrubbers, cyclones, and other air pollution control devices. The permittee shall keep monthly logs of maintenance and/or repair for each air pollution control device. The use of either written or computer-generated logs is acceptable. These logs shall document:

1. Each specific maintenance and repair activity;
2. The date that maintenance/repair was initiated;
3. The date that maintenance/repair was completed; and
4. Operator name, initials, or identification number.

Each maintenance/repair log must be made available upon request by the Technical Secretary or representative. These logs must be retained for five (5) years. The permittee is not required to submit these records with the Title V semiannual report, unless specifically required by **Condition E2** or by MACT reporting requirements (40 CFR 63 Subpart S or MM, or other MACT requiring semiannual reporting).

**E3-2.** Logs and records specified in this permit shall be made available upon request by the Technical Secretary or representative and shall be retained for a period of not less than five years unless otherwise noted. Logs and records contained in this permit may be based on a recommended format. Any logs that have an alternative format may be utilized provided such logs contain the same information that is required. The use of either written or computer-generated logs is acceptable. Logs and records are not required to be submitted semiannually, unless specifically required by **Condition E2(a)(1)** or by MACT reporting requirements (40 CFR 63 Subpart S or MM, or other MACT requiring semiannual reporting).

**E3-3.** The permittee is subject to the requirements of 40 CFR 63 Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters). The emission units subject to this rule are Power Boilers F1, F2, and F3 (Sources 10, 11, and 12) and the Fluidized Bed Multi-Fuel Boiler (Source 41). For existing sources, compliance with Subpart DDDDD is required by January 31, 2016, except as provided in §63.6(i).

A.) Pursuant to 40 CFR §63.7550, the permittee must submit semiannual, annual, biennial, or 5-year, 40 CFR 63, Subpart DDDDD compliance reports, whichever is applicable. The compliance reports must contain the information required in (a) through (e) below:

- (a) Company and Facility name and address.
- (b) Process unit information, emissions limitations, and operating parameter limitations.
- (c) Date of report and beginning and ending dates of the reporting period.
- (d) The total operating time during the reporting period.
- (e) Information as specified in section 40 CFR 63.7550 (c) for the reporting period

**Compliance Method:** Upon review and approval of the Notification of Compliance Status for 40 CFR 63 Subpart DDDDD, NESHAP for Major Source Industrial, Commercial, and Institutional Boilers and Process Heaters, the semiannual reporting requirements will be incorporated using the applicable procedures in Condition C4 (Minor Permit Modifications) of this permit.

B.) Pursuant to 40 CFR §63.7555 and §63.7560, the permittee must keep the following records pertaining to 40 CFR 63, Subpart DDDDD in a form suitable and readily available for expeditious review, according to §63.10(b)(1). The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Each record must be kept on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). Records may be kept off site for the remaining 3 years.

(a) A copy of each notification and report submitted to comply with subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report submitted, according to the requirements in § 63.10(b)(2)(xiv).

(b) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(c) If the permittee operates a unit in the unit designed to burn gas 1 subcategory, and an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under part 63, other gas 1 fuel, or gaseous fuel subject to another subpart of part 63 or part 60, 61, or 65, is used, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

(d) Records of the calendar date, time, occurrence and duration of each startup and shutdown.

(e) Records of the type(s) and amount(s) of fuels used during each startup and shutdown.

**Compliance Method:** Included with the requirement.

**E3-4.** This facility is subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry), as follows:

**Low volume high concentration (LVHC) gas collection system:** The LVHC system collects gases vented from the digester, turpentine recovery, evaporator, condensate steam stripper systems, and other equipment serving the same function. LVHC gases are combusted in the lime kiln or the stripper off gas (SOG) incinerator. The LVHC closed-vent systems meet the applicable requirements of §63.450.

**High volume low concentration (HVLC) gas collection system:** The HVLC system collects gases vented from pulp washing, knoter, screen, decker, oxygen delignification systems, weak liquor storage tanks, and other equipment serving the same function. HVLC gases are combusted in the multi-fuel fluidized bed boiler or the No. 3 Recovery Furnace. The HVLC closed-vent systems meet the applicable requirements of §63.450.

**Process wastewater condensates** are collected from the digesters and evaporators and are treated in accordance with §63.446 using a condensate steam stripper (see **Condition E19-3** for specific requirements). Stripper off gases are combusted in the SOG incinerator. The enclosure/capture system used to capture HAP emissions meets the applicable requirements of §63.450.

**Bleach plant:** Each bleaching system that uses chlorinated compounds for bleaching is subject to Subpart S. A high-efficiency wet scrubber is used to control gaseous emissions. The enclosure/capture system used to capture HAP emissions at the bleach plant meets the applicable requirements of §63.450.

The permittee shall comply with applicable requirements of Subpart S as listed in **Table E3-4**.

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.440	<b>Applicability</b>	
§63.440(a)	Applicable to processes that produce pulp, paper, or paperboard located at major sources as defined in §63.2 of Subpart A and use processes listed in (a)(1) – (a)(3)	See (a)(1) – (a)(3)
§63.440(a)(1)	Applicable to kraft, soda, sulfite, and semi-chemical pulping processes using wood	Kraft Pulp Mill (23)
§63.440(a)(2)	Applicable to mechanical pulping processes using wood	1,500 ADTP/day Thermo Mechanical Pulping (TMP) (20), 950 ADTP/day TMP (40)
§63.440(a)(3)	Applicable to secondary and non-wood fibers	Recycle Mill (35)
§63.440(b)	Existing source provisions apply to affected sources listed in (b)(1) and (b)(2)	See (b)(1) and (b)(2)
§63.440(b)(1)	Pulping and bleaching systems at processes listed in (a)(1)	Kraft Pulp Mill (23), Bleach Plant (28)
§63.440(b)(2)	Bleaching systems at processes listed in (a)(2) and (a)(3)	1,500 ADTP/day TMP (20), 950 ADTP/day TMP (40), Recycle Mill (35)
§63.440(c)	New source provisions	See (c)(1) – (c)(5)
§63.440(c)(1)	Sources listed in (b)(1) constructed or reconstructed after December 17, 1993	None
§63.440(c)(2)	Pulping and bleaching systems listed in (a)(1) constructed or reconstructed after December 17, 1993	None
§63.440(c)(3)	Additional pulping and bleaching lines constructed at processes listed in (a)(1) after December 17, 1993	None
§63.440(c)(4)	Sources listed in (b)(2) constructed after March 8, 1996	950 ADTP/day TMP (40)
§63.440(c)(5)	Additional bleaching lines constructed at processes listed in (a)(2) and (a)(3) after March 6, 1996	None
§63.440(d)	Compliance date for existing sources is April 16, 2001	Kraft Pulp Mill (23) digesters and turpentine recovery system, Chemical Recovery (36) evaporators and condensate steam stripper
§63.440(d)(1)	Compliance dates for existing kraft pulping system HVLC sources listed in §§63.443(a)(1)(ii) – (iv) is April 17, 2006. Report as specified in §63.455(b)	Kraft Pulp Mill (23) washing, knotting, screening, and oxygen delignification systems
§63.440(d)(2)	Compliance dates for dissolving-grade bleaching systems at kraft and sulfite mills	None
§63.440(d)(3)	Compliance dates for mills enrolled in Voluntary Advanced Technology Incentives Program (VATIP)	None
§63.440(e)	Compliance date for new sources	950 ADTP/day TMP (40)
§63.440(f)	Process equipment shared by more than one type of pulping process must comply with most stringent requirements	None
§63.440(g)	General Provisions Applicability to Subpart S (Attachment 2)	All
§63.441	<b>Definitions</b>	All

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.443	<b>Standards for kraft mills</b>	
§63.443(a)	Kraft pulping system control requirements	See (a)(1) and (a)(2)
§63.443(a)(1)	Listed equipment at existing sources required to be controlled	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.443(a)(2)	Listed equipment at new sources required to be controlled	None
§63.443(b)	Semi-chemical and soda pulping system control requirements	None
§63.443(c)	Equipment listed in (a) and (b) must be enclosed and vented to a closed vent system meeting §63.450 and routed to a control device meeting the requirements of (d)	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.443(d)	Control device requirements	See (d)(1) – (d)(4)
§63.443(d)(1)	Reduce total HAP emissions by 98% or more by weight	None
§63.443(d)(2)	Reduce total HAP concentration at the outlet of the thermal oxidizer to 20 ppm or less by volume, corrected to 10 percent oxygen. This is the chosen method to demonstrate compliance by the permittee.	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.443(d)(3)	Reduce total HAP emissions using a thermal oxidizer designed for a minimum temperature of 1600 °F and minimum retention time of 0.75 seconds	None
§63.443(d)(4)	Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing HAPs with primary fuel, into flame zone, or with combustion air for boilers and recovery furnaces having a heat input of 150 MMBtu/hr or higher	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.443(e)	Excess emission allowances	See (e)(1) – (e)(3)
§63.443(e)(1)	One percent for LVHC control devices	SOG Incinerator (31), Lime Kiln (30)
§63.443(e)(2)	Four percent for HVLC control devices	None
§63.443(e)(3)	Four percent for combined LVHC and HVLC control devices	Multi-fuel Boiler 1 (41) Recovery Furnace #3 (26)
	<b>Standards for Sulfite Pulping Systems</b>	
§63.444(a) – (c)	Sulfite pulping system standards	None
	<b>Standards for the bleaching system</b>	
§63.445(a)	Bleaching systems that do not use chlorine or chlorinated compounds are exempt from the requirements of this section	See (a)(1) – (a)(3)
§63.445(a)(1)	Applies to bleaching systems using chlorine	None
§63.445(a)(2)	Applies to bleaching systems for kraft, sulfite, or soda pulp using chlorinated compounds	Bleach Plant (28)
§63.445(a)(3)	Applies to bleaching systems for mechanical wood pulp, secondary and non-wood fiber pulp using chlorine dioxide	None 1,500 ADTP/day TMP (20), 950 ADTP/day TMP (40), Recycle Mill (35) do not use chlorine or chlorine dioxide

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.445(b)	Equipment listed in (a) must be enclosed and vented to a closed vent system meeting §63.450 and routed to a control device meeting the requirements of (c), unless process modifications are used to achieve compliance with (c)(2) or (c)(3), then enclosures and closed vent systems are not required unless appropriate	Bleach Plant (28)
§63.445(c)	Control device requirements	See (c)(1) – (c)(3)
§63.445(c)(1)	Reduce total chlorinated HAP 99% or more by weight	None
§63.445(c)(2)	Achieve total chlorinated HAP concentration of 10 parts per million by volume (ppmv) or less at outlet	Bleach Plant (28)
§63.445(c)(3)	Achieve mass emission rate of 0.002 pounds per ODT or less at outlet	None
§63.445(d)	Bleaching systems listed in (a)(2) shall reduce chloroform emissions by either (d)(1) or (d)(2)	See (d)(1) and (d)(2)
§63.445(d)(1)	Comply with 40 CFR Part 430	None
§63.445(d)(2)	Do not use any chlorine or hypochlorite	Bleach Plant (28)
§63.446	<b>Standards for kraft pulping process condensates</b>	
§63.446(a)	Applies to kraft pulping processes	Kraft Pulp Mill (23)
§63.446(b)	Listed equipment subject to condensate requirements of (c), (d), and (e)	See (b)(1) – (b)(5)
§63.446(b)(1)	Digester system	Kraft Pulp Mill (23)
§63.446(b)(2)	Turpentine recovery system	Kraft Pulp Mill (23)
§63.446(b)(3)	Evaporator system	Chemical Recovery (36)
§63.446(b)(4)	HVLC system	Kraft Pulp Mill (23)
§63.446(b)(5)	LVHC system	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.446(c)	Collection requirements for equipment listed in (b)	See (c)(1) – (c)(3)
§63.446(c)(1)	Collect all equipment listed in (b)(1) – (b)(5)	None
§63.446(c)(2)	Collect (b)(4) and (b)(5) plus 65% of total HAP mass from (b)(1) – (b)(3)	None
§63.446(c)(3)	Collect at least 11.1 pounds total HAP per ton ODP from (b)(1) – (b)(5) for mills that perform bleaching	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.446(d)	Convey collected condensate in closed collection system	See (d)(1) and (d)(2)
§63.446(d)(1)	Closed collection system must meet requirements of Subpart RR (§63.960, 63.961, and 63.962)	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.446(d)(2)	Condensate collection tank requirements	Chemical Recovery (36)
§63.446(e)	Condensate treatment requirements	See (e)(1) – (e)(5)
§63.446(e)(1)	Recycle the condensate to equipment listed in §63.443(a) meeting requirements of §63.443 (c) and (d); or	None
§63.446(e)(2)	Discharge the condensate below the surface of a biological treatment system; or	None
§63.446(e)(3)	Treat the condensate to destroy 92% or more of the total HAP by weight; or	Kraft Pulp Mill (23), Chemical Recovery (36)

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.446(e)(4)	Remove at least 6.6 pounds total HAP per ton ODP or achieve outlet concentration of 210 ppmv or less for mills that do not perform bleaching; or	None
§63.446(e)(5)	Remove at least 10.2 pounds total HAP per ton ODP or achieve outlet concentration of 330 ppmv or less for mills that do perform bleaching.	None
§63.446(f)	HAP removed from condensates under (d) or (e), except (e)(2) must be controlled as specified by §63.443 (c) and (d)	Chemical Recovery (36)
§63.446(g)	10% excess emissions allowance for steam strippers complying with (d), (e), and (f)	Chemical Recovery (36)
§63.446(h)	Mills with bleached and unbleached pulping must evaluate annual changes in production to comply with (i)	None
§63.446(i)	Mills with bleached and unbleached pulping operations may prorate production to determine compliance	None
	<b>Clean Condensate Alternative</b>	
§63.447(a) – (h)	Clean condensate alternative	None
§63.448 - §63.449	<b>Reserved</b>	
§63.450	<b>Standards for enclosures and closed-vent systems</b>	
§63.450(a)	Each enclosure and closed vent system required by §63.443(c), §63.444(b), and §63.445(b) must meet (b) – (d)	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.450(b)	Each hood/enclosure shall maintain negative pressure following §63.457(e). Each hood/enclosure closed during the initial performance test shall remain closed	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.450(c)	Each enclosure operated at positive pressure shall have no detectable leaks above 500 ppmv above background, measured by §63.457(d)	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.450(d)	Bypass line requirements	See (d)(1) and (d)(2)
§63.450(d)(1)	Install flow indicator and monitor every 15 minutes	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.450(d)(2)	For manual valves seal in closed position	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.451 - §63.452	<b>Reserved</b>	
§63.453	<b>Monitoring requirements</b>	
§63.453(a)	Specifies continuous monitoring system requirements for compliance with §63.443(c) and (d), §63.444(b) and (c), §63.445(b) and (c), §63.446 (c), (d), and (e), §63.447(b), or §63.450(d)	See (b) – (p)
§63.453(b)	Monitor temperature of thermal oxidizer or outlet total HAP or methanol if complying with §63.443(d)(2) [temperature monitored]	SOG Incinerator (31)
§63.453(c)	Bleaching system scrubber requirements	See (c)(1) – (c)(3)
§63.453(c)(1)	pH or ORP of effluent [ORP chosen by permittee to be monitored]	Bleach Plant (28)

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.453(c)(2)	Vent gas inlet flow [blower amps monitored, see §63.453(m)]	Bleach Plant (28)
§63.453(c)(3)	Liquid influent flow [re-circulation flow monitored]	Bleach Plant (28)
§63.453(d)	Option to measure chlorine outlet concentration	None
§63.453(e)	VATIP requirements to monitor chlorine and hypochlorite application rates	None
§63.453(f)	Sulfite pulping system scrubber requirements	None
§63.453(g)	Steam stripper (condensate steam stripper) requirements	See (g)(1) – (g)(3)
§63.453(g)(1)	Wastewater feed rate	Chemical Recovery (36)
§63.453(g)(2)	Steam feed rate	Chemical Recovery (36)
§63.453(g)(3)	Wastewater column feed temperature	Chemical Recovery (36)
§63.453(h)	Option to measure steam stripper methanol outlet concentration	None
§63.453(i)	Condensate requirements	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.453(j)(1) – (j)(3)	Biological treatment requirements	None
§63.453(k)	Closed vent collection system requirements	See (k)(1) – (k)(6)
§63.453(k)(1)	Inspect closed hoods/enclosures listed in §63.450(b) monthly	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(k)(2)	Inspect each system listed in §63.450(a) monthly	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(k)(3)	Initial and annual demonstration of no detectable leaks from positive pressure systems listed in §63.450(c)	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(k)(4)	Initial and annual demonstration of negative pressure for systems listed in §63.450(e)	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(k)(5)	Inspect valve or closure mechanism listed in §63.450(d)(2) every 30 days	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(k)(6)	Specifies corrective action requirements	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.453(l)	Closed condensate collection system requirements	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.453(l)(1)	Inspect condensate collection system monthly	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.453(l)(2)	Initial and annual check of condensate tanks for no detectable leaks	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.453(l)(3)	If leaks are detected visually or with instrument readings greater than 500 ppmv, corrective action specified in Subpart RR shall be taken	Kraft Pulp Mill (23), Chemical Recovery (36)

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

Rule Citation	Description	Resolute FP US Inc. Calhoun Operations Affected Emission Units
§63.453(m)	Alternative monitoring techniques and parameters [blower amps/fan motor load approved and used instead of vent gas inlet flow]	Bleach Plant (28)
§63.453(n)	Establishment and reestablishment of monitoring parameters	See (n)(1) – (n)(4)
§63.453(n)(1)	Continuously record the operating parameter during performance test	Chemical Recovery (36), Bleach Plant (28), SOG Incinerator (31)
§63.453(n)(2)	Determinations shall be based on control performance and monitored parameters during performance tests, and supplemented by engineering assessments and manufacturer recommendations	Chemical Recovery (36), Bleach Plant (28), SOG Incinerator (31)
§63.453(n)(3)	Rationale for selecting monitoring parameters shall be provided to the Administrator for approval	Chemical Recovery (36), Bleach Plant (28), SOG Incinerator (31)
§63.453(n)(4)	Rationale for selecting operating parameter values, monitoring frequency, and averaging period shall be provided to the Administrator for approval	Chemical Recovery (36), Bleach Plant (28), SOG Incinerator (31)
§63.453(o)	Control devices operated outside established ranges shall be considered excess emissions and violations of the applicable standards	Chemical Recovery (36), Bleach Plant (28), SOG Incinerator (31)
§63.453(p)(1) – (p)(3)	Biological treatment system monitoring ranges	None
§63.453(q)	Operate and maintain any source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	All affected sources.
§63.454	<b>Recordkeeping requirements</b>	
§63.454(a)	Recordkeeping requirements of §63.10 of Subpart A listed in Table 1, and (b) – (g) apply	
§63.454(b)	Inspection plan requirements closed vent systems, closed collection systems, and enclosure openings	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(1)	Date of Inspection	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(1)	Equipment type and identification	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(3)	Results of negative pressure tests	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(4)	Results of leak detection tests	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(5)	Nature of defect or leak and method of detection	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)

<b>Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S</b>		
<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.454(b)(6)	Date defect or leak detected and date of attempted repairs	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(7)	Defect or leak repair method	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(8)	Reason for delay if defect or leak not repaired within specified time	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(9)	Expected date for repair if beyond specified time	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(10)	Date of successful repair	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(11)	Position and duration of opening bypass line and condition of seals	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(b)(12)	Duration of use of bypass line on computer controlled values	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(c)	Hypochlorite and chlorine usage for mills complying with VATIP	None
§63.454(d)	New process equipment or modifications to process equipment are subject to requirements of (a)	None
§63.454(e)	Bypass line flow indicator requirements	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.454(f)	Biological treatment unit requirements	None
§63.454(g)(1)-(2)	Maintain records of malfunctions.	All affected sources.
§63.455	<b>Reporting requirements</b>	
§63.455(a)	Comply with the reporting requirements of Subpart A as contained in Table 1 of Subpart S.	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.455(b)	Include control strategy report for mills subject to §63.440(d)(1) and (d)(3)(ii)	See (b)(1) – (b)(3)
§63.455(b)(1)	Describe controls selected for compliance	Kraft Pulp Mill (23)
§63.455(b)(2)	Establish milestone schedule	Kraft Pulp Mill (23)
§63.455(b)(3)	Revise with progress update every two-years	Kraft Pulp Mill (23)
§63.455(c)	Requirements for mills enrolled in VATIP	None
§63.455(d)	Applies at startup to any new affected source	None
§63.455(e)	Biological treatment unit requirements	None
§63.455(f)	Biological treatment unit requirements	None
§63.455(g)	Malfunction reporting requirements.	All affected sources.
§63.455(h)(1)-(4)	Performance test reporting requirements	All affected sources.
§63.456	<b>Affirmative defense for violation of emission standards during malfunction</b>	All affected sources.

**Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.457	<b>Test methods and procedures</b>	
§63.457(a)(1)-(2)	Initial and repeat performance tests	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)	Vent sampling location and gas stream requirements	See (b)(1) – (b)(6)
§63.457(b)(1)	Sampling site selected following Method 1 or 1A of Part 60, Appendix A-1	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)(2)	No traverse site required for vents smaller than 4 inches in diameter	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)(3)	Volumetric flow determined using Method 2, 2A, 2C, or 2D of Part 60, Appendix A	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)(4)	Moisture content determined using Method 4 of Part 60, Appendix A	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)(5)	Procedures for determining vent gas concentrations using three or more test runs under normal operating conditions and averaging results	SOG Incinerator (31), Bleach Plant (28)
§63.457(b)(6)	Minimum sample time for each run is one-hour	SOG Incinerator (31), Bleach Plant (28)
§63.457(c)	Liquid sample procedures	See (c)(1) – (c)(4)
§63.457(c)(1)	Collect samples using method specified in (c)(3)	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(c)(2)	Use inlet and outlet flow meters to determine volume	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(c)(3)	Procedures for determining liquid concentrations using three or more test runs under normal operating conditions and averaging results	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(c)(4)	Biological treatment sampling	None
§63.457(c)(5)	Non-detect procedures	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(c)(6)	Non-detect QA requirements	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(d)	Detectable leak procedures for sources subject to §63.450 of §63.446(d)(2)(i)	See (d)(1) and (d)(2)
§63.457(d)(1)	Use Method 21 of Part 60, Appendix A	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.457(d)(2)	Calibration procedures for Method 21 instrument	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.457(e)	Negative pressure procedures	See (e)(1) – (e)(4)
§63.457(e)(1)	Use anemometer	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.457(e)(2)	Measure static pressure	None
§63.457(e)(3)	Use smoke tube	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.457(e)(4)	Other industrial ventilation method acceptable to Administrator	None

<b>Table E3-4: Applicable requirements and affected sources subject to 40 CFR 63 Subpart S</b>		
<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.457(f)	HAP concentration measurements for §63.443, §63.444, and §63.447	See (f)(1) and (f)(2)
§63.457(f)(1)	Sum all individual HAPs	None
§63.457(f)(2)	Methanol	Kraft Pulp Mill (23), Chemical Recovery (36), Bleach Plant (28)
§63.457(g)	Measure condensate HAP as methanol, except for biological treatment systems	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(h)	Measure bleaching HAP as sum of chlorinated HAPs or chlorine	Bleach Plant (28)
§63.457(i)	Vent gas stream calculations	See (i)(1) – (i)(3)
§63.457(i)(1)	Procedure to determine total HAP emission rate	SOG Incinerator (31) and Bleach Plant (28)
§63.457(i)(2)	Procedure to determine total HAP emission rate per ton of production	SOG Incinerator (31) and Bleach Plant (28)
§63.457(i)(3)	Procedure to determine total HAP reduction	SOG Incinerator (31) and Bleach Plant (28)
§63.457(j)	Liquid stream calculations	See (i)(1) – (i)(3)
§63.457(j)(1)	Procedure to determine total HAP or methanol inlet and outlet mass	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(j)(2)	Procedure to determine total HAP or methanol inlet and outlet mass per ton of production	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(j)(3)	Procedure to determine total HAP or methanol reduction	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(j)(4)	Compounds less than 1 ppm by weight or less than lower detection limit if greater than 1 ppm by weight.	Kraft Pulp Mill (23), Chemical Recovery (36)
§63.457(k)	Oxygen correction to 10%	See (k)(1) and (k)(2)
§63.457(k)(1)	Oxygen concentration determined using Method 3A or 3B of Part 60, Appendix A-2	SOG Incinerator (31), Bleach Plant (28)
§63.457(k)(2)	Procedure to correct to 10% oxygen	SOG Incinerator (31), Bleach Plant (28)
§63.457(l)(1)-(3)	Biological treatment calculations	None
§63.457(m)(1)-(2)	Condensate segregation procedures	None
§63.457(n)	Biological treatment sample storage	None
§63.457(o)	Conduct of performance tests	All affected sources.
<b>§63.458</b>	<b>Implementation and Enforcement</b>	
<b>§63.459</b>	<b>Alternative Standards</b>	

**Compliance method:** Compliance shall be demonstrated by compliance with the monitoring, recordkeeping, and reporting requirements specified in Subpart S (including referenced Subparts A and RR). Logs and records shall be kept on site and shall be made available upon request by the Technical Secretary or representative and shall be retained for a period of not less than five years.

