NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Fayetteville Regional Office
County: Montgomery
NC Facility ID: 6200029
Inspector's Name: Joshua Loehman
Date of Last Inspection: 04/19/2023
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Troy Lumber Company Inc.

Facility Address:
Troy Lumber Company Inc.
110 Leslie Street
Troy, NC 27371

SIC: 2421 / Sawmills & Planing Mills General
NAICS: 321912 / Cut Stock, Resawing Lumber, and Planing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0503, 02D .0504, 02D .0512, 02D .0515, 02D .0516, 02D .0521, 02D .0524, 02D .0530, 02D .1111, 02D .1806, 02Q .0317 (avoidance for 02D .0530), 02Q .0508(j)
NSPS: Subparts Dc
NESHAP: Subparts DDDDD, DDDD
PSD: NA
PSD Avoidance: NA
NC Toxics: NA
112(r): NA (General Duty Clause)
Other: NA

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Tanner Franklin EHS Manager (910) 576-6111 110 Leslie Street Troy, NC 27371	Fred Taylor, II President (910) 576-6111 110 Leslie Street Troy, NC 27371	Michael Deyo President (804) 937-9377 100 Walton Park Lane Midlothian, VA 23114

Application Data

Application Number: 6200029.20B
Date Received: 07/31/2020
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 02330/T26
Existing Permit Issue Date: 10/19/2021
Existing Permit Expiration Date: 09/30/2026

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	7.02	63.22	379.06	59.05	18.40	34.18	15.58 [Methanol (methyl alcohol)]
2020	5.81	51.43	360.88	47.09	16.36	31.14	14.86 [Methanol (methyl alcohol)]
2018	5.12	45.01	311.13	41.93	33.35	29.52	14.97 [Methanol (methyl alcohol)]
2017	4.67	41.09	306.18	31.00	35.67	28.50	14.74 [Methanol (methyl alcohol)]

Review Engineer: Ed Martin

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 02330/T27
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

The purpose of this permit application is to renew the existing Title V permit in accordance with 02Q .0513. Troy Lumber currently operates under Air Quality Permit No. 02330T26, which will expire on September 30, 2026. The renewal application for the then existing Title V permit No. 02330T24 was received in the Division's RCO on July 31, 2020, or at least six months prior to the expiration date of January 31, 2021, as required by Section 3, General Condition K. Therefore, the application was filed in a timely manner, the application shield pursuant to 15A NCAC 02Q .0512(b)(1) remains in effect, and the existing permit shall not expire until the renewal permit has been issued or denied pursuant to 02Q .0513. All terms and conditions of the existing permit will remain in effect until the renewal permit has been issued or denied. This renewal permit is being issued for another five-year term and will expire five years from the date of issuance.

This permit change is a significant Title V permit modification that does not contravene or conflict with a condition in the existing permit pursuant to rule 15A NCAC 02Q .0501(b)(1). A 30-day public notice and 45-day EPA review of the draft permit is required.

2. Facility Description

Troy Lumber Company Inc. (Troy Lumber) is located in Troy, North Carolina, Montgomery County. Troy Lumber is an existing lumber mill which began operations in 1945. The primary product manufactured at this facility is construction grade dimension lumber from green southern yellow pine trees. Other products created as a result of this operation include wood chips, sawdust, bark and shavings. Southern yellow pine logs are trucked into the site, debarked and cut into lumber at specified dimensions in the sawmill. The green rough-cut lumber from the sawmill is stacked and dried in the lumber kilns.

The green lumber is dried in the kilns for 18-24 hours, depending on the initial moisture content, age and size of the wood. Rough cut green lumber is dried to reduce moisture content in the lumber from approximately 50 percent (%) to a target of 19%. Green wood waste (sawdust) and some dry planer shavings are the primary fuels for the existing wood-fired boilers.

The dried lumber is finished by planing (ID No. ES-PM) and trimming (ID No. ES-SH) in the planer mill. Finished lumber is sorted by length, size, and grade; packaged and then shipped off site by truck or rail for delivery to the customer. Bark from the logs is sold to customers that process it into landscaping material. Poor quality log parts are chipped and used as a paper mill fiber source. Scrap lumber is ground into chips and sold. The remaining green wood chips and planer shavings not used as fuel for the boilers are sold and shipped off site as byproducts.

The mill can operate 24 hours per day, 365 days per year (8,760 hours per year). The maximum production capacity is currently limited to 265.41 million board feet of lumber per year (MMBF/yr) and a maximum combined heat input to all four boilers is currently limited to 669,731 million Btu per year by the facility's permit.