- E3-5.** This facility is subject to 40 CFR 63 Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semicheical Pulp Mills). The affected units are existing units and include No. 3 Recovery Furnace, (Source 26), No. 3 Recovery Smelt Tank (Source 27), and Lime Kiln (Source 30). Compliance was achieved by the required date of March 13, 2004, for these three existing units. Upon startup of any new units, the new-source requirements of Subpart MM will be incorporated into this permit using the applicable procedures in Section C.

Pursuant to Subpart MM, parametric monitoring values for control devices may be reestablished by source testing provided adequate notice is provided to the Division.

The permittee shall comply with applicable requirements of Subpart MM as listed in **Table E3-5**.

<b>Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM</b>		
<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
<b>§63.860</b>	<b>Applicability</b>	
§63.860(a)	Applicable to owners or operators of each kraft, soda, sulfite, or stand-alone semichemical pulp mill that is a major source of HAPs	All
§63.860(b)	Affected sources	See (b)(1) – (b)(7)
§63.860(b)(1)	Each existing chemical recovery system at kraft and soda mills	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.860(b)(2)	Each new NDCE recovery furnace and smelt tank at kraft and soda mills	None
§63.860(b)(3)	Each new DCE recovery furnace and smelt tank at kraft and soda mills	None
§63.860(b)(4)	Each new lime kiln at kraft and soda mills	None
§63.860(b)(5)	Each new or existing sulfite combustion unit at sulfite mills	None
§63.860(b)(6)	Each new or existing semichemical combustion unit at stand-alone semichemical mills	None
§63.860(b)(7)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.860(c)	General Provisions applicability to Subpart MM (Attachment 2).	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.860(d)	At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
<b>§63.861</b>	<b>Definitions</b>	<b>All</b>
<b>§63.862</b>	<b>Standards</b>	
§63.862(a)(1)	Standards for HAP metals, existing sources	See (a)(1)(i) – (iii)
§63.862(a)(1)(i)	Kraft and soda mills	See (a)(1)(i)(A) – (C)
§63.862(a)(1)(i)(A)	Each existing recovery furnace – PM ≤ 0.044 grains/dscf @ 8% O <sub>2</sub> (0.10 g/dscm)	No. 3 Recovery Furnace (26) [PSD limit of 0.027 gr/dscf supersedes MM]

**Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.862(a)(1)(i)(B)	Each existing smelt tank – PM ≤ 0.2 lb/ton BLS fired (0.10 kg/Mg)	No. 3 Smelt Tank (27) [PSD limit of 0.12 lb/ton supersedes MM]
§63.862(a)(1)(i)(C)	Each existing lime kiln – PM ≤ 0.064 grains/dscf @ 10% O <sub>2</sub> , (0.15 g/dscm)	Lime Kiln (30)
§63.862(a)(1)(ii)(A)-(D)	Alternative standard for existing affected sources at kraft and soda mills operating 6,300 hours or more per year	None
§63.862(a)(1)(iii)	Existing affected sources at kraft and soda mills operating less than 6,300 hour per year must comply with paragraph (a)(1)(i) of this section	None
§63.862(a)(2)	Standards for existing sulfite combustion units	None
§63.862(b)(1) – (4)	Standards for HAP metals, new sources	None
§63.862(c)(1) – (2)	Standards for gaseous organic HAP from new kraft and soda mill recovery furnaces, and existing or new semichemical combustion units	None
§63.862(d)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
<b>§63.863</b>	<b>Compliance Dates</b>	
§63.863(a)	Existing sources must comply no later than March 13, 2004, except as noted in §63.863(c)	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.863(b)	New source must comply immediately upon startup	None
§63.863(c)	Existing sources must comply with the revised requirements published on October 11, 2017 no later than October 11, 2019, with the exception of the following:	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.863(c)(1)	The first of the 5-year periodic performance tests must be conducted by October 13, 2020, and thereafter within 5 years following the previous performance test; and	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.863(c)(2)	The date to submit performance test data through the CEDRI is within 60 days after the date of completing each performance test.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
<b>§63.864</b>	<b>Monitoring Requirements</b>	
§63.864(a) – (c)	Reserved	None
§63.864(d)	Continuous opacity monitoring system (COMS) required in accordance with Performance Specification 1 (PS-1) in appendix B of 40 CFR part 60 and §63.6(h) and §63.8 for each kraft or soda recovery furnace with an ESP	No. 3 Recovery Furnace (26)
§63.864(d)(1) – (2)	Reserved	None
§63.864(d)(3)	Each COMS must sample at least once every ten seconds and record at least once every six minutes	No. 3 Recovery Furnace (26)
§63.864(d)(4)	COMS data must be reduced as specified in §63.2	No. 3 Recovery Furnace (26)
§63.864(e)	Continuous parameter monitoring system (CPMS) requirements	See (e)(1) – (14)
§63.864(e)(1)	Kraft or soda recovery furnaces or lime kilns using an ESP must maintain proper operation of the ESP's automatic voltage control (AVC)	No. 3 Recovery Furnace (26)

**Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.864(e)(2)	Kraft or soda recovery furnaces or lime kilns using an ESP followed by a wet scrubber must follow the parameter monitoring requirements specified in paragraphs (e)(1) and (10) of this section. The opacity monitoring system specified in paragraph (d) of this section is not required for combination ESP/wet scrubber control device systems	None
§63.864(e)(3) – (9)	Reserved	None
§63.864(e)(10)	Kraft and soda mill recovery furnaces, smelt tanks, and lime kilns, and semichemical combustion units using scrubbers must record pressure drop and liquid flow rates every 15 minutes. Pressure drop monitoring devices must be certified by the manufacturer to be accurate within a gage pressure of ±500 pascals (±2 inches of water gage pressure). Liquid flow monitoring devices must be certified by the manufacturer to be accurate within ±5 percent of the design flow rate. As an alternative to pressure drop measurement, a monitoring device for measurement of fan amperage may be used for smelt dissolving tank dynamic scrubbers that operate at ambient pressure or for low-energy entrainment scrubbers where the fan speed does not vary.	No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(e)(11)	Requirements for semichemical combustion units using an RTO	None
§63.864(e)(12)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.864(e)(13)	Alternative monitoring parameters for ESPs, scrubbers, RTOs, and fabric filters require written approval from the administrator	None
§63.864(e)(14)	Alternative monitoring parameters for alternative control devices not listed in paragraph (13) of this section require a site-specific monitoring plan which must be approved by the administrator	None
§63.864(f)	CMS data quality assurance requirements	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(g)	Monitoring requirements for gaseous HAPs	None
§63.864(h)	Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high level adjustments must not be included in any data average computed under this subpart	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(i)	Reserved	None
§63.864(j)(1) – (5)	Determination of operating ranges	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(k)	On-going compliance provisions	See (k)(1) – (3)
§63.864(k)(1)	Implementation of corrective action(s) during times when spent pulping liquor or lime mud is fed (as applicable), including completion of transient startup and shutdown conditions as expediently as possible, is required when the monitoring exceedances listed in paragraphs ((k)(1)(i) – (vii) occur.	See (k)(1)(i) – (vii)

**Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.864(k)(1)(i)	For kraft and soda mill recovery furnaces and lime kilns with ESP control, when the average of ten consecutive 6-minute opacity averages exceeds 20 percent.	No. 3 Recovery Furnace (26)
§63.864(k)(1)(ii)	For kraft and soda mill recovery furnaces, smelt tanks and lime kilns with scrubber control, when any 3-hour average monitored parameter value is outside the established operating range, with the exception of pressure drop during periods of startup and shutdown	No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(k)(1)(iii)	For kraft and soda mill recovery furnaces and lime kilns with an ESP followed by scrubber control, when any 3-hour average monitored parameter value is outside the established operating range, with the exception of pressure drop during periods of startup and shutdown	None
§63.864(k)(1)(iv)	Requirements for semichemical combustion units with RTOs	None
§63.864(k)(1)(v)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.864(k)(1)(vi)	Requirements when alternative monitoring parameters are outside established ranges	None
§63.864(k)(1)(vii)	Requirements for alternative air pollution control devices	None
§63.864(k)(2)	Affected sources are in violation of the emission standards in §63.862 when the monitoring exceedances listed in paragraphs (k)(2)(i) – (ix) occur during times when spent pulping liquor or lime mud is fed (as applicable)	See (k)(2)(i) – (ix)
§63.864(k)(2)(i)	For existing kraft and soda mill recovery furnaces with ESP control, if opacity values above 35% occur for 2% or more of the operating time during the semi-annual period	No. 3 Recovery Furnace (26)
§63.864(k)(2)(ii)	Requirements for new kraft and soda recovery furnaces and lime kilns with ESP control	None
§63.864(k)(2)(iii)	For a new or existing lime kiln equipped with an ESP, when opacity is greater than 20 percent for 3 percent or more of the operating time within any semiannual period	None
§63.864(k)(2)(iv)	For new or existing kraft and soda recovery furnaces, smelt tanks or lime kilns with scrubber control, if six or more 3-hour average monitored parameter values during a 6-month period are outside the established operating range, with the exception of pressure drop during periods of startup and shutdown	No. 3 Smelt Tank (27) Lime Kiln (30)
§63.864(k)(2)(v)	For new or existing kraft and soda recovery furnaces, smelt tanks or lime kilns with an ESP followed by a wet scrubber, if six or more 3-hour average monitored parameter values during a 6-month period are outside the established operating range, with the exception of pressure drop during periods of startup and shutdown	None
§63.864(k)(2)(vi)	Requirements for semichemical combustion units with RTOs	None
§63.864(k)(2)(vii)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.864(k)(2)(viii)	Requirements when alternative monitoring parameters are outside established ranges	None

**Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.864(k)(2)(ix)	Requirements for alternative air pollution control devices	None
§63.864(k)(3)	For purposes of determining the number of nonopacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period	No. 3 Recovery Furnace (26)
<b>§63.865</b>	<b>Performance Test Requirement and Test Methods</b>	
§63.865	Conduct an initial performance test and periodic performance tests using the test methods and procedures listed in §63.7 and paragraph (b) of this section. Conduct the first of the periodic performance tests within 3 years of the effective date of the revised standards and thereafter within 5 years following the previous performance test. Performance tests shall be conducted based on representative performance (i.e., performance based on normal operating conditions) of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.865(a)(1) – (2)	Procedure to determine overall PM emission limit for alternative standard under §63.862(a)(1)(ii)(a)	None
§63.865(b)(1) – (6)	Requirements for determining concentration or mass of PM, oxygen content, converting measured PM to correct oxygen content, selecting sampling port locations, and collecting process operating data to determine BLS firing rates and CaO production rates during the test	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.865(c) – (d)	Requirements for gaseous HAPs	None
<b>§63.866</b>	<b>Recordkeeping Requirements</b>	
§63.866(a)	Reserved	None
§63.866(b)	Maintain records of corrective actions required under §63.864(k)(1) and violations under (k)(2)	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.866(c)	Subpart MM records	See (c)(1) – (8)
§63.866(c)(1)	Daily BLS firing rates (tons BLS/day)	No. 3 Recovery Furnace (26)
§63.866(c)(2)	Daily lime kiln production rates (tons CaO/day)	Lime Kiln (30)
§63.866(c)(3)	Parameter monitoring data and deviations from established monitoring ranges. For each deviation a brief explanation of cause, time of occurrence, corrective action taken, and time corrective action was initiated and completed,	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.866(c)(4)	Calculations supporting compliance determinations under §63.865 (a) – (d)	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.866(c)(5)	Established parameter monitoring range values	No. 3 Smelt Tank (27) Lime Kiln (30)
§63.866(c)(6)	Records for gaseous organic HAP standards	None
§63.866(c)(7)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.866(c)(8)	Records demonstrating compliance with the requirement in §63.864(e)(1) to maintain proper operation of an ESP's AVC	No. 3 Recovery Furnace (26)

**Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM**

<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.866(d)(1) – (3)	Requirements for failures to meet any applicable standards, including emission limits or opacity or CPMS operating limits	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
<b>§63.867</b>	<b>Reporting Requirements</b>	
§63.867(a)(1)	Notifications	See (a)(1) – (2)
§63.867(a)(1)	Notifications from subpart A, as specified in table 1 of this subpart	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(a)(2)	Reserved	None
§63.867(a)(3)	Requirements applicable to the Cosmo Specialty Fibers' Cosmopolis, Washington facility	None
§63.867(b)(1) – (4)	Additional requirements for sources complying with alternative emission standards under §63.862(a)(1)(ii)	None
§63.867(c)	Semi-annual excess emission reporting information requirements.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(c)(1)	Summary reporting requirements if the total duration of excess emissions or process control system parameter exceedances for the reporting period is less than 1 percent of the total reporting period operating time, and CMS downtime is less than 5 percent of the total reporting period operating time.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(c)(2)	reserved	None
§63.867(c)(3)	Reporting requirements if measured parameters meet any of the conditions specified in §63.864(k)(1) or (2), or if the total duration of monitoring exceedances for the reporting period is 1 percent or greater of the total reporting period operating time, or the total CMS downtime for the reporting period is 5 percent or greater of the total reporting period operating time, or any violations according to §63.864(k)(2) occurred.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(c)(4)	For each failure to meet an applicable standard, including any emission limit in §63.862 or any opacity or CPMS operating limit in §63.864, report the date, time and duration of each failure. For each failure, the report must include a list of the affected sources or equipment, and for any failure to meet an emission limit under §63.862, provide an estimate of the quantity of each regulated pollutant emitted over the emission limit, and a description of the method used to estimate the emissions.	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(c)(5)	Subpart MM and Subpart S excess emission and summary reports may be combined	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(d)(1)	Electronic reporting requirements for performance tests	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(d)(2)	Electronic reporting requirements for notifications and semiannual reports	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)

<b>Table E3-5: Applicable requirements and affected sources subject to 40 CFR 63 Subpart MM</b>		
<b>Rule Citation</b>	<b>Description</b>	<b>Resolute FP US Inc. Calhoun Operations Affected Emission Units</b>
§63.867(d)(3)	Requirements during electronic reporting system outages	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)
§63.867(d)(4)	Requirements during force majeure events	No. 3 Recovery Furnace (26) No. 3 Smelt Tank (27) Lime Kiln (30)

**Compliance method:** Compliance shall be demonstrated by compliance with the monitoring, recordkeeping, and reporting requirements specified in Subpart MM (including referenced Subparts A and S). Logs and records shall be kept on site and shall be made available upon request by the Technical Secretary or representative and shall be retained for a period of not less than five years.

**E3-6.** Fugitive dust emissions from this facility shall be controlled as specified in Chapter 1200-03-08 of Tennessee Air Pollution Control Regulations. Fugitive sources include the causticizing area (source 33), recycle mill (source 35), industrial landfills 1 & 2 (sources 38 and 39), and the 950 ADTP/day TMP system-(source 40). Specifically, fugitive emissions shall be controlled such that there are no visible emissions beyond the property line of the property on which the emission originates, excluding legitimate malfunctions of equipment, for more than five minutes per hour or twenty minutes per twenty-four hours.

TAPCR 1200-03-08-.01(2) Title V renewal application dated December 19, 2018

**Compliance Method:** Reasonable measures shall be taken to prevent or mitigate fugitive dust. Compliance with this emission limitation shall be certified through utilization of the Tennessee Visible Emission Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986. Readings shall be taken if valid complaints occur to assess or to verify compliance, if needed, for individual emission sources of concern.

**E3-7.** Visible emissions from all roads and parking lots at the facility shall not exceed ten percent (10%) opacity.

TAPCR 1200-03-05-.01(3) Title V renewal application dated December 19, 2018

**Compliance Method:** Compliance with this emission limitation shall be certified through utilization of the Tennessee Visible Emission Evaluation Method 1 as adopted by the Tennessee Air Pollution Control Board on April 29, 1982 and amended on September 29, 1982, and August 24, 1984. Each of the emission sources where this condition is specified shall conduct visible readings according to the opacity matrix dated September 11, 2013 (Attachment 1). A location for each reading shall be submitted to the Technical Secretary for his approval for each affected source no later than 60 days after issuance of this permit.

**E3-8.** Regarding recordkeeping of logs, the following is applicable:

- (a) For sources required to maintain monthly logs, all data, including all required calculations, must be entered in the log no later than 30 days from the end of the month for which the data is required.
- (b) For sources required to maintain weekly logs, all data, including all required calculations, must be entered in the log no later than 7 days from the end of the week for which the data is required.
- (c) For sources required to maintain daily logs, all data, including all required calculations, must be entered in the log no later than 7 days from the end of the day for which the data is required.

TAPCR 1200-03-10-.02(2)(a)

**E3-9.** For emission standards not expressed in pounds per hour or tons per year (e. g., ppm, lb/MMBtu, grains/dscf, lb/ODTP, et al), compliance with the emission limit shall be determined in terms of units of the applicable emission standard. For emission standards not expressed in pounds per hour or tons per year, a corresponding emission rate (pounds per hour or tons per year) is listed in parenthesis after the emission standard. The corresponding emission rates are used for fee purposes and to establish baseline emissions (see Attachment 4 for a summary).

- E3-10.** Emission standards expressed in pounds per hour are based on daily averages, except as otherwise indicated by specific emission limits, test methods, or periodic monitoring requirements. TAPCR 1200-03-09-.02(11)(e)1.(iii)(I)II.
- E3-11.** Pursuant to TAPCR 1200-03-10-.04(2)(a)2, gauges, indicators, and similar devices used to measure and conduct parametric monitoring of control equipment must maintain an operational availability of at least 95%. Logs and records to substantiate such operational availability must be kept and such records shall be made available to the Technical Secretary or representative upon request. Compliance with the operational availability requirement will be based on the semiannual reporting period identified in **Condition E2**, unless a different period is identified in the permit.
- E3-12.** For all emission sources that use opacity matrix decision trees (Attachment 1) to comply with any visible emissions requirement, including emission sources for which visible emissions are not required by the opacity matrix, if the magnitude and frequency of excursions reported by the permittee in the periodic monitoring for emissions is unsatisfactory to the Technical Secretary, this permit may be reopened to impose additional opacity monitoring requirements. TAPCR 1200-03-10-.02(1)(a)
- E3-13.** The permittee shall comply with the applicable provisions of Attachment 5 (TAPCR 1200-03-09-.01(4)(a)11 Recordkeeping Requirements) for the modifications and pollutants listed in **Table E3-13**. The applications listed in **Table E3-13** document the information required for compliance with TAPCR 1200-03-09-.01(4)(b)38.(i). The permittee shall keep records and calculate emissions using the methodology specified in the applications.

<b>Table E3-13: Minor Modifications Subject to TAPCR 1200-03-09-.01(4)(b)38.(i)</b>	
<b>Modification</b>	<b>Affected Pollutant(s)</b>
Modifications of the Kraft mill digester liquor delivery system (54-0012-23) described in the minor permit modification application dated April 21, 2008.	NO <sub>x</sub> , PM, and PM <sub>10</sub> ,
Modifications to the lime kiln (54-0012-30) described in the minor permit modification application dated April 21, 2008 (changes to the lime conveyor system to reduce air in-leakage, improvements to the duct system to minimize plugging and increase flow, and burner tip modifications to accommodate additional fuel).	NO <sub>x</sub> , PM, and PM <sub>10</sub>
Modifications to the woodyard (54-0012-21) described in the minor permit modification application dated July 16, 2010 (install a rotary-type rail car dumper and associated chip handling equipment, replace four existing Kraft chip screens and associated rechippers (with cyclones) with one new shaker screen and associated rechipper (with cyclone)).	NO <sub>x</sub> , PM, PM <sub>10</sub> , and PM <sub>2.5</sub>
Modifications to the Kraft mill (54-0012-23) and bleach plant (54-0012-28) described in the minor permit modification applications dated December 13, 2013, and February 17, 2014:  1. Modify the oxygen delignification system to add a second stage – first quarter of 2014.  2. Replace the eight existing RDH batch digesters with a single vapor phase continuous digester and associated equipment –fourth quarter of 2014.  3. Add a pressurized flow tube to the bleach plant – fourth quarter of 2014.	NO <sub>x</sub> , PM, PM <sub>10</sub> , PM <sub>2.5</sub> , and VOC
Modifications to the paper mill (54-0012-32) and Kraft refiner (54-0012-43) described in the minor permit modification application dated December 13, 2013 (upgrades to refining and wet end sheet production, sheet drying modifications, dry sheet profiling upgrades, control system upgrades, and winder upgrades) – second quarter of 2014.	None. The Division has reviewed the modifications and has determined that the recordkeeping requirements of TAPCR 1200-03-09-.01(4)(a)11 do not apply (the emissions increase for all pollutants is well below the PSD significance threshold, and the “reasonable possibility” recordkeeping requirements do not apply).

**Table E3-13: Minor Modifications Subject to TAPCR 1200-03-09-.01(4)(b)38.(i)**

Modification	Affected Pollutant(s)
Modifications to the and kraft refiner (54-0012-43) to supply additional hardwood kraft to the paper machines, as described in the minor permit modification application dated May 12, 2015 (new screw press; new stock chest pump; new press filtrate pump; new hardwood leveling chest pump; new chutes, conveyors, and piping; new motors).	None. The Division has reviewed the modifications and has determined that the recordkeeping requirements of TAPCR 1200-03-09-.01(4)(a)11 do not apply (the emissions increase for all pollutants is well below the PSD significance threshold, and the “reasonable possibility” recordkeeping requirements do not apply).
New tissue machine No. 1 (54-0012-45) and three new converting lines (insignificant emission units 54-0012-46, 47, and 48) described in the minor permit modification application dated May 22, 2015.	NO <sub>x</sub> , PM, PM <sub>10</sub> , and PM <sub>2.5</sub>
Modifications to the Kraft mill (54-0012-23) to replace the existing blow tank as described in the minor permit modification application dated August 27,2019.	

**E3-14.** The permittee shall comply with the applicable provisions of 40 CFR 64 (Compliance Assurance Monitoring) for the emission sources and pollutants listed in Attachment 3. A report of the monitoring, recordkeeping, and reporting information required by this condition shall be submitted with semiannual report in accordance with **Condition E2**.

TAPCR 1200-03-09-.03(8), 40 CFR 64

**E3-15. Identification of Responsible Official, Technical Contact, and Billing Contact**

- (a) The application that was utilized in the preparation of this permit is dated December 19, 2018, and is signed is by Scott Palmer, General Manager. A letter dated October 2, 2019 designated David Glass as the Interim Acting Resident Manager. If this person terminates his employment or is assigned different duties such that he is no longer a Responsible Official for this facility as defined in part 1200-03-09-.02(11)(b)21 of the Tennessee Air Pollution Control Regulations, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Responsible Official and certification of truth and accuracy. All representations, agreement to terms and conditions, and covenants made by the former Responsible Official that were used in the establishment of the permit terms and conditions will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements, and/or covenants.
- (b) The application that was utilized in the preparation of this permit is dated December 19, 2018, and identifies Michael Yoder, as the Principal Technical Contact for the permitted facility. If this person terminates her employment or is assigned different duties such that she is no longer the Principal Technical Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Principal Technical Contact and certification of truth and accuracy.
- (c) The application that was utilized in the preparation of this permit is dated December 19, 2018, and identifies Michael Yoder, as the Billing Contact for the permitted facility. If this person terminates her employment or is assigned different duties such that she is no longer the Billing Contact for this facility, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification must be in writing and must be submitted within thirty (30) days of the change. The notification shall include the name and title of the new Billing Contact and certification of truth and accuracy.

<b>54-0012-10, 11, 12</b>	<b>Power Boilers F1, F2, and F3 with ESP control</b>	Power Boilers F1, F2, and F3 burn coal, #6 fuel oil, and natural gas and have a single common stack. Electrostatic precipitators (one ESP per boiler) are used for control of particulate emissions. Low NO <sub>x</sub> burners are installed on F2 and F3.
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Conditions E4-1 through E4-10 apply to source 54-0012 – 10, 11, & 12

**E4-1.** The maximum heat input capacity for this fuel burning installation shall not exceed 1,134 million British Thermal Units per hour (MMBtu/hr).

**Compliance Method:** The Division application of record dated June 19, 1979 indicates Boiler F1 built in 1954 has an input capacity of 214 MMBtu/hr, Boiler F2 built in 1956 has an input capacity of 460 MMBtu/hr, and Boiler F3 built in 1958 has an input capacity of 460 MMBtu/hr.

**E4-2.** Particulate emissions from this fuel burning installation shall not exceed 0.176 pounds per million Btu (lb/MMBtu) of heat input (874.2 tons/year).

TAPCR 1200-03-06-.02(1)

**Compliance Method:** Compliance with this condition shall be assured as follows:

- (a) The permittee shall comply with the requirements of Condition E3-3 for this source.
- (b) If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5, as specified in 40 CFR 60, Appendix A, and reported as the average of three (3) test runs. Stack testing conducted on December 11, 1984 with ESP control indicated emissions of 0.0195 lb/MMBtu at a boiler capacity of 89%. Compliance with visible emission standard listed in **Condition E4-4** shall be used as an indicator to determine whether compliance with the PM standard should be confirmed with a Method 5 test.
- (c) The permittee shall comply with the routine maintenance requirements of **Condition E3-1** for the ESPs.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

- E4-3.** Sulfur dioxide emissions from this fuel burning installation shall not exceed 4,562 tons during any period of 12 consecutive calendar months.

Paragraphs 11, 13, 14, 16, 19, and Appendix A, *United States v. Bowater Incorporated* (1:09-CV-00223), as modified by:

- ~~1.5.~~ EPA letter to Lori Chalker, Environmental Manager, AbitibiBowater, dated May 17, 2010, and signed by Beverly A. Spagg;
- ~~2.6.~~ EPA letter to Lori Chalker, Environmental Manager, AbitibiBowater, dated September 22, 2010, and signed by Beverly A. Spagg, and
- ~~3.7.~~ TAPCR 1200-03-14-.01(3) and construction permit #9C7215F issued pursuant to a Jan. 13, 1989 agreement letter and PSD

**Compliance Method:** By November 22, 2010, an SO<sub>2</sub> continuous emission monitor (CEM) shall be acquired, installed, calibrated, certified, and operational on the common stack serving Power Boilers F1, F2 and F3. The SO<sub>2</sub> CEMS shall be calibrated and certified as required by 40 CFR 75 and maintained and operated at all times on the common stack serving Power Boilers F1, F2 and F3. By December 22, 2010, a hard copy of the results from the calibration and certification of the SO<sub>2</sub> CEMS shall be submitted to EPA and to the Compliance Validation Section of the Division of Air Pollution Control.

If the facility has not burned coal in six (6) months and plans not to burn coal in the next six (6) months, SO<sub>2</sub> and flow monitoring, as required by 40 CFR 75, will be deferred.

The facility will notify the Compliance Validation Section of the Division of Air Pollution Control within 15 days of initiation of burning any coal and will commence monitoring as required by 40 CFR 75 within 45 days of the initiation date.

- E4-4.** Visible emissions from the common stack serving the power boilers shall not exceed 20% opacity (six-minute average except for one six-minute period per one (1) hour or more than twenty four (24) minutes in any twenty four (24) hours.

TAPCR 1200-03-05-.10(2), TAPCR 1200-03-09-.02(11)(e)1.(iii) Title V renewal applications dated December 19, 2018

**Compliance Method:** Consistent with the provisions of TAPCR 1200-03-05-.03(1), compliance with the applicable visible emissions standards shall be determined by a certified reader using Method 9. The common stack shall be evaluated biannually unless a valid reading cannot be made due to merging plumes or other reasons. In the event that a valid reading cannot be taken within 6 months and provided that at least one reading was attempted during the six month period, an additional 30 days shall be allowed in which to attempt another reading. If a valid reading cannot again be made, the permittee shall within 60 days of the end of the six-month period submit a report describing its efforts to obtain valid readings, and the reasons it could not.

TAPCR 1200-03-09-.02(11)(e)1.(iii) and TAPCR 1200-03-10-.02(1).

- E4-5.** Consistent with the requirements of Chapter 1200-03-20 and Rule 1200-03-05-.02 of Tennessee Air Pollution Control Regulations (TAPCR), due allowance may be made for visible emissions in excess of those allowed in this permit which are necessary or unavoidable due to routine startup and shutdown conditions.

Routine startups as used above shall only cover startups which have less than 12 minutes of visible emission levels (based on six minute averaging intervals) in excess of the standard contained in Rule 1200-03-05-.10 of the Regulations. Routine shutdowns as used above shall only cover shutdowns which have less than 12 minutes of visible emissions levels (based on six-minute averaging intervals) in excess of the standard contained in Rule 1200-03-05-.10 of the TAPCR. This exemption for routine startups and shutdowns shall not apply when an exceedance of the Tennessee ambient air quality standard for particulate matter for the twenty-four (24) hour averaging interval occurs in the vicinity of this facility.

TAPCR 1200-03-20-.06(6) and Title V renewal application dated December 19, 2018

**Compliance Method:** A log of all malfunctions and non-routine startups and shutdowns shall be maintained in accordance with TAPCR 1200-03-20-.04.

- E4-6.** The exhaust gases from the power boilers combined stack shall be discharged vertically upwards into the ambient air from a stack with a maximum diameter of 10.25 feet at an exit point of not less than 211.5 feet above ground level.

TAPCR 1200-03-09-.02(11)(e)1.(i), and Title V renewal application dated December 19, 2018

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #2800S).

**E4-7.** VOC emissions from this fuel burning installation shall not exceed 27.3 tons/year.

TAPCR 1200-03-06-.03(2), construction permit #957082F

**Compliance Method:** Compliance with the VOC limits shall be determined using the appropriate and most current AP-42 emission factors. A log of VOC emissions shall be compiled each month and for all intervals of 12-consecutive months and shall be reported semiannually in accordance with **Condition E2**.

**E4-8.** Carbon monoxide (CO) emissions as a result of low NO<sub>x</sub> burners were modeled to assess ambient impacts of increased collateral worst-case CO emissions as a result of installation of the low NO<sub>x</sub> burners (LNBs) pollution control project (PCP). The construction modification reduces NO<sub>x</sub> emissions significantly. Model-projected maximum hourly and 8-hour average impacts were well below the respective National Ambient Air Quality Standards (NAAQS) for CO.

Construction permit #957082F

**E4-9.** NO<sub>x</sub> emissions from this fuel-burning installation shall not exceed 2,214 tons per year. Low NO<sub>x</sub> burners shall be operated at all times on Power Boilers F2 and F3.

Paragraphs 11, 12, 16, 17, and Appendix B, *United States v. Bowater Incorporated* (1:09-CV-00223)

**Compliance Method:** NO<sub>x</sub> CEMS shall be operated at all times on Power Boilers F2 and F3 and shall be calibrated, maintained, and certified as required by 40 CFR 75. Compliance with the NO<sub>x</sub> emission limit shall be assured as follows:

- (a) The permittee shall use low-NO<sub>x</sub> burners and NO<sub>x</sub> CEMS for Boilers F2 and F3 year-round. NO<sub>x</sub> CEMS shall be calibrated and certified in accordance with 40 CFR 75.
- (b) The permittee shall calculate monthly NO<sub>x</sub> emissions at the end of each month as follows:
  - (i) For Boiler F1, calculate the NO<sub>x</sub> emissions by using the NO<sub>x</sub> emission factor obtained from the most recent performance test, the heating value for coal obtained from the coal analysis, and the actual quantity of coal fired during the month.
  - (ii) For Boilers F2 and F3, calculate NO<sub>x</sub> emissions using data from the NO<sub>x</sub> CEMS.
  - (iii) Calculate total NO<sub>x</sub> emissions as the sum of emissions from Boilers F1, F2, and F3.
- (c) The permittee shall calculate 12-month rolling total NO<sub>x</sub> emissions each month as the current month total NO<sub>x</sub> emissions plus total NO<sub>x</sub> emissions for the eleven previous months.

Records of all required monitoring data and support information shall be retained for at least 5 years from the date of the monitoring sample, measurement, report, or application. NO<sub>x</sub> emissions shall be reported in accordance with **Condition E2**.

TAPCR 1200-03-06-.01(7), consent decree

**E4-10.** The permittee shall comply with the applicable provisions of TAPCR 1200-03-27-.12 (NO<sub>x</sub> SIP Call Requirements for Stationary Boilers and Combustion Turbines), as follows:

- (a) **Definitions, abbreviations, and acronyms:** Terms, abbreviations, and acronyms shall have the meanings set forth in TAPCR 1200-03-27-.12(1) and (2).
- (b) **Applicability:** Except as otherwise exempted by TAPCR 1200-03-27-.12, the provisions of this rule shall apply to each affected unit and each affected facility. TAPCR 1200-03-27-.12(3)
- (c) **Existing units:** NO<sub>x</sub> allowances are allocated to all existing affected units in the amounts specified in the State Implementation Plan. TAPCR 1200-03-27-.12(6)(a)

- (d) **New units:** The Responsible Official of a new affected unit may request NO<sub>x</sub> allowances starting with the first control period in which the affected unit commences operation, in accordance with TAPCR 1200-03-27-.12(6)(c)2. The Technical Secretary will review each allowance allocation request and allocate NO<sub>x</sub> allowances for each control period in accordance with TAPCR 1200-03-27-.12(6)(c)2.
- (e) **Adjustment of allowance allocations:** The Technical Secretary may adjust allowance allocations for new and existing units in accordance with TAPCR 1200-03-27-.12(6)(d).
- (f) **NO<sub>x</sub> emission requirements:** As of the compliance deadline for a control period, the tons of total nitrogen oxides emissions for the control period from all affected units at an affected facility, as determined in accordance with TAPCR 1200-03-27-.12(11), shall not exceed the number of allowances allocated to the affected facility. TAPCR 1200-03-27-.12(7).
- (g) **Monitoring and Reporting:** The owners and operators, and to the extent applicable, the Responsible Official, of an affected unit shall comply with the applicable monitoring, recordkeeping, and reporting requirements provided in 40 CFR part 75 for each control period. The Responsible Official may petition the Technical Secretary and EPA Administrator requesting approval of an alternative to any requirement of 1200-03-27-.12(11)(a). Approval of any monitoring alternative must be granted in writing by both the Technical Secretary and the EPA Administrator. TAPCR 1200-03-27-.12(11)

TAPCR 1200-03-27-.12

<b>54-0012-19</b>	<b>Coal Handling Facility:</b>	The coal handling facility includes coal unloading, screening coal, conveying, coal crushing, coal storage piles, and associated equipment. Particulate emissions from this source are primarily fugitive in nature. This source is subject to 40 CFR 60 Subpart Y (NSPS for Coal Preparation Plants).
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Conditions E5-1 through E5-5 apply to source 54-0012-19.
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**E5-1.** The capacity of this emission source shall not exceed 561,600 tons of coal per year.

Construction permit #992962P and Title V renewal applications dated December 19, 2018

**Compliance Method:** A log of the monthly coal throughput, in a form that readily shows compliance with this condition for all intervals of twelve consecutive months, shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

**E5-2.** Particulate matter emitted from this emission source shall not exceed 24.9 tons per year.

TAPCR 1200-03-07-.01(5), and construction permit #992962P and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E5-1 and E5-3**.

**E5-3.** The following control measures shall be utilized:

- (a) All conveyors shall be totally enclosed.
- (b) Crushers shall be enclosed.
- (c) Wet suppression shall be used as needed with spray bars and nozzles at the transfer towers, crusher building, and the truck and rail pits.
- (d) Roads shall be paved.

Construction permit #992962P and Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall comply with the routine maintenance requirements of **Condition E3-1** for the coal handling facility and associated control equipment.

- E5-4.** Visible emissions from roads and parking areas shall not exceed ten percent (10%) opacity as determined by Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, and as amended on September 15, 1982, and August 24, 1984.

Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E5-5.** Visible emissions from coal processing and conveying equipment, coal storage systems, and the coal transfer and loading system shall not be twenty percent (20%) opacity or greater.

40 CFR §60.254(a), Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-20</b>	<b>1,500 ADTP per day Thermo-Mechanical Pulping (TMP) System</b>	1,500 ton per day TMP system, including primary, secondary, and rejects refining, turpentine and heat recovery system, screens, pneumatic conveying, screw conveyors, deckers, pulp storage chests, process piping, pumps, valves, sewers, chip feeders, and other TMP process equipment.
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Conditions E6-1 through E6-4 apply to source 54-0012-20.

- E6-1.** The capacity of emission source 20 shall not exceed 1,500 air dried tons of pulp (ADTP) per day and 547,500 ADTP for all intervals of 12 consecutive months.

TAPCR 1200-03-09-.01(1) and Title V renewal application dated December 19, 2018

**Compliance Method:** Compliance with this limit shall be demonstrated by compliance with the recordkeeping requirements of **Condition E6-2**.

- E6-2.** Total gaseous nonmethane organic compounds (TGNMO) or VOC emissions from this source shall not exceed 119.4 tons for all intervals of 12 consecutive months.

TAPCR 1200-03-09-.01(1) Title V renewal application dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured as follows:

- (a) A log of the daily production rate, in a form that readily shows compliance with this condition, shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative (**Log E6-2(a)**). The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

<b>Log E6-2(a): TMP Daily Production</b>	
Month/Year:	
<b>Day</b>	<b>Production (ADTP)</b>
1	
2	
3	
31	
<b>Total Production for Month/Year:</b>	

- (b) The permittee shall calculate VOC emissions from this source during each calendar month and maintain records of these emissions in a form that readily shows compliance with this condition (**Log E6-2(b)**). This log must be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.



<b>54-0012-21</b>	<b>Wood Handling Facility</b>	The wood handling facility (woodyard) consists of hardwood and softwood processing operations:
		(1) Log handling including receiving, transporting, storing, debarking & chipping;
		(2) Chip Processing including receiving, conveying, storing, screening, slicing, rechipping, TMP chip washing & storage and
		(3) Wood waste including receiving, conveying, hogging, screening & storing

Conditions E7-1 through E7-7 apply to source 54-0012-21.

**E7-1.** The capacity of this emission source shall not exceed 857 tons per hour of wood (including bark) and 200 tons per hour for wood waste (purchased) averaged over daily total operating time excluding down time.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this limitation shall be determined by **Log E7-1**. Reports shall be submitted semiannually in accordance with **Condition E2** of this permit.

<b>Log E7-1: Wood and Wood waste Input from Woodyard</b>					
Month/Year:					
<b>Day</b>	<b>Wood Processed (tons/day)</b>	<b>Wood Waste Processed (tons/day)</b>	<b>Woodyard Operating Hours</b>	<b>Wood Processed* (tons/hour)</b>	<b>Wood Waste Processed ** (tons/hour)</b>
1					
2					
31					
* (Wood tons per day)/(Woodyard operating hours) = Tons wood processed per hour					
** (Wood waste tons per day)/(Woodyard operating hours) = Tons wood waste processed per hour					

**E7-2.** Particulate matter emitted from the cyclone outlets and silo replacement air outlets serving this source shall not exceed the following limits at any time:

- (a) 7.8 pounds per hour (lb/hr) total for all the cyclone outlets and silo replacement air outlet(s).
- (b) 0.25 grains per dry standard cubic foot for any cyclone outlet or silo replacement air outlet.

TAPCR 1200-03-07-.01(5), agreement letter dated May 9, 1997, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** This source shall not operate without the cyclones and silo air outlets in place and operating properly. The cyclones shall be inspected monthly for holes, leaks, or plugging, and all inspection and maintenance activities shall be recorded in a monthly log. Holes, leaks, or plugging shall be promptly repaired upon discovery. The inspection log shall indicate whenever the process is not operating during the monthly inspection.

**E7-3.** Wet suppression must be applied at process points as necessary to comply with the emission standards for this source.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Routine maintenance, as required to maintain specified emission limits, shall be performed on the wet suppression system. Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. Maintenance logs shall comply with the requirements of **Condition E3-1**.

**E7-4.** Visible emissions from the cyclones serving the operations included in the “Kraft/TMP Wood Yard Additions” (cyclones previously permitted under permits 997208P and 029521P), including the chipper cyclone and chip screening cyclone, shall not exceed zero percent (0%) opacity. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01 (3), construction permit #945200P, and construction permit # 997208P issued pursuant to a January 13, 1989 PSD

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E7-5.** Fugitive emissions from the operations included in the "Kraft/TMP Wood Yard Additions" (operations previously permitted under permits 997208P and 029521P), including conveyors and process equipment specified in the Division letter dated July 20, 1989, shall not exceed zero percent (0%) opacity. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01 (3), construction permit #945200P, and construction permit #997489P issued pursuant to a January 13, 1989 PSD, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E7-6.** Visible emissions from processes/operations not specified in **Condition E7-4** shall not exceed ten percent (10%) opacity. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01 (3) and agreement letter dated May 9, 1997 from the permittee and construction permit #945200P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018.

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E7-7.** Visible emissions from roads and parking areas shall not exceed ten percent (10%) opacity as determined by the Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, and as amended on September 15, 1982, and August 24, 1984.

TAPCR 1200-03-05-.01 (3), Title V renewal applications dated December 19, 2018, PSD permit #9C7208P

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-22</b>	<b>Lime Slaker</b>	The lime slaker began operation on September 24, 1989. This source combines hydrated lime and green liquor to form white liquor and calcium carbonate (lime mud). A high efficiency wet scrubber is used for particulate control.
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Conditions E8-1 through E8-3 apply to source 54-0012-22.

- E8-1.** The exhaust gases from the lime slaker shall be discharged vertically upwards into the ambient air from a stack with a maximum diameter of 3 feet at an exit point not less than 24 feet above ground level.

TAPCR 1200-03-09-.01(4)(j) and PSD permit #9C7486P

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above, with a stack diameter of 3 feet and stack height 67.5 feet (Stack ID #3060S).

- E8-2.** Particulate matter emitted from this source shall not exceed 2.6 lb/hr (11.4 tons/year).

TAPCR 1200-03-09-.01(4)(j) and PSD permit #9C7486P

**Compliance Method:** This source shall not operate unless the scrubber is utilized. A daily log of the scrubber liquid flow rate shall be kept as shown in **Log E8-2**, and a flow rate shall be recorded if the source is operational. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

The minimum acceptable scrubber liquid flow rate shall be 100 gal/min. If readings fall below the minimum acceptable flow rate, the recorder shall note any action taken or other relevant comments in the daily log. All readings below the minimum acceptable flow rate shall be reported as deviations in the semiannual report.

Log E8-2: Scrubber liquid flow rate for the Lime Slaker (Source 22)		
Month _____ Year _____		
Date	Scrubber Liquid Flow Rate (gal/min)	Relevant comments/ activities/ action taken

If required by the Technical Secretary, compliance testing shall be performed in accordance with 40 CFR 60, Appendix A, EPA Method 5, and reported as the average of three (3) test runs.

- E8-3.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

Construction permit #997486P

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division’s Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-23</b>	<b>Kraft Pulp Mill with LVHC and HVLC Systems</b>	The kraft mill operation includes a single vapor phase continuous digester, brownstock washers, filtrate tanks, and foam tanks. Fumes are collected by the High Volume Low Concentration (HVLC) system and are incinerated in the Fluidized Bed Multi-Fuel Boiler No. 1 (Source 41); or Recovery Furnace #3 (Source 26). Turpentine from the continuous digester is collected and recovered. Fumes from turpentine recovery, evaporator system, and blow tank are collected by the Low Volume High Concentration (LVHC) system and combusted in the Lime Kiln (Source 30) or the SOG (TRS) Incinerator (Source 31). 40 CFR 60 Subpart BB, PSD, 40 CFR 63 Subpart S.
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Conditions E9-1 through E9-5 apply to source 54-0012-23.

- E9-1.** The kraft mill (source 23) consists of the continuous digester and associated blow tank, brownstock washers and associated filtrate and foam tanks, knotters, screens, oxygen delignification system, turpentine recovery system, and TRS collection and treatment system with a SOG (TRS) incinerator for the control of emissions of low volume high concentration (LVHC) reduced sulfur compounds.

Construction permit #953528P

- E9-2.** In order for the kraft mill to operate, the LVHC system, including either the lime kiln or the SOG incinerator, must be operated. If both pieces of equipment are non-operational, then equipment controlled by the LVHC system (turpentine system and evaporator systems) must commence shutdown within two hours of both pieces of equipment becoming non-operational. The complete shutdown of this equipment shall be accomplished consistent with good operating and safety practices within the 8-hour time frame set forth in the letter from G. L. Henderson to Jeryl W. Stewart dated January 10, 1991.

Construction permit #953528P and PSD permit #9C7487P

**Compliance Method:** A log of LVHC system bypass shall be maintained at the source location and reported semiannually in accordance with **Condition E2**. Compliance with the requirement to operate the lime kiln or SOG incinerator shall be assured by compliance with **Conditions E14-10 and E15-9**.

**E9-3.** In order for this source to operate, the HVLC system, including either the multi-fuel boiler or the No. 3 Recovery Furnace, must be operational for the incineration of the HVLC gases generated by this source. If both boilers are non-operational, then equipment controlled by the HVLC system (Foam Tank, Filtrate Tanks, Coru-Deck Washers, Continuous Digester, and Digester blow tank) must commence shutdown within four hours of both boilers becoming non-operational. The complete shutdown of this equipment shall be accomplished within the 8-hour time frame set forth in the letter from G. L. Henderson to Jeryl W. Stewart dated January 10, 1991.

Construction permits #953526F, #953528P, and #954383P Title V renewal applications dated December 19, 2018 and PSD permit #9C7487P

**Compliance Method:** A log of HVLC system bypass shall be maintained at the source location and reported semiannually in accordance with **Condition E2**.

**E9-4.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average opacity).

TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6)

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E9-5.** The kraft mill is subject to 40 CFR 63, Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**.

<b>54-0012-24</b>	<b>Chlorine Dioxide Plant</b>	This Chlorine Dioxide Plant produces chlorine dioxide for use in the bleach plant and has the capacity to produce of 45 tons per day of chlorine dioxide. The chlorine dioxide is formed by chemical reactions by mixing saltcake, chlorate, methanol and sulfuric acid in a generator under controlled conditions. The reaction product is cooled, condensed, and stored for use in the bleach plant. A wet scrubber followed by a weak wash (caustic) scrubber is used for control. BACT
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Conditions E10-1 through E10-6 apply to source 54-0012-24

**E10-1.** Chlorine emissions shall not exceed 0.92 lb/hr.

TAPCR 1200-03-09-.01(4)(a)(3), PSD permit #9C7488P, construction permit #951617P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E10-3 and E10-4**. If required by the Technical Secretary, compliance testing shall be performed in accordance with NCASI Technical Bulletin No. 520 (Impinger Capture Technique), April 1987. Stack testing performed on June 29, 2000 indicated 0.03 lb/hr of chlorine. This test result was acknowledged by the Division in a letter dated April 30, 2001.

**E10-2.** Chlorine dioxide emissions shall not exceed 0.83 lb/hr.

TAPCR 1200-03-09-.01(4)(a)(3), PSD permit #9C7488P, construction permit #951617P

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E10-3 and E10-4**. If compliance testing is required by the Technical Secretary, it shall be done in accordance with NCASI Technical Bulletin No. 520. Stack testing performed on June 29, 2000 indicated 0.0 lb/hr of chlorine dioxide. This test result was acknowledged by the Division in a letter dated April 30, 2001.

**E10-3.** Monitoring devices shall be installed on the chlorine dioxide generating plant for continuous measurement of the scrubbing liquid flow to each scrubber. The monitoring devices shall be certified by the manufacturer to be accurate to within plus or minus five percent (5%) of design scrubbing liquid flow.

PSD permit #9C7488P

**Compliance Method:** Scrubbing liquid flow shall be recorded on an hourly basis. Records of flow measurements shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. A ten percent or more drop in flow rate below the value of 11.5 gal/min established during the performance test of June 29, 2000, for a period of four hours or more shall be reported to the Technical Secretary in accordance with **Condition E2**.

**E10-4.** If either of the scrubbers that serve this source is nonoperational, the chlorine dioxide generating plant shall be shut down.

Construction permit #997207P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** A log of shutdown events shall be maintained at the site and reported semiannually in accordance with **Condition E2**.

**E10-5.** The exhaust gases from the chlorine dioxide generating plant shall be discharged unobstructed vertically upwards to the ambient air from a stack with an exit diameter of 1.2 feet at an exit point not less than 75 feet above ground level.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #3900S).

**E10-6.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

PSD permit #9C7488P

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-26</b>	<b>No. 3 Recovery Furnace</b>	This source consists of a recovery furnace that burns concentrated black liquor from the evaporators and saltcake to recover cooking liquor in the form of smelt. The boiler can also burn TRS gases from the saltcake mix tank and can serve as a combustor for HVLC gases. Electrostatic precipitator control is utilized. 40 CFR 60 Subpart BB and BACT apply. This operation is subject to MACT standards under 40 CFR 63, Subpart MM, with the exception of more stringent PM emission standard from a January 3, 1990 PSD.
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Conditions E11-1 through E11-24 apply to source 54-0012-26.

**E11-1.** Particulate emissions from the No. 3 Recovery Furnace shall not exceed 0.027 grains per dry standard cubic foot of effluent gas corrected to 8% oxygen when natural gas and/or black liquor is fired (62.6 lb/hr).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7490P. The PSD requirement supersedes the less stringent particulate emission standard of 40 CFR 63 Subpart MM

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E11-9, E11-10, and E11-11**.

If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5, as specified in 40 CFR 60, Appendix A. Particulate emission testing conducted on July 22, 2004 indicated the outlet concentration was 0.0143 gr/dscf at 8% oxygen (25.7 lb/hr). Pursuant to Subpart MM, a continuous opacity monitoring system as shown in **Condition E11-10** serves as a surrogate of PM compliance when ESP controls are used on recovery furnaces subject to MM.

**E11-2.** The sulfur dioxide emission rate shall not exceed 200 ppmv (dry basis) corrected to 8% oxygen and 540 lb/hr when burning black liquor or a mixture of black liquor and natural gas.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7490P

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 6, as specified in 40 CFR 60 Appendix A. Stack testing conducted on August 2, 1994 indicated negligible sulfur dioxide emissions.

**E11-3.** The sulfur dioxide emission rate when natural gas alone is fired shall not exceed 0.3 lb/MMBtu.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7490P

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with either EPA Method 6 as specified in 40 CFR 60 Appendix A or by fuel sampling and analysis procedures in accordance with ASTM, D4057-01, D129 and D240-87. Stack testing conducted on August 2, 1994 indicated negligible sulfur dioxide emissions.

**E11-4.** The nitrogen oxide emission rate shall not exceed 75 ppmv corrected to 8% oxygen when burning black liquor or a mixture of black liquor and natural gas (146 lb/hr). For fee purposes, combustion of black liquor or a mixture of black liquor and natural gas is the primary/normal mode of operation.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7490P

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 7 as specified in 40 CFR 60 Appendix A. Stack testing conducted on February 22, 1995 indicated 68 ppm of nitrogen oxide emissions.

**E11-5.** The nitrogen oxide emission rate shall not exceed 300 ppm by volume corrected to 8% oxygen when burning only natural gas.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7490P

**Compliance Method:** Compliance with this condition is based on AP-42 emission factors (Natural Gas Combustion, Section 1.4). If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 7 as specified in 40 CFR 60 Appendix A.

**E11-6.** The carbon monoxide emission rate shall not exceed 200 ppmv corrected to 8% oxygen and 679.2 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #997490P

**Compliance Method:** Compliance with this condition is based on the AP-42 emission factor for noncontact recovery furnaces without direct contact evaporators (Table 10.2-1). If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 10, as specified in 40 CFR 60 Appendix A.

**E11-7.** The total gaseous nonmethane organic (TGMNO) compound emission rate shall not exceed 300 ppmv (dry basis) corrected to 8% oxygen (193 lb/hr).

PSD permit #9C7490P

**Compliance Method:** Compliance with this condition is based on emission factors contained in NCASI Bulletin #112 listed in the PSD application (0.32 lb/1,000 lb BLS) and from the emission factor for recovery furnaces with NDCE listed in the *Air Pollution Engineering Manual*, A&WMA (1992 edition), Chapter 18 (0.83 lb VOC/ton of air dried pulp). If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 25 or Method 25A, as specified in 40 CFR 60 Appendix A.

**E11-8.** Total reduced sulfur emissions from this source shall not exceed 5 ppm by volume on a dry basis corrected to eight percent (8%) oxygen (12-hour average) and 7.2 lb/hr.

Periods of excess emissions from this source shall not be considered violations of the applicable total reduced sulfur compounds emissions standard so long as the total amount of time that the source is exceeding the applicable total reduced sulfur compounds emission standard (excluding periods of startup, shutdown, or malfunction and periods when the recovery furnace is not operating) is not in excess of one percent (1%) of the total amount of time in a calendar quarter. This exemption is applicable provided that good operational and maintenance practices are utilized for both the recovery furnace and the associated air pollution control equipment, and that the required ninety five percent (95%) operational availability level of the continuous in-stack total reduced sulfur compounds monitoring system is maintained during each calendar quarter.

**Compliance Method:** Compliance with this emission standard shall be assured by compliance with the requirements of Attachment 3 (Compliance Assurance Monitoring).

TAPCR 1200-03-09-.01(4)(j), 40 CFR §60.283(a)(2), PSD permit #9C7490P, 40 CFR 64

**E11-9.** Visible emissions from this source shall not exhibit an opacity of thirty-five percent (35%) (six-minute average) or greater. Periods of excess emissions from this source shall not be considered violations of the applicable visible emission standard so long as the total amount of time that the source is exceeding the applicable visible emission standard (excluding periods of startup, shutdown, or malfunction and periods when the recovery furnace is not operating) is not in excess of six percent (6%) of the total amount of time in a calendar quarter. This exemption is applicable provided that good operational and maintenance practices are utilized for both the recovery furnace and the associated air pollution control equipment, and that the required ninety-five percent (95%) operational availability of each opacity monitor is maintained. The opacity monitor shall be used to determine the compliance of each stack with the thirty-five percent (35%) opacity standard.

TAPCR 1200-03-09-.01(4)(a)(3), 40 CFR 60 Subpart BB, PSD permit #9C7490P

**Compliance Method:** The source owner or operator shall install, maintain, operate, and submit reports of excess emissions from an in-stack opacity monitoring system to be located in a representative area of the effluent gas stream of the recovery furnace. The in-stack opacity monitoring system shall meet all the requirements set forth in Performance Specification 1 as outlined in 40 CFR 60, Appendix B.

**E11-10.** The use of Division approved continuous in-stack opacity monitoring system (COMS) is the method of demonstrating continual compliance with the applicable opacity limitation for this kraft recovery furnace. The in-stack opacity monitoring system shall be fully operational for at least ninety-five percent (95%) of the time during each calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the source in noncompliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by this Division as being legitimate malfunctions of the instruments.

TAPCR 1200-03-09-.01(4)(a)(3), 1200-03-10-.02, PSD permit #9C7490P

**E11-11.** On-stack quality assurance audits shall be conducted on a semiannual basis. This on-stack quality assurance audit shall consist of a repetition of the calibration error portion of Performance Specification 1 (40 CFR 60, Appendix B) utilizing the on-stack audit device, and written reports of the audits shall be submitted to the Technical Secretary.

As an alternative, an off-stack quality assurance audit may be conducted on a biennial calendar basis. If elected, this quality assurance audit shall include, at a minimum, a repetition of the calibration portion of 40 CFR 60, Appendix B, Performance Specification 1. Both the monitor transceiver and retroreflector must be removed from the stack and set up to the stack path length prior to conducting the quality assurance. Written reports of the quality assurance checks shall be submitted to the Technical Secretary. Prior to the commencing of the use of this option, the Technical Secretary shall be informed in writing of the election of this option. Utilization of this option shall not be cause for the reopening of this permit.

Within ninety (90) days of each major modification or major repair of any opacity monitor, a repeat of the performance specification test shall be conducted, and a written report of it submitted to the Technical Secretary as proof of the continuous operation of the opacity monitoring system within acceptable limits.

TAPCR 1200-03-09-.01(4)(a)(3), 1200-03-10-.02, PSD permit #9C7490P

**E11-12.** Sulfur dioxide emitted from the incineration of HVLC TRS gases from this boiler and fluidized bed multi-fuel boiler No.1 shall not exceed a combined total of 91.5 lb/hr. For fee purposes, allowable emissions are counted with the multi-fuel boiler (54-0012-41).

Construction permit #954383P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Based on the maximum TRS emissions totaled from the HVLC sources (batch digester, blow tank, brownstock washers, decker, and oxygen delignification), the maximum sulfur dioxide emission rate is 22.4 lb/hr. This emission rate is based on a production rate of 1,945 ADTP/day utilizing NCASI (TB 858) emission factors for TRS from kraft mill HVLC gases. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 6, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs.

**E11-13.** A log of the hours of TRS incineration in the No. 3 Recovery Furnace shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

Construction permit #954383P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E11-14.** The permittee shall not operate the recovery furnace on black liquor solids, including during startup and shutdown, unless the electrostatic precipitator is operating properly.

TAPCR 1200-03-09-.01(4)(a)(3), PSD permit #9C7490P

**Compliance Method:** Proper operation of the electrostatic precipitator shall be assured by compliance with **Conditions E11-9, E11-10, E11-11, and E11-12**. A log of Recovery Furnace shutdowns shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

**E11-15.** The fossil fuel annual capacity factor shall be ten percent (10%) or less, where the annual capacity factor is defined as the ratio between the actual heat input to the boiler from fossil fuel (including highway diesel distillate oil blended with black liquor) during a calendar year and the potential heat input to the boiler had it been operated 8,760 hours at the maximum fossil fuel designed heat input.

TAPCR 1200-03-09-.01(4)(a)(3), PSD permit #9C7490P

**Compliance Method:** Daily records of fuel usage shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The permittee shall calculate the annual capacity factor for each fuel burned in the boiler as indicated in **Log E11-15**. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

Log E11-15: Annual Capacity Factor for Fossil Fuel from No. 3 Recovery Furnace								
Month/year	Fuel Type	Fuel Used**	Heat Capacity for Fuel***	Actual Heat Input for Current Month (MMBtu)	12-Month Rolling Avg. Heat Input (MMBtu)	Max. Annual Heat Input (MMBtu)	Capacity Factor (%)	12-Month Rolling Average Capacity Factor %

(Fuel Usage)(Heat Capacity) = Actual Heat Input  
 12-Month Actual Heat Input / Maximum Heat Input = Annual Capacity Factor  
 12-month rolling averages are current month values averaged with the 11 preceding months.  
 \*\* MMSCF for natural gas, lb for black liquor  
 \*\*\* Btu/SCF for natural gas and Btu/lb for black liquor

**E11-16.** This boiler shall burn only black liquor (which may be blended with up to 1.5 gallons of highway diesel distillate oil for every 1,000 gallons of black liquor), natural gas, and/or HVLC TRS gases.

Construction permit #954383P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E11-13 and E11-15**.

**E11-17.** The exhaust gases from the No. 3 Recovery Furnace shall be discharged unobstructed vertically upwards to the ambient air from stacks with a maximum diameter of 13 feet at an exit point not less than 275 feet above ground level.

TAPCR 1200-03-09-.01(4)(a)(3) PSD permit #9C7490P

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #2730S).

**E11-23.** The No. 3 Recovery Furnace is subject to 40 CFR 63 Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfit, and Stand-Alone Semicheical Pulp Mills). This source shall comply with all applicable Subpart MM requirements listed in **Condition E3-5**.

**E11-24.** The No. 3 Recovery Furnace is subject to 40 CFR 63, Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry) when incinerating HVLC gases. This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**.

<b>54-0012-27</b>	<b>No. 3 Smelt Tank</b>	Smelt dissolving tank for the No. 3 Kraft Recovery Furnace with wet scrubber control. PSD, 40 CFR 60 Subpart BB, and 40 CFR 63 Subpart MM.
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Conditions E12-1 through E12-7 apply to source 54-0012-27

**E12-1.** Particulate matter emitted from this source shall not exceed 0.12 pounds per ton of black liquor solids (dry weight). This emission limit is equivalent to 14.0 lb/hr based on the last emission test under Variance 94-194, when a maximum of 117 tons per hour of black liquor solids was fired.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7491P. The PSD requirement supersedes the less stringent MACT Subpart MM and NSPS Subpart BB limits of 0.20 lb/ton BLS

**Compliance Method:** The scrubber liquid flow rate and pressure drop shall be measured and recorded every 15 minutes in accordance with **Condition E3-5** and the monitoring, recordkeeping, and reporting requirements of 40 CFR 63 Subpart MM. Based on scrubber operating conditions recorded during the July 27, 2004 Subpart MM testing, a minimum scrubbing liquid flow rate of 402.1 gallons per minute and a minimum pressure drop of 7.9 inches of water must be maintained. These values are based on 90% of the average measured values during testing. Particulate emission testing for Subpart MM indicated compliance with test results of 0.093 lb/ton BLS and 10.4 lb/hr at a rate of 112.7 tons of BLS/hr. Monitoring and reporting shall be performed in accordance with Subpart MM.

If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5, as specified in 40 CFR 60, Appendix A, and reported as the average of three (3) test runs. The black liquor solids feed rate shall be recorded during testing. If an input rate higher than 117 tons/hr of BLS is desired, compliance testing must be performed to demonstrate compliance at the higher input rate.

**E12-2.** Sulfur dioxide (SO<sub>2</sub>) emitted from this source shall not exceed 0.2 pounds per ton of equivalent air dried, unbleached kraft pulp (10.9 lb/hr, based on a mill conversion factor of 4,300 lb BLS/ADTP and 117 tons/hr BLS).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7491P

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E12-1**. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 6, as specified in 40 CFR 60, Appendix A, and reported as the average of three (3) test runs. The black liquor fire rate (BLS/hour) shall be recorded during source testing.

**E12-3.** Total reduced sulfur (TRS) emitted from this source shall not exceed 0.033 pounds per ton of black liquor solids (dry weight). TRS emissions shall not exceed 3.0 lb/hr per the mutual agreement letter dated April 5, 1995.

TAPCR 1200-03-09-.01(4)(j), 40 CFR §60.283(a)(4), PSD permit #9C7491P, Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E12-1**. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 16, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three test runs. The black liquor fire rate (BLS/hour) shall be recorded during source testing. The emission rate measured during source testing on February 22, 1995, was 1.3 lb/hr at a black liquor firing rate of 117 tons per hour of BLS (0.011 lb per ton of BLS).

**E12-4.** Input feed of black liquor solids to the No. 3 Recovery Furnace shall cease within four hours after the initiation of the No. 3 Smelt Tank scrubber by-pass. Input feed to the No. 3 Recovery Furnace shall not restart until the No. 3 Smelt Tank scrubber is back on-line and functioning properly.

PSD permit #9C7491P

**Compliance Method:** Records of scrubber bypass events, including a log of the by-pass start time, by-pass end time, time input feed to recovery furnace ended (if applicable), and time of re-start of recovery input feed (if applicable) shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

**E12-5.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one six-minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E12-6.** The exhaust gases from No. 3 Smelt Tank shall be discharged unobstructed vertically upwards into the ambient air from a stack with a maximum diameter of 54 inches at an exit point of not less than 230 feet above ground level.

TAPCR 1200-03-09-.01(4)(a)(3), PSD permit #9C7491P

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #2731S).

**E12-7.** The No. 3 Smelt Tank is subject to 40 CFR 63 Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfit, and Stand-Alone Semicemical Pulp Mills). This source shall comply with all applicable Subpart MM requirements listed in **Condition E3-5**.

<b>54-0012-28</b>	<b>Bleach Plant</b>	This three-stage bleach plant whitens washed stock from the kraft pulp mill and began operation in 1990. The first stage uses chlorine dioxide, the second stage uses oxygen, and the third stage uses chlorine dioxide. The capacity is 1,850 tons of air dried pulp per day. A high-efficiency wet scrubber is used to control gaseous emissions. BACT and 40 CFR 63 Subpart S
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Conditions E13-1 through E13-8 apply to source 54-0012-28

**E13-1.** Chlorine emitted from this source shall not exceed 5.0 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7492P

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E13-8**. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 26A, as modified pursuant to §63.457(b)(5)(ii). Emission testing conducted on September 17, 2001, indicated 0.0 lb/hr of chlorine using chlorine dioxide only as a bleaching agent. White liquor was used as the scrubbing liquid, and the production rate during the test was 928 tons/day of air-dried pulp.

**E13-2.** Chlorine dioxide emitted from this source shall not exceed 2.5 lb/hr (11.0 tons/year).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7492P

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E13-8**. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 26A, as modified pursuant to §63.457(b)(5)(ii). Emission testing conducted on September 17, 2001, indicated 0.0 lb/hr of chlorine dioxide emissions using

chlorine dioxide only as a bleaching agent. White liquor was used as the scrubbing liquid, and the production rate during the test was 928 tons/day of air-dried pulp.

- E13-3.** Chloroform emitted from this source shall not exceed 0.42 lb/ton air dried pulp (141.8 tons/year).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7492P

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E13-8**. If required by the Technical Secretary, compliance testing shall be performed in accordance with NCASI Technical Bulletin No. 558.

Emission testing conducted on November 12, 1999, indicated that chloroform emissions were 0.0084 lb/ton of air dried pulp. Chlorine dioxide was used as a bleaching agent, white liquor was used as the scrubbing liquid, and the production rate was 1197.4 tons/day of air-dried pulp during the test.

- E13-4.** Monitoring devices shall be utilized for continuous measurement of the scrubbing liquid flow to the scrubber. The monitoring device(s) shall be certified by the manufacturer to be accurate to within plus or minus five percent (5%) of design scrubbing liquid flow.

PSD permit #9C7492P

**Compliance Method:** The scrubbing liquid flow to the scrubber shall be continuously monitored and recorded. These records and manufacturer accuracy certification shall be maintained on site. Deviations from the 3-hour value of the scrubbing liquid flow rate established for compliance with Subpart S shall be reported in accordance with **Condition E13-8**.

- E13-5.** If the scrubber is nonoperational, the bleach plant shall shut down.

PSD permit #9C7492P

**Compliance Method:** A log of shutdown events shall be maintained at the site and reported semiannually in accordance with **Condition E2**.

- E13-6.** The exhaust gases from the bleach plant shall be discharged unobstructed vertically upwards into the ambient air from a stack with a maximum diameter of 1.5 feet at an exit point of not less than 160 feet above ground level.

Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #5500S).

- E13-7.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E13-8.** The Bleach Plant is subject to 40 CFR 63, Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**. Compliance assurance of emission limits for the Bleach Plant was verified by source testing conducted on September 17, 2001, and test results were submitted to the Division on November 13, 2001. The chosen emission limit for proof of compliance is an outlet scrubber concentration of 10 ppmv or less of chlorine pursuant to §63.445(c)(2).

The Continuous Monitoring System (CMS) of the Bleach Plant scrubber assures compliance with emission limits under Subpart S for the Bleach Plant. Under Subpart S, the permittee has determined that acceptable parameters for operation of the Bleach Plant are as follows:

Parametric Monitoring for the Bleach Plant – 40 CFR 63 Subpart S	
Parameter	Value (3-hour rolling average)
Gas inlet scrubber air flow rate	minimum fan motor amperage of 52% of motor load**
Oxidation/reduction potential (ORP)	maximum value of -228 millivolts electronegative charge
South tower scrubber liquid influent flow rate	minimum flow rate of 90 gallons per minute
** Alternative monitoring approved by EPA pursuant to §§63.453(m) and (n), May 10, 2001.	

Any values outside these ranges over a 3-hour rolling average shall be reported as deviations in accordance with the Subpart S semiannual report required by **Condition E3-4**.

<b>54-0012-30</b>	<b>Lime kiln</b>	This source consists of a lime kiln fired by natural gas with scrubber control and used to convert calcium carbonate (lime) from the causticizing area to calcium oxide (quicklime), which is used to make white liquor. The official startup date was September 24, 1989. The lime kiln is used as the primary combustor to destroy HAP and TRS emissions collected in the LVHC system originating from the kraft pulp mill and chemical recovery and is a back-up incinerator for stripper off-gases when the SOG incinerator is not operational. The production capacity is 500 tons per day of reburned lime (CaO). Particulate emissions from the lime kiln are controlled by a high-efficiency wet scrubber. BACT, 40 CFR 60 Subpart BB, and 40 CFR 63 Subparts S and MM.
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Conditions E14-1 through E14-14 apply to source 54-0012-30

**E14-1.** The capacity of this source shall not exceed 500 tons per day of reburned lime.

PSD permit #9C7485P

**Compliance Method:** Daily records of lime kiln operating hours and process material input rates shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by these records shall be submitted with semiannual report in accordance with **Condition E2**. The daily lime production rate shall be calculated as follows:

$$\text{Solids (CaCO}_3\text{) fed to the kiln in tons/day} = \frac{(\text{Lime mud gal/min})(8.345 \text{ lb/gal})(1.22 \text{ lb slurry/ft}^3)(\% \text{ solids})(1,440 \text{ min/day})}{(2,000 \text{ lb/ton})(60 \text{ min/hr})(24 \text{ hr/day})}$$

$$\text{Solids (CaCO}_3\text{) fired in the kiln in tons/day} = (\text{tons/day of solids fed to kiln})(0.75)$$

$$\text{Reburned lime (CaO) production in tons/day} = (\text{tons/day of solids fired in the kiln})(56 \text{ lb CaO} / 100 \text{ lb CaCO}_3)(0.9)$$

**Notes to Equations:**

- 75% of solids fed to the kiln are fired in the kiln. The remaining 25% are collected in the wet scrubber.
- 90% of the calcium carbonate fired in the kiln is converted to calcium oxide.

**E14-2.** Particulate emissions from the lime kiln shall not exceed 0.064 grains per dry standard cubic foot of effluent gas (0.15 g/dscm) corrected to 10% oxygen when natural gas is fired (25.3lb/hr).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P, 40 CFR §63.862(a)(1)(C), 40 CFR §60.282(a)(3)(i)

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5, as specified in 40 CFR 60 Appendix A, and reported as the average of three (3) test runs.

The scrubber liquid flow rate and pressure drop shall be measured and recorded every 15 minutes in accordance with **Condition E3-5** and the monitoring, recordkeeping, and reporting requirements of 40 CFR 63 Subpart MM. Based on scrubber operating conditions recorded during the September 9, 2005, Subpart MM performance test, a minimum scrubbing liquid flow rate of 448.4 gallons per minute and a minimum pressure drop of 18.1 inches of water must be maintained. These values are based on 90% of the average measured values during testing. Particulate emission testing on that date indicated the outlet concentration was 0.053 gr/dscf at 10% oxygen (14.7 lb/hr) at a production rate of 332.4 tons per day of lime.

**E14-3.** Sulfur dioxide emitted from this source shall not exceed 20 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P

**Compliance Method:** Compliance with this condition shall be assured by compliance with the monitoring, recordkeeping, and reporting requirements of **Condition E14-2**. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 6, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. The lime production rate shall be recorded during source testing. The emission rate measured during source testing on November 15, 1990, was 0.5 lb/hr at a lime production rate of 356 tons per day.

**E14-4.** Nitrogen oxides emitted from this source shall not exceed 83 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #997485P

**Compliance Method:** If is required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 7, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. The lime production rate shall be recorded during source testing. Source testing was conducted on this source on November 15, 1990 and resulted in an emission rate of 5.8 lb/hr, at lime production rate of 356 tons per day.

**E14-5.** Carbon monoxide emitted from this source shall not exceed 18.1 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P

**Compliance Method:** Compliance is assured based on the AP-42 emission factor for a lime kiln listed in Table 10.2-1 of Chemical Wood Pulping. (0.1 pounds of CO per air dried ton of unbleached pulp). If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 10, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. The lime production rate shall be recorded during source testing.

**E14-6.** VOC emissions from this source measured as total gaseous nonmethane organic compounds (TGNMO) shall not exceed 52.5 lb/hr.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P

**Compliance Method:** Compliance is assured based on emission factors contained in NCASI Bulletin #358 listed in the PSD application (max. 1.6 lb VOC per ton of lime produced) and from the lime kiln emission factor listed in the *Air Pollution Engineering Manual*, A&WMA (1992 edition), Chapter 18, Table 5 (0.22 lb VOC per ton of air dried pulp).

If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 25, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. The lime production rate shall be recorded during source testing.

**E14-7.** Total reduced sulfur (TRS) emitted from this source shall not exceed eight parts per million by dry volume (8 ppmvd), expressed as H<sub>2</sub>S, corrected to ten percent (10%) oxygen, and utilizing a twelve (12) hour data averaging time period, as specified in 40 CFR §60.283(a)(5) (2 lb/hr).

**Compliance Method:** Compliance with this emission standard shall be assured by compliance with the requirements of Attachment 3 (Compliance Assurance Monitoring).

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P, 40 CFR §60.283(a)(5), 40 CFR 64

**E14-8.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E14-9.** An hourly record of LVHC incineration in the lime kiln shall be maintained at the source location and kept available for inspection by the Technical secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

PSD permit #9C7485P

**E14-10.** In the event that the lime kiln ceases to operate and/or incinerate TRS gases for a period of more than 2 hours, the SOG (TRS) incinerator must be used to incinerate TRS gases.

PSD permit #9C7485P, construction permit #953528, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Conditions E4-13, E4-14, and E15-9**.

**E14-11.** The lime kiln shall not be operated unless the scrubber is operating properly.

PSD permit #9C7485P

**Compliance Method:** Compliance with this condition shall be assured by compliance with the monitoring, recordkeeping, and reporting requirements of **Condition E14-2**.

**E14-12.** The exhaust gases from the lime kiln shall be discharged unobstructed vertically upwards into the ambient air from a stack with a maximum diameter of 66 inches at an exit point not less than 150 feet above ground level.

TAPCR 1200-03-09-.01(4)(j), PSD permit #9C7485P

**Compliance Method:** The permittee shall notify the Technical Secretary of any proposed change in stack parameters in accordance with TAPCR 1200-03-09-.02(7). Stack parameters currently meet the dimensions stated above (Stack ID #3120S).

**E14-13.** The lime kiln is subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry) when incinerating LVHC gases. This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**.

**E14-14.** This lime kiln is subject to 40 CFR 63, Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semicemical Pulp Mills). This source shall comply with all applicable Subpart MM requirements listed in **Condition E3-5**.

<b>54-0012-31</b>	<b>Stripper Off Gas (SOG) Incinerator</b>	The primary use of the SOG incinerator is to destroy HAP emissions from the kraft mill condensate stripper gas (stripper off-gas). Due to a modification made in 2000 the SOG incinerator is also permitted to incinerate HAP emissions collected from the kraft mill turpentine decanter underflow. The SOG incinerator has a secondary purpose of serving as a back-up incinerator for the lime kiln to burn LVHC gases from the kraft mill and chemical recovery. The design charge rate is 5,610 lb/hr. The packed-column scrubber is used to control sulfur dioxide emissions due to TRS oxidation. This incinerator is subject to 40 CFR 63 Subpart S and 40 CFR 60 Subpart BB for TRS.
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Conditions E15-1 through E15-10 apply to source 54-0012-31

**E15-1.** Particulate matter emitted from this source shall not exceed 5.4 lb/hr.

TAPCR 1200-03-07.01(5), agreement letter dated August 2, 2000, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance this condition shall be assured by compliance with the monitoring, recordkeeping, and reporting requirements of **Condition E15-2**. If required by the Technical Secretary, compliance testing shall be performed in accordance with 40 CFR 60, Appendix A, EPA Method 5 as specified in 40 CFR 60 Appendix A, and reported as the average of three (3) test runs.

**E15-2.** Sulfur dioxide emitted from this source shall not exceed 9.1 lb/hr.

TAPCR 1200-03-14-.01(3), per the agreement letter dated August 2, 2000 to avoid PSD significant increase, construction permit #952992I, #937344I, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by proper and continual use of the scrubber. The scrubber is equipped with a flow meter, which is accurate within plus or minus 5% of the design scrubbing flow. The scrubber liquid flow rate shall be continuously monitored and recorded, and the minimum acceptable flow rate of scrubber liquid shall be 400 gal/min. If readings fall below the minimum acceptable flow rate, the recorder shall note any action taken or other relevant comments in the daily log. All readings below the minimum acceptable flow rate shall be reported as deviations in accordance with **Condition E2**.

If required by the Technical Secretary, compliance testing shall be performed in accordance with 40 CFR Part 60, Appendix A, EPA Method 6, and reported as the average of three (3) test runs.

**E15-3.** Nitrogen oxide emitted from this source shall not exceed 15.2 lb/hr.

TAPCR 1200-03-07-.07(2), construction permit #952992I, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 7, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. Testing conducted on March 17, 1997 resulted in an emission rate of 6.2 lb/hr, and testing conducted on April 11, 2001, resulted in an emission rate of in 5.8 lb/hr.

**E15-4.** Carbon monoxide emitted from this source shall not exceed 39.6 lb/hr.

TAPCR 1200-03-07-.07(2), construction permit #952992I, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 10, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. Compliance with this condition shall be assured by burning natural gas and by compliance with 40 CFR 60 Subpart BB and 40 CFR 63 Subpart S. Subpart S control device requirements are specified in §63.443(d).

**E15-5.** Volatile organic compounds emitted from this source shall not exceed 9.4 lb/hr.

TAPCR 1200-03-07-.07(2), construction permit #952992I, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 25, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs. Compliance with this condition shall be assured by burning natural gas and by compliance with 40 CFR 60 Subpart BB and 40 CFR 63 Subpart S. Subpart S control device requirements are specified in §63.443(d).

- E15-6.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

- E15-7.** Only natural gas shall be used as fuel for this source.

Construction permit #952992I, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Records of fuel usage shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative.

- E15-8.** The combustion temperature of the SOG incinerator shall be maintained at a temperature not less than 1,200° F for at least one-half second.

TAPCR 1200-03-16-.29, 40 CFR §60.283(a)(1)(iii), Title V renewal applications dated December 19, 2018

**Compliance Method:** The combustion temperature at the point of incineration of the effluent gases shall be continuously monitored and recorded. Each period in excess of 5 minutes where the combustion temperature is less than 1,200° F shall be reported semiannually. The combustion temperature is maintained above 1,437 ° F as a surrogate method to comply with 40 CFR 63 Subpart S and **Condition E15-10**. Compliance with the minimum temperature requirement of Subpart S will satisfy the minimum temperature requirement of Subpart BB.

- E15-9.** A log of the operating hours for the SOG (TRS) incinerator shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. This log shall include records of any diversion of TRS gases from the lime kiln to the SOG (TRS) incinerator. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

PSD permit #997487P, construction permit #953528P, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

- E15-10.** The SOG incinerator is a control device subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). The primary use of the SOG incinerator is to burn off-gases generated by the condensate steam stripper. The condensate steam stripper and the SOG incinerator exceed the 92% HAP removal/destruction rate required for pulping process condensates. The SOG incinerator is also used to incinerate LVHC gases as an alternate combustor to the lime kiln. This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4** when incinerating such gases.

**Compliance Method:** When incinerating LVHC gases, the permittee has chosen to comply with Subpart S using the SOG incinerator as a control device to satisfy §63.443(d). The SOG incinerator is used to keep the methanol concentration below 20 ppm at 10% oxygen per §63.443(d)(2). This will be assured by maintaining the minimum combustion zone temperature of the SOG incinerator at 1,437° F, as utilized during Subpart S performance testing. The combustion zone temperature will be continuously monitored and recorded, and excursions below the minimum temperature shall be reported as deviations in the Subpart S semiannual report.



- 0.00477 x Xj + 0.0953: Empirical equation for estimating methanol emissions from this source, pounds per air dried finished paper and pulp, (lb./ADTEP) (1).
- Wi: Monthly production rate of pulp and paper including finished coated paper, ADTFP/month.
- 2.4: Methanol to total VOC conversion factor (2).
- Xk: Individual methanol concentration value/data point available at the sampling time for one of the white water streams generated by the source, milligram per liter (mg/L).
- K: Numbering of the individual methanol concentration data point.
- n: Total number of the methanol concentration value/data points available at the jth updating or recalculation of the nominal methanol concentration for all white waters generated by the source.
- [1-2]: National Council of the Paper Industrial for Air and Stream Improvement, Inc. "Compilation of Air Toxic and Total Hydrocarbon Emissions Data for Sources at Chemical Wood Pulp Mills", Volume 1, Technical Bulletin No. -701, October 1995

**E16-2.** Particulate emissions from this source shall not exceed the following limits:

Emission point	Outlet Concentration	Allowable Emission Rate (lb/hr)	Allowable Emissions (tons/year)
Paper machine #4 starch silo	0.03 gr/dscf	0.21	
Paper machine #4 natural gas air flotation dryer	N/A	0.15	
Paper production, pulp dryer, and coating	N/A	2.64	
Total		3.00	13.1

TAPCR 1200-03-07-.01(5), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with the starch silo outlet concentration shall be assured by regular maintenance of the baghouse, proper operation of the pneumatic conveying system, and compliance with the opacity standard. Compliance with the flotation dryer emission limit shall be assured by the use of natural gas and low NO<sub>x</sub> combustion (the particulate emission limit is derived from the AP-42 emission factor for natural gas combustion). Particulate emission compliance from the paper production, coating and pulp dryer will be assured based on the NCASI TB 884 emission factor of 0.0058 pounds of particulate per air-dry short ton (ADST). At maximum daily production of pulp and paper at 3,215 ADST, particulate emissions have been calculated to be 0.78 lb/hr.

**E16-3.** NO<sub>x</sub> emissions from the natural gas air flotation dryer shall not exceed 3.6 tons per year.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this limit shall be assured by the use of natural gas and the inherent design of the low NO<sub>x</sub> burner utilized in the dryer.

**E16-4.** Sulfur dioxide emissions from this source shall not exceed 4.4 tons per year.

TAPCR 1200-03-14-.01(3), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Sulfur dioxide from the natural gas air flotation dryer are 0.012 lb/hr and are negligible from the paper machines and the coating operation. Compliance is assured by the use of natural gas.

**E16-5.** Carbon monoxide emissions from the natural gas air flotation dryer shall not exceed 11 tons per year.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this limit shall be met by the use of natural gas and the inherent design of the low NO<sub>x</sub> burner utilized on the air flotation dryer. Carbon monoxide emissions based on vendor estimates are 2.5 lb/hr.

**E16-6.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**54-0012-33 Causticizing Area:** This source consists of causticizers, mudwashers, precoat filters, precoat filter vacuum pumps, white liquor clarifiers and mud mix tanks. The causticizing area converts green liquor from the smelt tanks into white liquor for use in the kraft pulp mill.

Conditions E17-1 through E17-3 apply to source 54-0012-33

**E17-1.** VOC emissions from the causticizing area shall not exceed:

- (a) 4.5 tons per month during any month; and
- (b) 39.5 tons during any period of twelve (12) consecutive months..

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this emission limitation shall be certified through utilization of the following equations along with the production records and **Log E17-1**

$$VOC_i = W_i \times E_T$$

Where:

VOC<sub>i</sub>: i<sup>th</sup> month's VOC emissions (including volatile organic HAPs), pounds per month;

i: Individual month of the operation

W<sub>i</sub>: CaO used by this source during the i<sup>th</sup> month of the operation, tons per month;

E<sub>T</sub>: Total emission factor compiled from the following individual process specific

VOC emission factors for the processes listed in the following table:

Process Description	E <sub>j</sub> (lb VOC/ton CaO used)
Causticizers	0.0440
Dregs Filter	0.0660
Dregs Filter Vacuum Pump	0.0014
White Liquor Classifiers	0.0056
Mud Mix Tanks	0.0041
Mudwashers	0.0041
Precoat Filters	0.0041
Precoat Filter Vacuum Pumps	0.0180

<b>Causticizing Area Total (E<sub>i</sub>)</b>	<b>0.1599</b>
National Council of the Paper Industrial for Air and Stream Improvement, Inc., "Compilation of Air Toxic and Total Hydrocarbon Emissions Data for Sources at Chemical Wood Pulp Mills", Volume 1, <u>Technical Bulletin</u> No. 701, October, 1995.	

A log of monthly production rate and VOC emission data as shown below must be kept. **Log E17-1**, as shown below, shall be submitted with semiannual report in accordance with **Condition E2**.

<b>Log E17-1: CaO Usage and VOC Emissions at Causticizing Area</b>					
<b>Month &amp; Year</b>	<b>CaO used (tons/month)</b>	<b>Emission Factor (lb VOC/ton CaO used)</b>	<b>VOC Emissions (lb/month)</b>	<b>VOC Emissions* (tons/month)</b>	<b>VOC Emissions** (tons/12 months)</b>
		0.1599			
		0.1599			
		0.1599			
		0.1599			
		0.1599			
		0.1599			

Formulas:

CaO Tons per Month X Emission Factor / 2,000 = VOC Emission Tons per Month

\* Refer to Compliance Method for Emission Formula Calculations

\*\* Sum of current month and the 11 previous months = VOC Emission Tons per 12 months

**E17-2.** Particulate matter emitted from this source shall not exceed 3.0 lb/hr.

TAPCR 1200-03-07-.01 (5) and agreement letter dated June 9, 1998 from the permittee, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with 40 CFR 60, Appendix A, EPA Method 5 or EPA Method 17, and reported as the average of three test runs. Particulate matter emissions are deemed to be insignificant due to the wet nature of the process.

**E17-3.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average opacity).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-35</b>	<b>Recycle Mill</b>	The Recycle Fiber Mill reprocesses old newspapers and magazines and includes the operations of waste paper handling, pulping, cleaning, screening, deinking, washing, and dewatering operations, process water treatment/reuse (dissolved air flotation), and associated storage chests.
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Conditions E18-1 through E18-4 apply to source 54-0012-35.

**E18-1.** VOC emissions from the recycle mill shall not exceed 4.5 tons during any month and 39.5 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall calculate VOC emissions from this source during each calendar month and maintain records of these emissions in a form that readily shows compliance with this condition (see **Log E18-1** below). This log must be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

<b>Log E23-1: Monthly Production and VOC Emission Log</b>			
<b>Month &amp; Year</b>	<b>Current Month Production (ODTP)*</b>	<b>Current Month VOC Emissions (tons)</b>	<b>12-Consecutive Month VOC Emissions (tons)**</b>
* Oven-dried tons of pulp			
** 12-consecutive month totals are calculated as the current month plus the 11 previous months			

VOC emissions for each month shall be calculated as follows (see Note below):

$$VOC_i = (0.27)(W_i)(0.9)$$

Where:

- i: Individual month of the operation;
- W<sub>i</sub>: Monthly production rate of air dried tons of finished pulp (ADTFP/month).
- VOC<sub>i</sub>: Total VOC emissions (including volatile organic HAPs) from the source during ith month of the operation, pounds per month;
- 0.27: VOC (as VOC) emission factor derived from the NCASI VOC (as carbon) emission factor, adjusted for molecular weight of significant volatile organic HAP detected in emission stream(s), following TDEC and EPA Region IV guidance, in pounds of VOC per oven dried ton of pulp (ODTP);
- 0.9: Nominal conversion factor used to convert ADTFP to ODTP, for consistency with the units of the emission factor used;

**Note:** National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), “Volatile Organic Compound Emissions from Non-Chemical Pulp and Paper Mill Sources”, Part IV – Deinking Process, Technical Bulletin No. 739, July 1997.

**E18-2.** Sodium hypochlorite may be used occasionally to clean the process equipment at this source.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** A monthly log of sodium hypochlorite usage shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative (see **Log E18-2**).

<b>Log E18-2: Sodium Hypochlorite Usage</b>	
<b>Month &amp; Year</b>	<b>Sodium Hypochlorite Usage (lb)</b>

**E18-3.** Particulate matter emitted from this source shall not exceed 3.3 lb/hr.

TAPCR 1200-03-07-.01 (5) and agreement letter dated June 19, 1998 from the permittee, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5, as specified in 40 CFR 60 Appendix A, and reported as the average of three test runs. Particulate is deemed to be insignificant due to the wet nature of the process.

**E18-4.** Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity for an aggregate of more than five (5) minutes in any one-hour period, or more than twenty (20) minutes in any 24-hour period, as specified in Rule 1200-03-05-.01 of the Tennessee Air Pollution Control Regulations (aggregate count).

TAPCR 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-36</b>	<b>Chemical Recovery</b>	This source consists of evaporator sets that receive weak black liquor from the kraft pulp mill and increase the solids content by evaporation of the water. The black liquor is then mixed with sulfur in mix tanks prior to introduction into the recovery furnaces. Process equipment includes salt cake mix tanks, evaporators, and weak black liquor storage tanks. Fumes from the chemical recovery process are routed from the evaporators to the LVHC system and from salt cake mix tank #3 to the HVLC system. A steam stripper removes methanol from foul condensate prior to waste treatment, and stripper off gas is sent to the SOG incinerator to comply with 40 CFR 63, Subpart S.
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Conditions E19-1 through E19-3 apply to source 54-0012-36.

**E19-1.** Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity for an aggregate of more than five (5) minutes in any one-hour period, or more than twenty (20) minutes in any 24-hour period, as specified in Rule 1200-03-05-.01 of the Tennessee Air Pollution Control Regulations (aggregate count).

TAPCR 1200-03-05-.01 Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E19-2.** The chemical recovery gaseous collection and routing system is subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). The chemical recovery process routes gases from the #3 condensate steam stripper and #3 evaporator to the LVHC TRS system for subsequent incineration, the salt cake mix gases are routed to the HVLC TRS system for subsequent incineration, and the #3 stripper reflux tank gases are sent to the SOG incinerator. This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**.

**E19-3.** The kraft pulping condensates from digesters and evaporators are subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry). This source shall comply with all applicable Subpart S requirements listed in **Condition E3-4**. Subpart S includes the following requirements:

- (a) Pursuant to §63.446(c), pulping process condensates from affected equipment that in total contain a total HAP mass of 11.1 pounds per ton of ODP for mills that perform bleaching are subject to the requirements of §§63.446(d) and (e).
  - (i) The pulping process condensates shall be conveyed in a closed collection system designed and operated to meet the requirements of §§63.446(d)(1) and (2).
  - (ii) Each pulping process condensate shall be treated according to one of the options listed in Subpart S (reduce or destroy the total HAPs by at least 92% or more by weight, treat the pulping process condensates to remove 10.2 pounds of total HAP per ton of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device).
- (b) Pursuant to §63.453(i), a CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in §63.453(n) to comply with the condensate applicability requirements specified in §63.446(c).

**Compliance Method:** Compliance with this condition shall be assured as follows:

(a) An initial performance test was completed on October 12, 2001. The test results indicated that 17.42 lb of methanol per oven-dried top of pulp were collected and treated, meeting the requirements of §63.446(e)(3). The test results also indicated that the removal efficiency from the condensate steam stripper was 98.2%, meeting the requirements of §63.446(e)(5). Continuous monitoring parameters were established as follows based on 90% of the parametric values measured during testing:

1. A minimum steam to wastewater feed ratio of 90.6:1 (based on a process wastewater feed rate of 109.1 gpm and a steam feed rate of 9,900 lb/hr during the initial performance test); and
2. Process wastewater column feed temperature above 174.8° F.

The steam to wastewater feed ratio and column feed temperature may be re-established by the permittee at any time following the procedures in §63.453(n).

(b) To demonstrate compliance with §63.446(c), a characterization study was completed to quantify the methanol content of each affected condensate stream to develop an emission factor (lb HAP/ODTP). Within five (5) years of conducting the characterization study, the kraft mill will conduct another characterization study and thereafter will conduct the test every five (5) years. The mill shall alternate these characterization studies between summer (June, July, and August) and winter (December, January, and February), with each test being done the opposite season of the previous test.

The combined flow from the kraft mill dirty condensate tank and evaporators will be recorded daily. This flow will be measured at the valve to the sewer and prior to the stripper inlet feed. If both the evaporators and kraft mill are running, this flow multiplied by its average methanol concentration (as determined in the most recent characterization study) will be used to calculate the mass of methanol collected and sent to treatment. If dirty condensate is not being collected from either the evaporators or the kraft mill, then the methanol normally associated with that stream will not be included in the daily collection calculation, unless the reason for the non-collection is a startup, shutdown, or malfunction event. The daily methanol collected will be divided by that day's production of oven-dried unbleached pulp tons (ODTP) to calculate the pounds of methanol per ODTP collected.

An operating day will be from 7:00 AM to 7:00 AM. If the kraft mill stops producing pulp and the stripper continues to operate, any methanol collected will be included with the daily calculation for the day the kraft mill ceases operation. Likewise, if the stripper begins treating condensates prior to the startup of the kraft mill, the methanol sent for treatment will be included with the calculation for the day production starts.

The permittee will continue using a 21-day rolling average of the daily pounds of methanol per ODTP to demonstrate compliance with the applicability requirements specified in §63.446(c) (11.1 lb/ODTP).

<b>54-0012-37</b>	<b>Wastewater Treatment Plant:</b>	This source includes Bar Screens, Primary Clarifier, #1 Settling Pond, #2 & #3 Aerated Basins, Sludge Thickeners, Sludge Presses, and an Emergency Storage Lagoon. The maximum treatment capacity for the wastewater treatment system is 60 million gallons of wastewater per day. The emissions from the wastewater treatment system include volatile organic compounds (VOC) and hazardous air pollutants (HAP). All emissions from this source are fugitive evaporation.
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Conditions E20-1 and E20-2 apply to source 54-0012-37.

**E20-1.** No regulatory gaseous emission limits (e. g., VOC and other gaseous pollutants) exist for this source, since this source predates the TAPCR regulatory cutoff date of April 3, 1972.

TAPCR 1200-03-07-.07(2)

**Compliance Method:** If this source is modified such that an increase in VOC emissions occurs, then VOC emission limits or other reasonable and proper controls may be imposed.

**E20-2.** Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity for an aggregate of more than five (5) minutes in any one-hour period, or more than twenty (20) minutes in any 24-hour period, as specified in Rule 1200-03-05-.01 of the Tennessee Air Pollution Control Regulations (TVEE Method 2).

TAPCR 1200-03-05-.01 Title V renewal applications dated December 19, 2018 **Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division’s Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-38</b>	<b>Industrial Landfill I (General Mill):</b>	The general mill industrial Landfill I became operational in 1987 and accepts solid waste from various mill operations for final disposal. Solid waste includes, but is not limited to, slaker grits, ash slurry, green liquor dregs, sludge, wood, metal, and plastic. The landfill has a capacity of 35 tons per hour averaged over a day.
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Conditions E21-1 through E21-5 apply to source 54-0012-38.

**E21-1.** The capacity of this source shall not exceed 35 tons per hour of industrial solid waste averaged over daily total operating time excluding down time.

TAPCR 1200-03-09-.01(1), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** A log of daily solid waste sent to Landfill 1 (**Log E21-1**) shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative.

<b>Log E21-1: Industrial Landfill I (General Mill) Industrial Solid Waste Input Daily Log</b>			
Month/Year:			
<b>Day</b>	<b>Industrial Waste Tons per Day</b>	<b>Industrial Landfill I Operating Hours</b>	<b>Industrial Waste Tons per Hour</b>
<b>Formula:</b> Industrial Waste Tons per Day / Landfill Operating Hours = Industrial Waste Tons per Hour			

**E21-2.** Particulate emissions from this source shall not exceed 2.0 lb/hr.

TAPCR 1200-03-07-.01(5), agreement letter dated May 28, 1997 TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Emissions are primarily from truck load dumping of waste and traffic. Reasonable measures to contain fugitive dust will assure compliance with the limits which include using a water truck as needed for landfill traffic. Landfill material generally has a high moisture content. Compliance with this condition shall be assured by compliance with **Condition E3-6**.

**E21-3.** Fugitive emissions from this source shall comply with **Condition E3-6**.

TAPCR 1200-03-08-.01 (2)

**E21-4.** VOC emissions emitted from this source shall not exceed 0.5 lb/hr.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** VOC emissions were estimated using EPA Method 25C. The test results (0.015 lb/hr) were rounded up by a factor of 10 for a conservative estimate of actual emissions. Based on the test data, the VOC emission limit is not anticipated to be exceeded.

**E21-5.** Visible emissions from roads and parking areas shall not exceed ten percent (10%) opacity as determined by Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, and as amended on September 15, 1982, and August 24, 1984.

TAPCR 1200-03-05-.01(3), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-39</b>	<b>Industrial Landfill II (Recycle Mill Sludge):</b>	The recycle mill industrial Landfill II became operational in 1995 and accepts solid waste from the recycle mill. The landfill has a capacity of 35 tons per hour averaged over a day.
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Conditions E22-1 through E22-5 apply to source 54-0012-39.

**E22-1.** The capacity of this source shall not exceed 35 tons per hour of industrial solid waste averaged over daily total operating time excluding down time.

TAPCR 1200-03-09-.01(1), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** A log of daily solid waste sent to Landfill 1 (**Log E22-1**) shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative.

<b>Log E22-1: Industrial Landfill II (Recycle Mill) Industrial Solid Waste Input Daily Log</b>			
Month/Year:			
<b>Day</b>	<b>Industrial Waste Tons per Day</b>	<b>Industrial Landfill II Operating Hours</b>	<b>Industrial Waste Tons per Hour</b>
1			
2			
31			
<b>Formula:</b> Industrial Waste Tons per Day / Landfill Operating Hours = Industrial Waste Tons per Hour			

**E22-2.** Particulate emissions from this source shall not exceed 2.0 lb/hr.

TAPCR 1200-03-07-.01(5) agreement letter dated May 28, 1997 TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Emissions are primarily from truck load dumping of waste and traffic. Reasonable measures to contain fugitive dust will assure compliance with the limits which include using a water truck as needed for landfill traffic. Landfill material generally has a high moisture content. Compliance with this condition shall be assured by compliance with **Condition E3-6**.

**E22-3.** Fugitive emissions from this source shall comply with **Condition E3-6**.

TAPCR 1200-03-08-.01 (2)

**E22-4.** VOC emissions emitted from this source shall not exceed 0.5 lb/hr.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** VOC emissions were estimated using EPA Method 25C. The test results (0.015 lb/hr) were rounded up by a factor of 10 for a conservative estimate of actual emissions. Based on the test data, the VOC emission limit is not anticipated to be exceeded.

**E22-5.** Visible emissions from roads and parking areas shall not exceed ten percent (10%) opacity and shall be determined by the Tennessee Visible Emission Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, and as amended on September 15, 1982, and August 24, 1984.

TAPCR 1200-03-05-.01 (3), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-40</b>	<b>950 ADTP/Day Thermo-Mechanical Pulping (TMP) System</b>	950 ton per day TMP with primary, secondary, and rejects refining, turpentine and heat recovery system, screens, pneumatic conveying, screw conveyors, deckers, pulp storage chests, process piping pumps, valves, sewers, chip feeders, and other TMP process equipment. A vapor recovery system and small exhaust scrubber (100 acfm) are used to control gaseous emissions from turpentine recovery.
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Conditions E23-1 through E23-5 apply to source 54-0012-40.

**E23-1.** VOC emissions from this source shall not exceed 4.5 tons during any month and 39.5 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07 (2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured as follows:

- (a) The permittee shall calculate VOC emissions from this source during each calendar month and maintain records of these emissions in a form that readily shows compliance with this condition (see **Log E23-1** below). This log must be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

<b>Log E23-1: Monthly Production and VOC Emission Log</b>			
Month & Year	Current Month Production (ODTP)	Current Month VOC Emissions (tons)	12-Consecutive Month VOC Emissions (tons)**
* Oven-dried tons of pulp			
** 12-consecutive month totals are calculated as the current month plus the 11 previous months			

VOC emissions for each month shall be calculated as follows (see Note below):

$$VOC_i = (0.1944)(W_i) / 2,000$$

i: Individual month of the operation;

VOC<sub>i</sub>: Total VOC emissions (including volatile organic HAPs) from the source during ith month of the operation, pounds per month;

0.1944: VOC emissions in pounds per oven dried ton of pulp (ODTP);

W<sub>i</sub>: Monthly production rate of oven dried tons of finished pulp (ODTFP/month).

**Note:** National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), "Volatile Organic Emissions from Pulp and Paper Mill Sources, Part III – Miscellaneous Sources at Kraft and TMP Mills, Technical Bulletin No.677, September 1994, where:

- (b) Routine maintenance, as required to maintain the specified emission limits, shall be performed on the turpentine scrubber. Maintenance records shall be recorded in a suitable permanent form and kept available for inspection by the Division. Maintenance logs shall comply with the requirements of **Condition E3-1**.

**E23-2.** Particulate matter emitted from this source shall not exceed 2.0 lb/hr.

TAPCR 1200-03-07-.01 (5), agreement letter from the permittee dated July 8, 1997, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 5 as specified in 40 CFR 60 Appendix A, and reported as the average of three (3) test runs. Particulate is deemed to be insignificant due to the wet nature of the process.

**E23-3.** Fugitive emissions from this source shall comply with the requirements of **Condition E3-6**.

TAPCR 1200-03-08-.01 (2)

**E23-4.** Visible emissions from the stacks listed below shall not exceed ten percent (10%) opacity. Visible emissions shall be determined by EPA Method 9, as outlined in 40 CFR 60, Appendix A (six-minute average). The following stacks are subject to this requirement:

Stack ID	Description
7000S2	Turpentine scrubber
7000S3	Vent condensers near latency chest and reject cyclones
7000S4	Vent condensers near latency chest and secondary cyclones
7000S6	Startup condenser
7000S7	Chip washing

TAPCR 1200-03-05-.01 (3) and agreement letter dated July 8, 1997 from the permittee.

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E23-5.** Visible emissions from processes/operations not specified in **Condition E23-4** shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6)

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

54-0012-41	<b>Fluidized Bed Multi-Fuel Boiler</b>	This 877 MMBtu/hr multi-fuel boiler has a bubbling fluidized bed and is fueled by, wood refuse including composite wood products, paper mill sludge, tire-derived fuel, and natural gas. This boiler was built by converting the #2 Recovery Furnace into a fuel fired boiler and was installed in 1999. Emissions from the boiler are vented through two stacks. An electrostatic precipitator is used for control of particulate emissions. This boiler also serves as an alternate combustor to the No. 3 Recovery Furnace for incineration of High Volume Low Concentration (HVLC) total reduced sulfur (TRS) gases. The ash handling system has a pneumatic ash conveying system baghouse, a bin vent filter on the ash storage silo, and a baghouse collecting emissions from both the ash weigh hoppers and loading hopper baghouse. 40 CFR 60 Subpart Db, 40 CFR 60 Subpart BB (TRS), and 40 CFR 63 Subpart S
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Conditions E24-1 through E24-19 apply to source 54-0012-41.

**E24-1.** The maximum heat input capacity for the steam generating boiler shall not exceed 877 MMBtu/hr.

TAPCR 1200-03-09-.01(1), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition is based on the application of record using the manufacturer’s design capacity and historical steam level outputs generated by this boiler.

**E24-2.** Only natural gas, tire-derived fuel, paper mill sludge, and “wood” shall be used as fuel(s) for the steam generating boiler. “Wood” means wood, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, slabs, sander dust, wood chips, scraps, slabs, millings, shavings, and processed pellet made from wood or other forest residue. Composite wood is considered wood as defined above and is also used as fuel.

TAPCR 1200-03-09-.01(1) and 1200-03-16-.59(1)(ee), 40 CFR §§60.41b and 60.43b, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured by compliance with **Condition E24-3**.

**E24-3.** The owner or operator of this source shall maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for each fuel. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity calculated at the end of each calendar month.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018, TAPCR 1200-03-16-.59(10)(d), 40 CFR §60.49b(d)

**Compliance Method:** Daily records of fuel usage shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The permittee shall calculate the annual capacity factor for each fuel burned in the boiler as indicated in **Log E24-3**. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

Log E24-3: Annual Capacity Factor for Natural Gas from Fluidized Bed Multi-Fuel Boiler No. 1								
Month/year	Fuel Type	Fuel Used**	Heat Capacity for Fuel***	Actual Heat Input for Current Month (MMBtu)	12-Month Rolling Avg. Heat Input (MMBtu)	Max. Annual Heat Input (MMBtu)	Capacity Factor (%)	12-Month Rolling Average Capacity Factor %
						7,682,520		
						7,682,520		
						7,682,520		
						7,682,520		
						7,682,520		
						7,682,520		

(Fuel Usage)(Heat Capacity) = Actual Heat Input  
 Maximum Heat Input = (877 MMBtu/hr)(8,760 hr/year) = 7,682,520 MMBtu/year  
 12-Month Actual Heat Input / Maximum Heat Input = Annual Capacity Factor  
 12-month rolling averages are current month values averaged with the 11 preceding months.  
 \*\* MMSCF for natural gas, tons for wood and tire-derived fuel, dry tons for paper mill sludge  
 \*\*\* Btu/SCF for natural gas and Btu/lb for solid fuels

**E24-4.** The annual capacity factor for natural gas shall not exceed 10 percent, where the annual capacity factor is defined as the ratio between the actual heat input to the boiler from fossil fuel during a calendar year and the potential heat input to the boiler had it been operating 8,760 hours at the maximum fossil fuel designed heat input. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity calculated at the end of each calendar month.

TAPCR 1200-03-16-.59(4) and 40 CFR §60.43b, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this limit shall be assured by compliance with the recordkeeping requirements of **Condition E24-3.**

**E24-5.** Pursuant to 40 CFR §60.43b(c)(1), particulate matter emitted from the steam generating boiler shall not exceed 0.10 pounds per million Btu heat input (384.1 tons/year). This standard applies at all times, except during periods of startup, shutdown or malfunction pursuant to 40 CFR §60.43b(g).

TAPCR 1200-03-16-.59 (4) and §60.43b, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured as follows:

- (a) reserved
- (b) If required by the Technical Secretary, compliance testing shall be performed in accordance with 40 CFR 60, Appendix A, EPA Method 5, and reported as the average of three (3) test runs. Stack testing conducted on May 10-11, 1999 indicated emissions of 0.073 lb/MMBtu. Compliance with visible emission standard listed in **Condition E24-11** shall be used as an indicator to determine whether compliance with the PM standard should be confirmed with a Method 5 test.
- (c) The permittee shall comply with the routine maintenance requirements of **Condition E3-1** for the ESP.

TAPCR 1200-03-09-.02(11)(e)1.(iii)

**E24-6.** Particulate emitted from the pneumatic ash conveying system baghouse, from the ash storage silo bin vent filter, and from the ash weigh hoppers and loading hopper dust collector shall not exceed 0.02 grains per standard dry cubic foot (0.55 lb/hr for all vents).

TAPCR 1200-03-07-.04(1), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be assured as follows:

- (a) The permittee shall comply with the requirements of Attachment 3 (Compliance Assurance Monitoring) for the pneumatic ash conveying system baghouse.
- (b) The permittee shall comply with the routine maintenance requirements of **Condition E3-1** for the pneumatic ash conveying system baghouse, the ash storage silo bin vent filter, and the ash weigh hoppers and loading hopper dust collector.

**E24-7.** Sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and gaseous ammonia (NH<sub>3</sub>) emitted from this steam generating boiler shall not exceed the following limits:



1200-03-06-.03(2), agreement letter dated July 19, 2005, and TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E24-9.** Mercury (Hg) emissions from this steam generating boiler shall not exceed 3,200 grams per day (1.3 tons/year).

TAPCR 1200-03-11-.04, 40 CFR §61.52(b), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance shall be determined by source performance testing or sludge analysis for mercury per 40 CFR §§61.53 and 61.54, respectively. Sludge samples were collected and analyzed for mercury content between March 13 and March 22, 1992. The highest measured value was 25.3 grams/day of mercury.

**E24-11.** Visible emissions from the steam generating boiler shall not exceed twenty percent (20%) opacity, except for one six-minute period per hour of not more than twenty-seven percent (27%) opacity. This standard applies at all times, except during periods of start-up, shutdown or malfunction pursuant to 40 CFR §60.43b(g).

40 CFR §60.43b(f), TAPCR 1200-03-09-.02(11)(e)1.(iii), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Consistent with the provisions of 40 CFR §60.42(b)(d)(7), compliance with the applicable visible emissions standards shall be determined by a certified reader using Method 9. Each stack shall be evaluated biannually unless a valid reading cannot be made due to merging plumes or other reasons. In the event that a valid reading cannot be taken within 6 months and provided that at least one reading was attempted during the six month period, an additional 30 days shall be allowed in which to attempt another reading. If a valid reading cannot again be made, the permittee shall within 60 days of the end of the six-month period submit a report describing its efforts to obtain valid readings, and the reasons it could not.

TAPCR 1200-03-09-.02(11)(e)1.(iii) and TAPCR 1200-03-10-.02(1).

**E24-12.** Visible emissions from non-fugitive emission points not specified in **Condition E24-11** shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions shall be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

**E24-13.** Sulfur dioxide emitted from the incineration of HVLC TRS gases from this boiler and the No. 3 Recovery Furnace shall not exceed a combined total of 91.5 lb/hr.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Based on the maximum TRS emissions totaled from the HVLC sources (batch digester, blow tank, brownstock washers, decker, and oxygen delignification), the maximum sulfur dioxide emission rate is 22.4 lb/hr. This emission rate is based on a production rate of 1,945 ADTP/day utilizing NCASI (TB 858) emission factors for TRS from kraft mill HVLC gases. If required by the Technical Secretary, compliance testing shall be performed in accordance with EPA Method 6, as specified in 40 CFR Part 60, Appendix A, and reported as the average of three (3) test runs.

**E24-14.** A log of the hours of TRS incineration in the multifuel boiler shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative. The information required by this log shall be submitted with semiannual report in accordance with **Condition E2**.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E24-15.** Total reduced sulfur emissions from this fuel burning installation shall not exceed five (5) parts per million by volume by volume on a dry basis (ppmvd) corrected to ten percent (10%) oxygen on a twelve hour averaging basis.

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018, 40 CFR §60.283(a)(1)

**Compliance Method:** Compliance with this emission standard shall be determined through the use of continuous in-stack emission monitoring for total reduced sulfur compounds.

**E24-16.** The source owner or operator shall install, maintain, operate, and submit reports of excess emissions from a total reduced sulfur (TRS) compounds in-stack monitoring system to be located in a representative area of the effluent gas stream of the multifuel boiler. The in-stack (TRS) monitoring system shall meet all the requirements set forth in Performance Specification 5 as outlined in 40 CFR 60, Appendix B.

TAPCR 1200-03-09-.01(4)(a)(3) TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018, 40 CFR §60.284

**E24-17.** The use of an approved continuous in-stack total reduced sulfur emission monitoring system is the method by which this fuel burning installation demonstrates continual compliance with the applicable total reduced sulfur emissions limitation. Therefore, for this fuel burning installation to demonstrate continual compliance with the applicable total reduced sulfur emissions limitation, the in-stack total reduced sulfur emissions monitoring system shall be fully operational for at least ninety five percent (95%) of the operational time of the monitored unit during each calendar quarter. Unless the reasons for the failure to maintain this level of operational availability are accepted by the Technical Secretary as being legitimate malfunctions of the instruments, an operational availability of less than this amount may be considered the basis for declaring this fuel burning installation to be in noncompliance with the applicable monitoring requirements.

TAPCR 1200-03-10-.02 and 1200-03-10-.04(2)(a)2, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E24-18.** Quality assurance checks shall be performed on the in-stack total reduced sulfur emissions monitoring system in accordance with the procedure specified in 40 CFR 60, Appendix F.

40 CFR §60.284(f)(2)

**E24-19.** The multi-fuel boiler is subject to 40 CFR 63 Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry) when combusting HVLC gases. This boiler shall comply with all applicable Subpart S requirements listed in **Condition E3-4.**

54-0012-42	<b>Two Fixed-roof Liquor Storage Tanks</b>	Two fixed-roof storage tanks are located in the Chemical Recovery area. These tanks were built in 1997 and are used to store black, white, or green liquor from the pulping processes and The capacities for the tanks are 2,200,000 gallons and 1,400,000 gallons. The tanks are subject to 40 CFR 60 Subpart Kb.
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Conditions E25-1 through E25-5 apply to source 54-0012-42.

**E25-1.** This permit is valid for storage tanks listed below:

Storage Tank ID	Capacity (Gallons)	Material stored
002052	2,200,000	Black, green, or white liquor
002066	1,400,000	Black, green, or white liquor

TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E25-2.** Pursuant to 40 CFR 60 Subpart Kb, the owner shall maintain readily accessible records shown the dimensions of each storage vessel and an analysis showing the capacity of the storage vessel.

40 CFR 60 Subpart Kb, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E25-3.** VOC emissions shall not exceed 12.3 tons for all intervals of 12 consecutive months.

TAPCR 1200-03-07-.02(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall store only kraft mill liquors (black, white, and green) or water in the storage tanks. A monthly log of the type of material stored in each tank shall be maintained. The contents of each tank for each calendar month shall be reported semi-annually in accordance with **Condition E2**.

Based on the worst-case scenario of year round operation calculated at maximum VOC hourly emissions from the highest volatile emitter black liquor, the VOC tonnage emission limit will not be exceeded. The emissions were based on NCASI VOC testing taken from Technical Bulletin 701 and are contained in a January 20, 2000 memo submitted to the Division.

**E25-4.** TRS emissions shall not exceed 0.5 tons for all intervals of 12 consecutive months.

TAPCR 1200-03-07-.02(2) TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** The permittee shall store only kraft mill liquors (black, white, and green) or water in the storage tanks. A monthly log of the type of material stored in each tank shall be maintained. The contents of each tank for each calendar month shall be reported semi-annually in accordance with **Condition E2**.

Based on the emission factors for hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide from NCASI Technical Bulletin 701, hourly emissions were determined and extended to year round operation. The above limit will not be exceeded based on the calculations contained in a January 20, 2000, memo submitted to the Division.

**E25-5.** Visible emissions from this source shall not exceed twenty (20) percent opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6)

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-43</b>	<b>Three Pulp Refiners,</b>	Two post refiners parallel process pulp from the two TMP operations without venting to the atmosphere. The third pulp refiner handles hardwood pulp from the kraft mill and vents to the atmosphere while recovering heat through a condenser.
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Conditions E26-1 through E26-4 apply to source 54-0012-43.

**E26-1.** The stated design input capacity for the kraft pulp refiner is 50,500 lb/hr on an air-dried (10% moisture) daily average basis. The Technical Secretary may require the permittee to prove compliance with this rate.

TAPCR 1200-03-09-.01 (1) TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E26-2.** Particulate matter (PM) emitted from the kraft pulp refiner shall not exceed 3.3 lb/hr and 0.25 grains per dry cubic foot of stack gases corrected to 70°F and 1 atmosphere.

TAPCR 1200-03-07-.01(5), agreement letter dated October 8, 2004 from the permittee, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** If proof of compliance with this limit is deemed necessary, the Technical Secretary may require the permittee to conduct PM emissions performance testing pursuant to TAPCR 1200-03-10. Due to the wet nature of the process, particulate matter is expected to be minimal.

**E26-3.** Volatile organic compounds (VOC) emitted from the kraft hardwood pulp refiner shall not exceed 5.6 tons during any period of twelve (12) consecutive months.

TAPCR 1200-03-07-.07(2), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition is based on emission factors provided by the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI)'s publication titled "*Volatile Organic Compound Emissions from Non-Chemical Pulp and Paper Mill Sources*", Part III – Mechanical Pulping, Technical Bulletin No. 738, dated July 1997, in combination with TDEC and EPA Region IV guidance dated November 1997.

Using a VOC emission factor of 0.0565 lb VOC per oven-dried ton of pulp (ODTP) at a maximum daily production rate of 606 air-dried tons of pulp (ADTP) per day, where 1 ADTP is equivalent to 0.9 ODTP, the 5.6 ton/year VOC limit will not be exceeded.

**E26-4.** Visible emissions from the kraft refiner stack shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01(1)

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

<b>54-0012-44</b>	<b>TMP Bleach Plant</b>	This new bleach plant has a design capacity of 600 air dry short tons (ADST) per day of bleached pulp, using hydrogen peroxide and caustic to brighten TMP pulp for use in lightweight coated publication and communication papers. This source is not subject to Subpart S bleach plant requirements, since a non-chlorine system is used.
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Conditions E27-1 and E27-2 apply to source 54-0012-44.

**E27-1.** VOC emissions from the TMP bleach plant shall not exceed 13.1 tons during any period of twelve (12) consecutive months

TAPCR 1200-03-07-.07(2) and 1200-03-09-.01(4)(b)5, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018



<b>54-0012-45</b>	<b>Tissue Machine No. 1</b>	Tissue Machine No. 1 with dust system and natural gas-fired Yankee dryer with ultra-low NO <sub>x</sub> burners.
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Conditions E28-1 through E28-4 apply to source 54-0012-45.

- E28-1.** The stated design input capacity for tissue machine No. 1 is 600,000 pounds per day on an air-dried (10% moisture) annual average basis. The Technical Secretary may require the permittee to demonstrate compliance with this rate.

TAPCR 1200-03-09-.02(11)(f)5.(ii), applications dated May 22, 2015, and February 15, 2017

**Compliance Method:** The permittee shall operate this source in accordance with the information submitted in the application dated May 22, 2015, and February 15, 2017. Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)**.

- E28-2.** Particulate matter (PM) emitted from tissue machine No. 1 shall not exceed 3.95 lb/hr.

TAPCR 1200-03-07-.01(5), application dated May 22, 2015

**Compliance Method:** If proof of compliance with this limit is deemed necessary, the Technical Secretary may require the permittee to conduct PM emissions performance testing pursuant to TAPCR 1200-03-10. The permittee shall monitor the liquid supply flow rate to the dust system (stack 9130S) by visual inspection once per shift when this source is in operation to confirm that the system is functioning. Records of the daily visual inspections must be maintained at the source location and kept available for inspection by the Technical Secretary or representative.

- E28-3.** To control nitrogen oxides (NO<sub>x</sub>) emissions from this source, the permittee shall use only ultra-low-NO<sub>x</sub> burners for this source.

TAPCR 1200-03-07-.07(2)

**Compliance Method:** The permittee has specified that the Yankee dryer for tissue machine No. 1 is equipped with ultra-low-NO<sub>x</sub> burners (vendor-supplied emission rate of 1.09 lb/hr at 49 MMBtu/hr heat input). Vendor specifications for each burner shall be maintained at the source location and made available for inspection by the Technical Secretary or representative. These specifications shall be retained for the life of the burner. Compliance shall be assured by annual certification, as required in **Condition E2(b)**.

- E28-4.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.03(6) and 1200-03-05-.01

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division's Opacity Matrix dated September 11, 2013 (Attachment 1).

Conditions E29-1 through E29-8 apply to sources 54-0012-46, 47, and 48.

**E29-1.** Particulate matter emitted from this source shall not exceed 9.5 lb/hr. TAPCR 1200-03-07-.03(1), Condition 13 of construction permit 972548

**Compliance Method:** The application dated February 15, 2017, states that the converting lines do not vent to the atmosphere during normal operation, and particulate matter is emitted through the bypass stack during HVAC maintenance or malfunction events. Compliance with this condition shall be assured by annual certification, as required in **Condition E2(b)** of this permit.

**E29-2.** Visible emissions from this source shall not exceed twenty percent (20%) opacity except for one-six (6) minute period per one (1) hour, or more than twenty-four (24) minutes in any twenty-four (24) hour period as specified in Rules 1200-03-05-.01(1) and 1200-03-05-.03(6) of the Tennessee Air Pollution Control Regulations. Visible emissions will be determined by EPA Method 9 as outlined in 40 CFR 60, Appendix A (six-minute average).

TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**Compliance Method:** Compliance with this condition shall be determined by the procedures of the Division’s Opacity Matrix dated September 11, 2013 (Attachment 1).

**E29-3.** The permittee shall comply with the applicable provisions of 40 CFR 63 Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating), as indicated in **Conditions E29-4** through **E29-8**. The affected source subject to Subpart JJJJ is the collection of all web coating lines at this source.

TAPCR 1200-03-09-.03(8), 40 CFR §63.3280 through §63.3300, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E29-4.** The coating materials used at the affected source shall comply with the following requirements:

Compliance Option	Limitation or Standard
Use of “as-purchased” compliant coating materials	Each coating material shall not exceed 0.016 kg organic HAP per kg coating material as-purchased; or
Use of “as-applied” compliant coating materials	Each coating material shall not exceed 0.016 kg organic HAP per kg coating material as-applied; or
	The monthly average of all coating materials shall not exceed 0.016 kg organic HAP per kg coating material as-applied on a monthly average basis.

**Compliance Method:** The permittee shall determine the as-purchased organic HAP content of each coating material in accordance with 40 CFR §63.3360(c). For as-purchased coating materials which are reduced, thinned, or diluted prior to application, the permittee shall calculate the as-applied organic HAP content of each coating by following the procedures in 40 CFR §63.3370(c)(1).

TAPCR 1200-03-09-.03(8), 40 CFR §63.3320(b)(2), §63.3360(c), §§63.3370(a) and (c)(1), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E29-5.** The permittee shall comply with the notification requirements specified in 40 CFR §63.3400(e).

TAPCR 1200-03-09-.03(8), 40 CFR §§63.3400(e), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E29-6.** The permittee shall maintain the following records on a monthly basis. In accordance with the requirements of 40 CFR §63.10(b)(1), the owner or operator shall maintain files of all information in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be retained on site. The remaining three (3) years of data may be retained offsite. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

- (a) Records of all measurements needed to demonstrate compliance with Subpart JJJJ, including organic HAP content data for the purpose of demonstrating compliance in accordance with 40 CFR §63.3360(c);
- (b) Material usage, organic HAP usage, and compliance demonstrations in accordance with 40 CFR §63.3370(c).
- (c) Records of all liquid-liquid material balances performed in accordance with 40 CFR §63.3370.

TAPCR 1200-03-09-.03(8), 40 CFR §63.3410(a), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E29-7.** The permittee shall comply with the following reporting requirements.

- (a) Each compliance report must cover the semiannual reporting periods of January 1 through June 30 and July 1 through December 31 of each calendar year. Each compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
- (b) The compliance report must contain the following information:
  - (i) Company name and address.
  - (ii) Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.
  - (iii) Date of report and beginning and ending dates of the reporting period.
  - (iv) If there are no deviations from any emission limit or operating limit, a statement that there were no deviations from the emission limitations during the reporting period.
  - (v) For each deviation that occurs during the reporting period, the compliance report must contain the following information:
    - (A) The total operating time of each affected source during the reporting period.
    - (B) Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken.

TAPCR 1200-03-09-.03(8), 40 CFR §63.3400(c), TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

**E29-8.** The permittee shall comply with the General Provisions of 40 CFR 63, as indicated in Table 2 of Subpart JJJJ.

TAPCR 1200-03-09-.03(8), 40 CFR §63.3340, TAPCR 1200-03-09-.02(11)(e)1.(i) and Title V renewal applications dated December 19, 2018

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**END OF Draft PERMIT NUMBER 575960**

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**ATTACHMENT 1**

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**OPACITY MATRIX DECISION TREE FOR VISIBLE EMISSION  
EVALUATION DATED SEPTEMBER 11, 2013  
TVEE METHODS 1 AND 2 AND EPA METHOD 9**

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**Decision Tree PM for Opacity from  
Nontraditional Sources (Roads and Parking Areas)  
Utilizing TVEE Method 1**

**Notes:**

The use of Tennessee Visible Emission Evaluation (TVEE) Method 1 is only applicable where the use of the method is specified as a permit condition.

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(1)(iii).

This Decision Tree outlines the criteria by which major sources can meet the PM requirements of Title V for demonstrating compliance with the visible emissions standard for nontraditional sources (roads and parking areas). It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

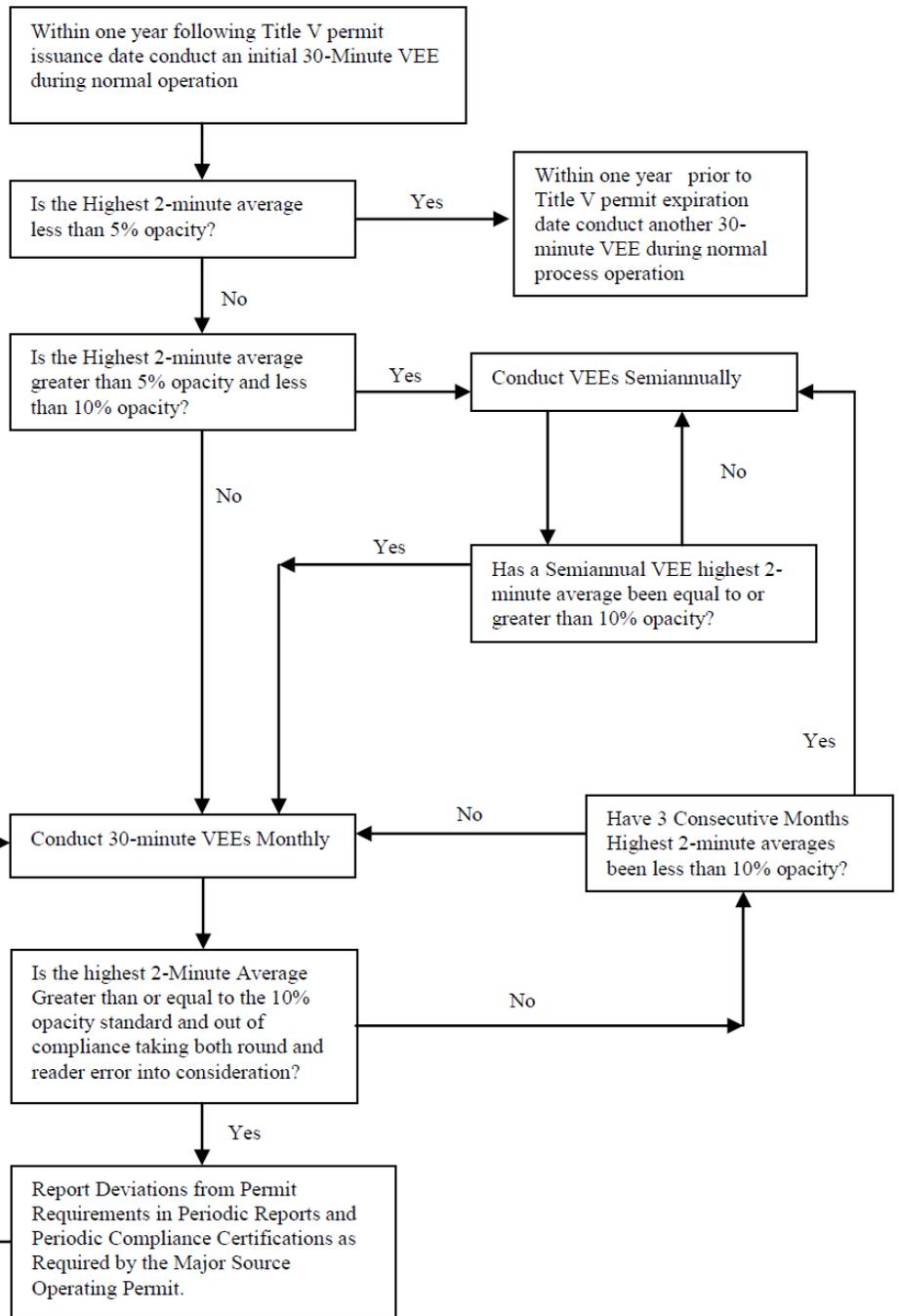
Visible Emissions Evaluations (VEEs) are to be conducted utilizing TVEE Method 1. The observer must be properly certified according to criteria specified in TVEE Method 1 to conduct Method 1 evaluations.

Initial observations are to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

A VEE conducted by TDAPC personnel after the Title V permit is issued will also constitute an initial reading.

**Reader Error**  
For TVEE Method 1, the TDAPC declares non-compliance when the highest two-minute average exceeds the standard plus 10% opacity for sources having this standard applied prior to August 24, 1984 or 8.8% for sources having this standard applied on or after August 24, 1984.

Dated June 18, 1996  
Amended September 11, 2013



**Decision Tree PM for Opacity for  
Sources Subject to Rule 1200-03-05-.01  
Utilizing TVEE Method 2**

**Notes:**

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standard in Rule 1200-03-05-.01. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PMT required.

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing Tennessee Visible Emission Evaluation Method 2. The observer must be properly certified according to the criteria specified in EPA Method 9 to conduct TVEE Method 2 evaluations.

**Typical Pollutants**

Particulates, VOC, CO, SO<sub>2</sub>, NO<sub>x</sub>, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

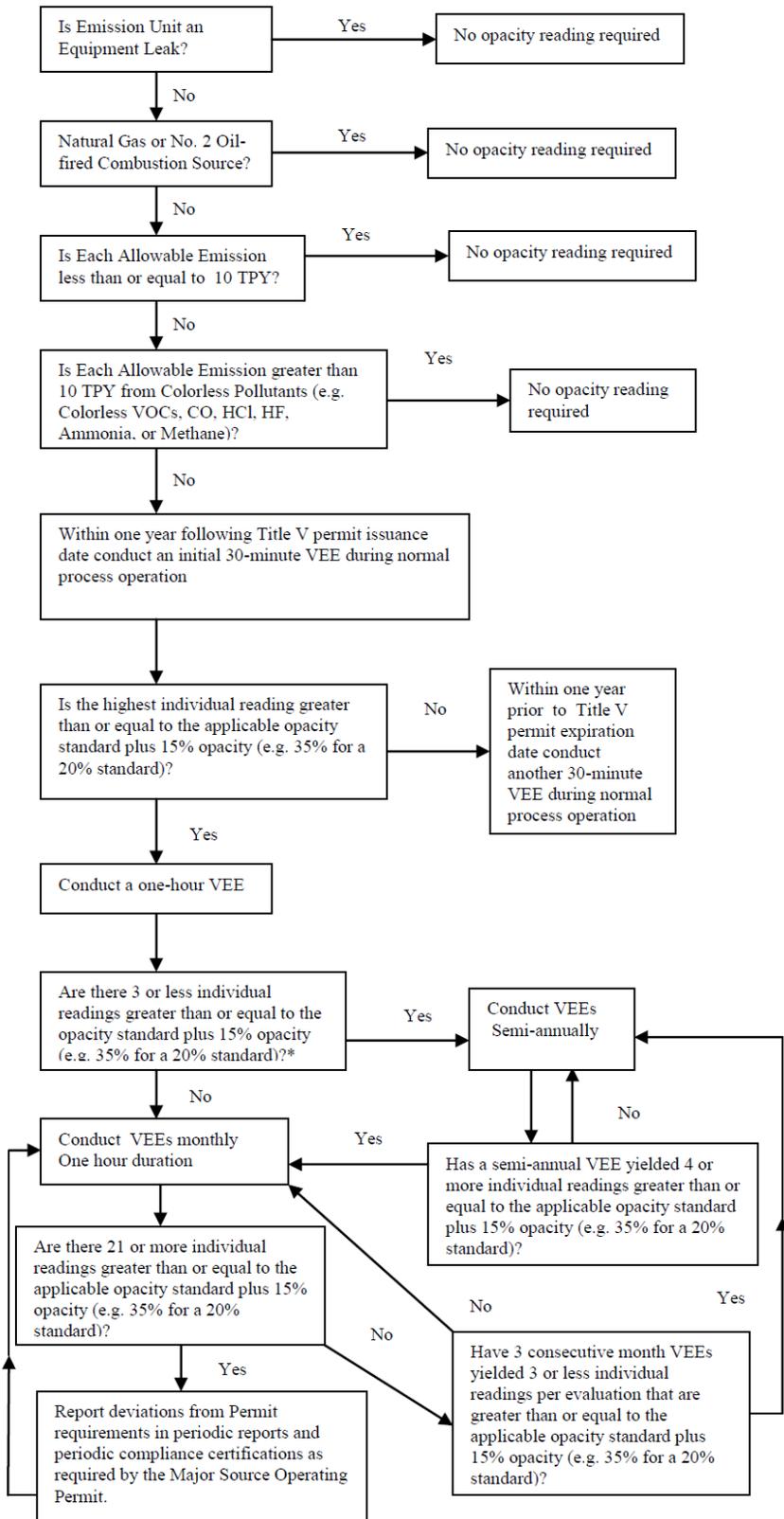
**Reader Error**

TVEE Method 2: The TAPCD declares non-compliance when 21 observations are read at the standard plus 15% opacity (e.g. 35% for a 20% standard).

\*The rationale for this is the fact that Rule 1200-03-05-.01 allows for an exemption of 5 minutes (20 readings) per hour and up to 20 minutes (80 readings) per day. With 4 or more excessive individual readings per hour the possibility of a daily exceedance exists.

Note: A company could mutually agree to have all of its sources regulated by EPA Method 9. Caution: Agreement to use Method 9 could potentially place some sources in non-compliance with visible emission standards. Please be sure before you agree.

Dated June 18, 1996  
Amended September 11, 2013



## Decision Tree PM for Opacity for Sources Utilizing EPA Method 9\*

**Notes:**

PM = Periodic Monitoring required by 1200-03-09-.02(11)(e)(iii).

This Decision Tree outlines the criteria by which major sources can meet the periodic monitoring and testing requirements of Title V for demonstrating compliance with the visible emission standards set forth in the permit. It is not intended to determine compliance requirements for EPA's Compliance Assurance Monitoring (CAM) Rule (formerly referred to as Enhanced Monitoring – Proposed 40 CFR 64).

Examine each emission unit using this Decision Tree to determine the PM required.\*

Use of continuous emission monitoring systems eliminates the need to do any additional periodic monitoring.

Visible Emission Evaluations (VEEs) are to be conducted utilizing EPA Method 9. The observer must be properly certified to conduct valid evaluations.

**Typical Pollutants**

Particulates, VOC, CO, SO<sub>2</sub>, NO<sub>x</sub>, HCl, HF, HBr, Ammonia, and Methane.

Initial observations are to be repeated within 90 days of startup of a modified source, if a new construction permit is issued for modification of the source.

A VEE conducted by TAPCD personnel after the Title V permit is issued will also constitute an initial reading.

**Reader Error**

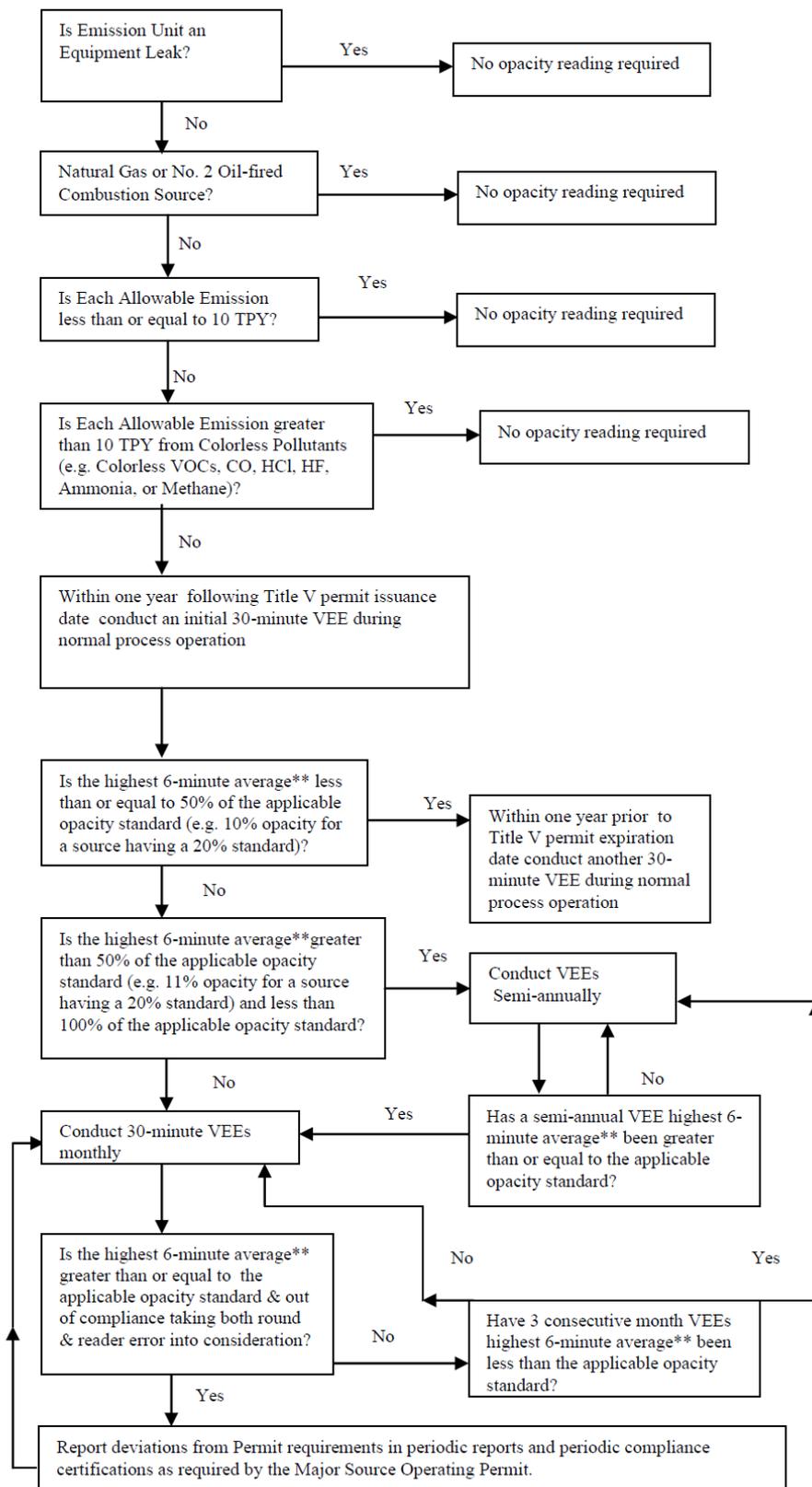
EPA Method 9, Non-NSPS or NESHAPS stipulated opacity standards: The TAPCD guidance is to declare non-compliance when the highest six-minute average\*\* exceeds the standard plus 6.8% opacity (e.g. 26.8% for a 20% standard).

EPA Method 9, NSPS or NESHAPS stipulate opacity standards: EPA guidance is to allow only engineering round. No allowance for reader error is given.

\*Not applicable to Asbestos manufacturing subject to 40 CFR 61.142

\*\*Or second highest six-minute average, if the source has an exemption period stipulated in either the regulations or in the permit.

Dated June 18, 1996  
Amended September 11, 2013



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**ATTACHMENT 2**

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**40 CFR 63 GENERAL PROVISIONS APPLICABILITY**  
**SUBPARTS S AND MM**

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**40 CFR 63 General Provisions Applicability to Subpart S**

<b>Reference</b>	<b>Applies to subpart S</b>	<b>Comment</b>
63.1(a)(1)-(3)	Yes	
63.1(a)(4)	Yes	Subpart S specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)	Yes	
63.1(a)(7)-(9)	No	Sections reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)-(12)	Yes	
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)	No	Section reserved.
63.1(b)(3)	Yes	
63.1(c)(1)-(2)	Yes	
63.1(c)(3)-(4)	No	Sections reserved.
63.1(c)(5)	Yes	
63.1(d)	No	Section reserved.
63.1(e)	Yes	
63.2	Yes	
63.3	Yes	
63.4(a)(1)-(2)	Yes	
63.4(a)(3)-(5)	No	Sections reserved.
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)-(4)	Yes	
63.5(b)(5)	No	Section reserved.
63.5(b)(6)	Yes	
63.5(c)	No	Section reserved.
63.5(d)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)(1)-(5)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(b)(6)	No	Section reserved.
63.6(b)(7)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)(1)-(2)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)(3)-(4)	No	Sections reserved.
63.6(c)(5)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)(1)(i)	No	See §63.453(q) for general duty requirement.
63.6(e)(1)(ii)	No	
63.6(e)(1)(iii)	Yes	

**40 CFR 63 General Provisions Applicability to Subpart S**

<b>Reference</b>	<b>Applies to subpart S</b>	<b>Comment</b>
63.6(e)(2)	No	Section reserved.
63.6(e)(3)	No	
63.6(f)(1)	No	
63.6(f)(2)-(3)	Yes	
63.6(g)	Yes	
63.6(h)(1)-(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(h)(3)	No	Section reserved.
63.6(h)(4)-(9)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)(1)-(14)	Yes	
63.6(i)(15)	No	Section reserved.
63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a) – (d)	Yes	
63.7(e)(1)	No	Replaced with §63.457(o), which specifies performance testing conditions under subpart S.
63.7(e)(2)-(4)	Yes	
63.7(f)	Yes	
63.7(g)(1)	Yes	
63.7(g)(2)	No	Section reserved.
63.7(g)(3)	Yes	
63.7(h)	Yes	
63.8(a)(1)-(2)	Yes	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)-(c)(1)(i)	No	See §63.453(q) for general duty requirement (which includes monitoring equipment).
63.8(c)(1)(ii)	Yes	
63.8(c)(1)(iii)	No	
63.8(c)(2)-(3)	Yes	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in §63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)-(8)	Yes	
63.8(d)(1)-(2)	Yes	
63.8(d)(3)	Yes, except for last sentence, which refers to an SSM plan	SSM plans are not required
63.8(e)	Yes	
63.8(f)(1)-(5)	Yes	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEMs.
63.8(g)	Yes	

**40 CFR 63 General Provisions Applicability to Subpart S**

<b>Reference</b>	<b>Applies to subpart S</b>	<b>Comment</b>
63.9(a)	Yes	
63.9(b)(1)-(2)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(b)(3)	No	Section reserved.
63.9(b)(4)-(5)	Yes	
63.9(c)	Yes	
63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(1)	Yes	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)(1)-(3)	Yes	
63.9(h)(4)	No	Section reserved.
63.9(h)(5)-(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	No	
63.10(b)(2)(ii)	No	See §63.454(g) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
63.10(b)(2)(iii)	Yes	
63.10(b)(2)(iv)-(v)	No	
63.10(b)(2)(vi)-(xiv)	Yes	
63.10(b)(3)	Yes	
63.10(c)(1)	Yes	
63.10(c)(2)-(4)	No	Sections reserved.
63.10(c)(5)-(8)	Yes	
63.10(c)(9)	No	Section reserved.
63.10(c)(10)-(11)	No	See §63.454(g) for malfunction recordkeeping requirements.
63.10(c)(12)-(14)	Yes	
63.10(c)(15)	No	
63.10(d)(1)-(2)	Yes	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes	
63.10(d)(5)	No	See §63.455(g) for malfunction reporting requirements.
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this standard.

**40 CFR 63 General Provisions Applicability to Subpart S**

<b>Reference</b>	<b>Applies to subpart S</b>	<b>Comment</b>
63.10(f)	Yes	
63.11-63.15	Yes	

Wherever subpart A specifies “postmark” dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.1(a)(1)	General applicability of the General Provisions	Yes	Additional terms defined in §63.861; when overlap between subparts A and MM of this part, subpart MM takes precedence.
63.1(a)(2)-(14)	General applicability of the General Provisions	Yes	
63.1(b)(1)	Initial applicability determination.	No	Subpart MM specifies the applicability in §63.860.
63.1(b)(2)	Title V operating permit—see 40 CFR part 70	Yes	All major affected sources are required to obtain a title V permit.
63.1(b)(3)	Record of the applicability determination	No	All affected sources are subject to subpart MM according to the applicability definition of subpart MM.
63.1(c)(1)	Applicability of subpart A of this part after a relevant standard has been set	Yes	Subpart MM clarifies the applicability of each paragraph of subpart A of this part to sources subject to subpart MM.
63.1(c)(2)	Title V permit requirement	Yes	All major affected sources are required to obtain a title V permit. There are no area sources in the pulp and paper mill source category.
63.1(c)(3)	[Reserved]	NA	
63.1(c)(4)	Requirements for existing source that obtains an extension of compliance	Yes	
63.1(c)(5)	Notification requirements for an area source that increases HAP emissions to major source levels	Yes	
63.1(d)	[Reserved]	NA	
63.1(e)	Applicability of permit program before a relevant standard has been set	Yes	
63.2	Definitions	Yes	Additional terms defined in §63.861; when overlap between subparts A and MM of this part occurs, subpart MM takes precedence.
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities and circumvention	Yes	
63.5(a)	Construction and reconstruction—applicability	Yes	
63.5(b)(1)	Upon construction, relevant standards for new sources	Yes	
63.5(b)(2)	[Reserved]	NA	

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.5(b)(3)	New construction/reconstruction	Yes	
63.5(b)(4)	Construction/reconstruction notification	Yes	
63.5(b)(5)	Construction/reconstruction compliance	Yes	
63.5(b)(6)	Equipment addition or process change	Yes	
63.5(c)	[Reserved]	NA	
63.5(d)	Application for approval of construction/reconstruction	Yes	
63.5(e)	Construction/reconstruction approval	Yes	
63.5(f)	Construction/reconstruction approval based on prior State preconstruction review	Yes	
63.6(a)(1)	Compliance with standards and maintenance requirements— applicability	Yes	
63.6(a)(2)	Requirements for area source that increases emissions to become major	Yes	
63.6(b)	Compliance dates for new and reconstructed sources	Yes	
63.6(c)	Compliance dates for existing sources	Yes, except for sources granted extensions under 63.863(c)	Subpart MM specifically stipulates the compliance schedule for existing sources.
63.6(d)	[Reserved]	NA	
63.6(e)	Operation and maintenance requirements	Yes	
63.6(f)	Compliance with nonopacity emissions standards	Yes	
63.6(e)(1)(i)	General duty to minimize emissions	No	See §63.860(d) for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	No	
63.6(e)(1)(iii)	Operation and maintenance requirements enforceable independent of emissions limitations	Yes	
63.6(e)(2)	[Reserved]	No	
63.6(e)(3)	Startup, shutdown, and malfunction plan (SSMP)	No	
63.6(f)(1)	Compliance with nonopacity emissions standards except during SSM	No	
63.6(f)(2)-(3)	Methods for determining compliance with nonopacity emissions standards	Yes	
63.6(g)	Compliance with alternative nonopacity emissions standards	Yes	
63.6(h)(1)	Compliance with opacity and visible emissions (VE) standards except during SSM	No	

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.6(h)(2)-(9)	Compliance with opacity and VE standards	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.6(i)	Extension of compliance with emission standards	Yes	
63.6(j)	Exemption from compliance with emissions standards	Yes	
63.7(a)(1)	Performance testing requirements— applicability	Yes	
63.7(a)(2)	Performance test dates	Yes	
63.7(a)(3)	Performance test requests by Administrator under CAA section 114	Yes	
63.7(a)(4)	Notification of delay in performance testing due to force majeure	Yes	
63.7(b)(1)	Notification of performance test	Yes	
63.7(b)(2)	Notification of delay in conducting a scheduled performance test	Yes	
63.7(c)	Quality assurance program	Yes	
63.7(d)	Performance testing facilities	Yes	
63.7(e)(1)	Conduct of performance tests	No	See §63.865.
63.7(e)(2)-(3)	Conduct of performance tests	Yes	
63.7(e)(4)	Testing under section 114	Yes	
63.7(f)	Use of an alternative test method	Yes	
63.7(g)	Data analysis, recordkeeping, and reporting	Yes	
63.7(h)	Waiver of performance tests	Yes	§63.865(c)(1) specifies the only exemption from performance testing allowed under subpart MM.
63.8(a)(1)	Monitoring requirements—applicability	Yes	See §63.864.
63.8(a)(2)	Performance Specifications	Yes	
63.8(a)(3)	[Reserved]	No	
63.8(a)(4)	Monitoring with flares	No	The use of flares to meet the standards in subpart MM is not anticipated.
63.8(b)(1)	Conduct of monitoring	Yes	See §63.864.
63.8(b)(2)-(3)	Specific requirements for installing and reporting on monitoring systems	Yes	
63.8(c)(1)	Operation and maintenance of CMS	Yes	See §63.864.
63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No	
63.8(c)(1)(ii)	Reporting requirements for SSM when action not described in SSMP	Yes	
63.8(c)(1)(iii)	Requirement to develop SSM plan for CMS	No	
63.8(c)(2)-(3)	Monitoring system installation	Yes	
63.8(c)(4)	CMS requirements	Yes	

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	Yes	
63.8(c)(6)	Zero and high level calibration check requirements	Yes	
63.8(c)(7)-(8)	Out-of-control periods	Yes	
63.8(d)(1)-(2)	CMS quality control program	Yes	See §63.864.
63.8(d)(3)	Written procedures for CMS	No	See §63.864(f).
63.8(e)(1)	Performance evaluation of CMS	Yes	
63.8(e)(2)	Notification of performance evaluation	Yes	
63.8(e)(3)	Submission of site-specific performance evaluation test plan	Yes	
63.8(e)(4)	Conduct of performance evaluation and performance evaluation dates	Yes	
63.8(e)(5)	Reporting performance evaluation results	Yes	
63.8(f)	Use of an alternative monitoring method	Yes	
63.8(g)	Reduction of monitoring data	Yes	
63.9(a)	Notification requirements— applicability and general information	Yes	
63.9(b)	Initial notifications	Yes	
63.9(c)	Request for extension of compliance	Yes	
63.9(d)	Notification that source subject to special compliance requirements	Yes	
63.9(e)	Notification of performance test	Yes	
63.9(f)	Notification of opacity and VE observations	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.9(g)(1)	Additional notification requirements for sources with CMS	Yes	
63.9(g)(2)	Notification of compliance with opacity emissions standard	Yes	Subpart MM does not contain any opacity or VE emissions standards; however, §63.864 specifies opacity monitoring requirements.
63.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded	Yes	
63.9(h)	Notification of compliance status	Yes	
63.9(i)	Adjustment to time periods or postmark deadlines for submittal and review of required communications	Yes	
63.9(j)	Change in information already provided	Yes	
63.10(a)	Recordkeeping requirements— applicability and general information	Yes	See §63.866.
63.10(b)(1)	Records retention	Yes	
63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups and shutdowns	No	

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.10(b)(2)(ii)	Recordkeeping of failures to meet a standard	No	See §63.866(d) for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
63.10(b)(2)(iii)	Maintenance records	Yes	
63.10(b)(2)(iv)-(v)	Actions taken to minimize emissions during SSM	No	
63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes	
63.10(b)(2)(vii)-(xiv)	Other CMS requirements	Yes	
63.10(b)(3)	Records retention for sources not subject to relevant standard	Yes	Applicability requirements are given in §63.860.
63.10(c)(1)-(14)	Additional recordkeeping requirements for sources with CMS	Yes	
63.10(c)(15)	Use of SSM plan	No	
63.10(d)(1)	General reporting requirements	Yes	
63.10(d)(2)	Reporting results of performance tests	Yes	
63.10(d)(3)	Reporting results of opacity or VE observations	Yes	Subpart MM does not include any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.10(d)(4)	Progress reports	Yes	
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports	No	See §63.867(c)(3) for malfunction reporting requirements.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports	No	See §63.867(c)(3) for malfunction reporting requirements.
63.10(e)(1)	Additional reporting requirements for sources with CMS—General	Yes	
63.10(e)(2)	Reporting results of CMS performance evaluations	Yes	
63.10(e)(3)(i)-(iv)	Requirement to submit excess emissions and CMS performance report and/or summary report and frequency of reporting	No	§63.867(c)(1) and (3) require submittal of the excess emissions and CMS performance report and/or summary report on a semiannual basis.
63.10(e)(3)(v)	General content and submittal dates for excess emissions and monitoring system performance reports	Yes	
63.10(e)(3)(vi)	Specific summary report content	No	§63.867(c)(1) specifies the summary report content.
63.10(e)(3)(vii)-(viii)	Conditions for submitting summary report versus detailed excess emission report	No	§63.867(c)(1) and (3) specify the conditions for submitting the summary report or detailed excess emissions and CMS performance report.
63.10(f)	Waiver of recordkeeping and reporting requirements	Yes	
63.11	Control device requirements for flares	No	The use of flares to meet the standards in subpart MM is not anticipated.

**40 CFR 63 General Provisions Applicability to Subpart MM**

<b>General provisions reference</b>	<b>Summary of requirements</b>	<b>Applies to subpart MM</b>	<b>Explanation</b>
63.12	State authority and delegations	Yes	
63.13	Addresses of State air pollution control agencies and EPA Regional Offices	Yes	
63.14	Incorporations by reference	Yes	
63.15	Availability of information and confidentiality	Yes	
63.16	Requirements for Performance Track member facilities	Yes	

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**ATTACHMENT 3**

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**COMPLIANCE ASSURANCE MONITORING (CAM) PLANS**

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## Compliance Assurance Monitoring General Requirements

### Operation of approved monitoring (§64.7):

**Commencement of operation:** The permittee shall conduct all monitoring required pursuant to 40 CFR 64 and this attachment upon issuance of this permit.

**Proper maintenance:** At all times, permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

**Continued operation:** Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**Response to excursions or exceedances:** Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

**Documentation of need for improved monitoring:** If the permittee identifies a failure to comply with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or if the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall promptly notify the Technical Secretary and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes.

### Reporting and recordkeeping requirements (§64.9)

**General reporting requirements:** On and after the issue date of this permit, the permittee shall submit monitoring reports to the Technical Secretary in accordance with **Condition E2** of this permit. The report shall include, at a minimum, the information required by **Condition E2** and the following information, as applicable:

- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; and
- (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).

**General recordkeeping requirements:** The permittee shall comply with the applicable recordkeeping requirements of §70.6(a)(3)(ii) and shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained under 40 CFR 64. The permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

### Quality Improvement Plan (§64.8)

Based on the results of a determination made under §64.7(d)(2), the Technical Secretary may require the owner or operator to develop and implement a Quality Improvement Plan (QIP) if the procedures used by the permittee in response to an excursion or exceedance are determined to be unacceptable.



**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64  
54-0012-22**

<b>Emissions Unit</b>	Lime Slaker
<b>Pollutants</b>	Particulate Matter
<b>Indicator</b>	Venturi Scrubber Flow Rate
<b>Description of Monitoring Protocol</b>	A daily log of the scrubber liquid flow rate shall be maintained at the source location and kept available for inspection by the Technical Secretary or representative.
<b>Indicator Range</b>	The following indicator is established: Minimum scrubber flow rate of 100 gal/minute, measured once per day. An excursion is defined as any daily measurement in which the scrubber flow rate is less than 100 gal/minute.
<b>Measurement Frequency</b>	The flow rate shall be recorded once per day when the source is operational.
<b>QA/QC Practices</b>	The scrubber shall be inspected daily for obvious signs of leaks or other malfunctions and to verify that the scrubber liquid is flowing. The flow meter shall be inspected annually in accordance with the manufacturer's instructions and replaced as needed.
<b>Reference</b>	40 CFR 60 Subpart BB, Title V application dated June 24, 2010, Appendix C.

**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64  
54-0012-26**

<b>Emissions Unit</b>	No. 3 Recovery Furnace
<b>Pollutants</b>	Total Reduced Sulfur (TRS)
<b>Indicator</b>	TRS Concentration
<b>Description of Monitoring Protocol</b>	<p>Install, maintain, operate, and submit reports of excess emissions from a total reduced sulfur (TRS) compounds in-stack monitoring system to be located in a representative area of the effluent gas stream of the recovery furnace. The in-stack TRS monitoring system shall meet all the requirements set forth in Performance Specification 5 as outlined in 40 CFR 60, Appendix B. Data from the in-stack monitor shall be reduced in accordance with §60.284.</p> <p>The in-stack TRS emissions monitoring system shall be fully operational for at least ninety five percent (95%) of the operational time of the monitored source during each calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the source to be in noncompliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by the Technical Secretary as being legitimate malfunctions of the instruments.</p>
<b>Indicator Range</b>	The following indicator is established: TRS concentration $\leq$ 5 ppmvd corrected to 8% oxygen (12-hour average). An excursion is defined as any 12-hour period (as defined in 40 CFR 60 Subpart BB) in which the average TRS concentration exceeds the indicator value.
<b>Measurement Frequency</b>	Continuously monitored and recorded
<b>QA/QC Practices</b>	Quality assurance checks shall be performed on the in-stack total reduced sulfur emissions monitoring system in accordance with the procedure specified in 40 CFR 60, Appendix F.
<b>Reference</b>	40 CFR 60 Subpart BB, Title V application dated June 24, 2010, Appendix C.

**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64  
54-0012-30**

<b>Emissions Unit</b>	Lime Kiln
<b>Pollutants</b>	Total Reduced Sulfur (TRS)
<b>Indicator</b>	TRS Concentration
<b>Description of Monitoring Protocol</b>	<p>Install, maintain, operate, and submit reports of excess emissions from a total reduced sulfur (TRS) compounds in-stack monitoring system to be located in a representative area of the effluent gas stream of the recovery furnace. The in-stack TRS monitoring system shall meet all the requirements set forth in Performance Specification 5 as outlined in 40 CFR 60, Appendix B. Data from the in-stack monitor shall be reduced in accordance with §60.284.</p> <p>The in-stack TRS emissions monitoring system shall be fully operational for at least ninety five percent (95%) of the operational time of the monitored source during each calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the source to be in noncompliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by the Technical Secretary as being legitimate malfunctions of the instruments.</p>
<b>Indicator Range</b>	The following indicator is established: TRS concentration $\leq$ 8 ppmvd corrected to 10% oxygen (12-hour average). An excursion is defined as any 12-hour period (as defined in 40 CFR 60 Subpart BB) in which the average TRS concentration exceeds the indicator value.
<b>Measurement Frequency</b>	Continuously monitored and recorded. Data generated by the continuous in-stack TRS monitoring system(s) shall be maintained for at least five (5) years.
<b>QA/QC Practices</b>	Quality assurance checks shall be performed on the in-stack total reduced sulfur emissions monitoring system in accordance with the procedure specified in 40 CFR 60, Appendix F.
<b>Reference</b>	40 CFR 60 Subpart BB, Title V application dated June 24, 2010, Appendix C.



**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64  
54-0012-41**

<b>Emissions Unit</b>	Pneumatic Ash Conveying System Baghouse
<b>Pollutants</b>	Particulate Matter
<b>Indicator</b>	Pressure Differential
<b>Description of Monitoring Protocol</b>	The pneumatic ash conveying system baghouse uses an induced draft fan to pull air through the baghouse. An filter protects the fan against damage from a bag failure. The pressure drop across this filter is monitored to assure proper operation of the baghouse.
<b>Indicator Range</b>	An excursion is defined as a pressure differential across the filter of greater than 32 inches of water (indicates a bag failure).
<b>Measurement Frequency</b>	One reading per day of the pressure differential across the pneumatic ash conveying system baghouse shall be taken when the ash handling system is operational.
<b>QA/QC Practices</b>	The ash system will be visually inspected once per day to verify that the filter protecting the ash system fan is not plugged. The baghouse will be inspected annually in accordance with the manufacturer’s instructions, and bags shall be replaced as necessary.
<b>Reference</b>	Title V application dated June 24, 2010, Appendix C.

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**ATTACHMENT 4**

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**SUMMARY OF FACILITY EMISSIONS**

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Emission Source	Description	Pollutant	Emission Limit	Corresponding tons/year	Permit Condition
54-0012-10, 11, 12	Power Boilers F1, F2, and F3	PM	0.176 lb/MMBtu	874.2	E4-2
		SO <sub>2</sub>	4,562 tons/year	4,562	E4-3
		CO	None	387	None
		VOC	27.3 tons/year	27.3	None
		NO <sub>x</sub>	2,214 tons/year	2,214	E4-9
		TRS	None	36.1	None
		HCl	None	220.8	None
		HF	None	27.6	None
		HAP Metals	None	0.6	None
54-0012-19	Coal Handling	PM	24.9 tons/year	24.9	E5-1
54-0012-20	1,500 ton/day TMP	VOC (TGNMO)	119.4 tons/year	119.4	E6-2
		Total HAP	None	7.5	None
54-0012-21	Woodyard	PM	7.8 lb/hr	34.2	E7-2
54-0012-22	Lime Slaker	PM	2.6 lb/hr	11.4	E8-1
		VOC	None	9.2	None
		Total HAP	None	1.7	None
54-0012-23	Kraft Mill	SO <sub>2</sub>	None	99.4	None
		VOC	None	28.9	None
		CO	None	16.0	None
		TRS	None	4.5	None
		Total HAP	None	11.9	None
54-0012-24	Chlorine Dioxide Plant	Chlorine	0.92 lb/hr	4.0	E10-1
		Chlorine Dioxide	0.83 lb/hr	3.6	E10-2
		VOC	None	0.5	None
		Total HAP	None	4.7	None
54-0012-26	No. 3 Recovery Furnace	PM	0.027 grains/dscf	342.1	E11-1
		SO <sub>2</sub>	200 ppmv & 540 lb/hr	2,365	E11-2
		CO	200 ppmv & 540 lb/hr	2,975	E11-6
		NO <sub>x</sub>	75 ppmv	639.5	E11-4. This is the default mode of operation.
		VOC (TGNMO)	300 ppmv	845.3	E11-7
		TRS	5 ppmv and 7.2 lb/hr	31.5	E11-8
		Lead	None	0.01	None
		Total HAP	None	23.0	None
54-0012-27	Smelt Dissolving Tank	PM	0.12 lb/ton BLS	61.3	E12-1
		SO <sub>2</sub>	0.2 lb/ton pulp	47.5	E12-2
		TRS	0.033 lb/ton BLS & 3.0 lb/hr	13.1	E12-3
		VOC	None	10.2	None
		NO <sub>x</sub>	None	10.2	None
54-0028	Bleach Plant	Chlorine	5 lb/hr	21.9	E13-1
		Chlorine Dioxide	2.5 lb/hr	11.0	E13-2
		Chloroform	0.42 lb/ton pulp	141.8	E13-3
		VOC	None	50.6	None
		CO	None	87.8	None

Emission Source	Description	Pollutant	Emission Limit	Corresponding tons/year	Permit Condition
		TRS	None	0.95	None
54-0012-30	Lime Kiln	PM	0.067 grains/dscf	110.8	E14-2
		SO <sub>2</sub>	20 lb/hr	87.6	E14-3
		NO <sub>x</sub>	83 lb/hr	363.5	E14-4
		CO	18.1 lb/hr	79.3	E14-5
		VOC (TGNMO)	52.5 lb/hr	230.0	E14-6
		TRS	8 ppmvd	8.76	E14-7
		Total HAP	None	0.79	None
54-0012-31	SOG Incinerator	PM	5.4 lb/hr	23.7	E15-1
			9.1 lb/hr	39.9	E15-2
			15.2 lb/hr	66.6	E15-3
		CO	39.6 lb/hr	173.4	E15-4
		VOC	9.4 lb/hr	41.2	E15-5
		TRS	None	0.04	None
		Total HAP	None	0.76	None
54-0012-32	Paper Mill	VOC	142.6 tons/year	142.6	E16-1
		PM	3 lb/hr total	13.1	E16-2
		NO <sub>x</sub>	3.6 tons/year	3.6	E16-3
		SO <sub>2</sub>	4.4 tons/year	4.4	E16-4
		CO	11 tons/year	11.0	E16-5
		Total HAP	None	76.9	None
54-0012-33	Causticizing Area	VOC	4.5 tons/month & 39.5 tons/12 months	39.5	E17-1
		PM	3.0 lb/hr	13.1	E17-2
		TRS	None	0.35	None
		Total HAP	None	7.20	None
54-0012-35	Recycle Mill	VOC	4.5 tons/month & 39.5 tons/12 months	39.5	E18-1
		PM	3.3 lb/hr	14.5	E18-3
		Total HAP	None	2.4	None
54-0012-36	Chemical Recovery	VOC	None	122.6	None
		TRS	None	4.7	None
		Total HAP	None	53.7	None
54-0012-37	Wastewater Treatment	VOC	None	192.0	None
		Total HAP	None	184.0	None
54-0012-38	Industrial Landfill I	PM	2.0 lb/hr	8.8	E21-2
		VOC	0.5 lb/hr	2.2	E21-4
		Total HAP	None	2.2	None
54-0012-39	Industrial Landfill II	PM	2.0 lb/hr	8.8	E22-2
		VOC	0.5 lb/hr	2.2	E22-4
54-0012-40	950 ton/day TMP	VOC	4.5 tons/month & 39.5 tons/12 months	39.5	E23-1
		PM	2.0 lb/hr	8.8	E23-2
		Total HAP	None	32.7	None
54-0012-41	Multi-Fuel Boiler	PM	0.10 lb/MMBtu (boiler)	384.1	E24-5
		PM	0.02 grains/dscf (ash handling)	0.55	E24-6
		SO <sub>2</sub>	111.8 lb/hr & 489.7 tons/year	489.7	E24-7

Emission Source	Description	Pollutant	Emission Limit	Corresponding tons/year	Permit Condition
		SO <sub>2</sub>	91.5 lb/hr when burning TRS gases	400.8	Condition E24-13 (total for this source and #3 Recovery Furnace when burning TRS)
		NO <sub>x</sub>	117.3 lb/hr & 513.8 tons/year	513.8	E24-7
		CO	166.5 lb/hr & 729.3 tons/year	729.3	E24-7
		NH <sub>3</sub>	15.0 lb/hr & 65.7 tons/year	65.7	E24-7
		Lead	None	0.1	None
		Mercury	3,200 g/day	1.3	E24-9
		Total HAP	None	23.3	None
54-0012-42	Two Fixed-Roof Storage Tanks	VOC	12.3 tons/year	12.3	E25-3
		TRS	0.5 tons/year	0.5	E25-4
54-0012-43	Pulp Refiners	PM	0.25 grains/dscf & 3.3 lb/hr	14.5	E26-2
		VOC	4.0 tons/year	5.6	E26-3
		Total HAP	None	0.7	None
54-0012-44	TMP Bleaching	VOC	13.1 tons/year	13.1	E27-1
		Total HAP	None	4.8	None
54-0012-45	Tissue Machine #1	PM	3.95 lb/hr	17.30	E28-2
		SO <sub>2</sub>	None	0.13	None
		VOC	None	13.14	None
		NO <sub>x</sub>	None	4.77	None
		Total HAP	None	4.80	None
54-0012-46, 47, 48	Converting Facility (Lines 1, 2, 3)	PM	9.5 lb/hr	41.6	E29-1
		VOC	None	1.58	None

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**ATTACHMENT 5**

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**SPECIFIC RECORDKEEPING REQUIREMENTS**

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**TAPCR 1200-03-09-.01(4)(a)11.**

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### TAPCR 1200-03-09-.01(4)(a)11 Recordkeeping Requirements

Pursuant to Rule 1200-03-09-.01(4)(a)11. of the Tennessee Air Pollution Control Regulations (TAPCR), the following specific provisions apply to projects at existing emissions units at a major stationary source in circumstances where there is a reasonable possibility that a project that is not a part of a major modification may result in a significant emissions increase and the owner or operator elects to use the method specified in TAPCR 1200-03-09-.01(4)(b)38.(i)(I) through (III) for calculating projected actual emissions.

- (i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
  - (I) A description of the project;
  - (II) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
  - (III) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under TAPCR 1200-03-09-.01(4)(b)38.(i)(III) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- (ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in TAPCR 1200-03-09-.01(4)(a)11.(i) to the Technical Secretary. Nothing in TAPCR 1200-03-09-.01(4)(a)11.(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the Technical Secretary before beginning actual construction.
- (iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in TAPCR 1200-03-09-.01(4)(a)11.(i)(II); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis<sup>[1]</sup>, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.
- (iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Technical Secretary within 60 days after the end of each year during which records must be generated under TAPCR 1200-03-09-.01(4)(a)11.(ii) setting out the unit's annual emissions during the calendar year that preceded submission of the report.
- (v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the Technical Secretary if the annual emissions, in tons per year, from the project identified in TAPCR 1200-03-09-.01(4)(a)11.(i), exceed the baseline actual emissions (as documented and maintained pursuant to TAPCR 1200-03-09-.01(4)(a)11.(i)(III)) by a significant amount (as defined in TAPCR 1200-03-09-.01(4)(b)24.) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to item TAPCR 1200-03-09-.01(4)(a)11.(i)(III). Such report shall be submitted to the Technical Secretary within 60 days after the end of such year. The report shall contain the following:
  - (I) The name, address and telephone number of the major stationary source;
  - (II) The annual emissions as calculated pursuant to TAPCR 1200-03-09-.01(4)(a)11.(iii); and
  - (III) Any other information that the owner or operator wishes to include in the report (*e.g.*, an explanation as to why the emissions differ from the preconstruction projection).

Pursuant to TAPCR 1200-03-09-.01(4)(a)12., the owner or operator of the source shall make this information available for review upon request for inspection by the Technical Secretary or the general public.

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[1] Recordkeeping of 12-month rolling total emissions fulfills this requirement.