3. History/Application Chronology

<u>History/Background Since Last Renewal</u>

February 25, 2016	Air permit No. 02330T21 was issued for renewal of the Title V permit with an expiration date of January 31, 2021. (See Russell Braswell's TV review dated February 25, 2016, for details).
April 22, 2016	Air permit No. 02330T22 was issued with an expiration date of January 31, 2021, pursuant to application 6200029.16A. This application was an administrative amendment for clarifications and correction of typographical errors in the permit. (See Charlie Yirka's TV review dated April 22, 2016, for details).

April 30, 2019

Air permit No. 02330T23 was issued with an expiration date of January 31, 2021. Troy submitted permit applications as follows:

- Permit application No. 6200029.18A was for a minor modification for the installation of two electrostatic precipitators (ESPs) on two existing wood-fired boilers.
- Permit application No. 6200029.18B was for a minor modification to change the status of a 32.66 million British thermal units per hour (MMBtu/hr) No. 2 fuel oil-fired boiler (ES-Boiler4) from a temporary boiler to a new boiler.
- Permit application No. 6200029.19B was for an administrative amendment to change the date performance testing is required for Boilers 1 and 2 to demonstrate compliance with the applicable particulate matter emission limits under 15A NCAC 02D .0504.

(See Heather Sand's TV review dated April 30, 2019, for details).

February 7, 2020

Air permit No. 02330T24 was issued with an expiration date of January 31, 2021. Application 600029.20A proposed adding an alternative operating scenario (AOS) to the changes made during processing of permit application No. 6200029.18B (above) and included a change for the 32.66 million Btu/hr ultra-low sulfur distillate fuel-fired boiler (ID No. ES-Boiler4). The primary operating scenario (POS) of this boiler to limited-use as defined in 40 CFR Part 63.7575 and make the current permitted scenario an AOS. Boiler 4 is only expected to operate when Boilers 1 and 2 (ID Nos. ES-B1 and ES-Boiler2) are being serviced. (See Judy Lee's TV review dated February 7, 2020, for details).

December 22, 2020

Air permit No. 02330T25 was issued, using the one-step procedure in 15A NCAC 02Q .0501(c)(1), with an expiration date of January 31, 2021 pursuant to applications 6200029.19A and 6200029.17A. Troy Lumber submitted a Prevention of Significant Deterioration (PSD) Application (6200029.19A) for various modifications, previously approved by the Division under the minor New Source Review (NSR) program in 15A NCAC 02Q .0300, especially 02Q .0317. The facility had requested and obtained PSD avoidance limitations during its previous years of operation for VOCs through different applications submittals.

In addition, the application includes the following equipment modifications and permitting of new equipment:

- Modifying Kiln #2 to operate as a continuous operation lumber drying kiln.
- Increasing Kiln #1, #2, and #3 annual permitted throughput to 265.41 MMBF per year.
- Installation of a 1,200 horsepower (hp); 57 million Btu per hour wood-fired boiler (ID No. ES-Boiler 3) controlled by two multicyclones and an electrostatic precipitator (ESP) for particulate control.
- New wood fuel storage silo (ID No. ES-WCS-2) and associated cyclone (ID No. CD-C5).

Separately, Troy Lumber submitted another application (6200029.17A) to comply with the significant modification under the second-step of the 02Q .0501(b)(2) Title V permitting process for several previously approved changes.

(See Judy Lee's TV review dated December 22,2020 for details).

October 19, 2021

Air permit No. 02330T26 (6200029.21A) was issued with an expiration date of September 30, 2026. This was a minor modification of an existing Title V Permit pursuant to 15A NCAC 02Q .0515. The application (No. 6200029.21A) was to replace the existing planer mill (ID No. ES-PM) and wood hog (ID No. ES-SH) and

	associated cyclones (ID Nos. CD-3 and CD-4, respectively). (See Judy Lee's TV review dated October 19, 2021, for details.
XX	Air permit No. 02330T27 was issued for another five years with an expiration date of _____.

Application Chronology

July 31, 2020	Title V renewal application 6200029.20B received and was complete for processing.
January 27, 2021	Addendum received to incorporate revised maximum heat input greater than 30 million Btu per hour for ES-Boiler2.
January 29, 2021	Additional information request made to applicant for revised application forms and calculations for ES-Boiler2 to reflect the NSPS requirements for a maximum heat input capacity greater than 30 mmBtu/hr as being applicable as a result of recent testing.
February 23, 2021	Additional information for ES-Boiler2 received from applicant.
June 22, 2023	Responsibility for application transferred to Ed Martin.
October 4, 2023	Sent the draft permit for supervisor's review.
October 20, 2023	Sent the draft permit to the Stationary Source Compliance Branch, Applicant, and the Fayetteville Regional Office for review.
November 7, 2023	Received Applicant's comments on the draft permit.
November 30, 2023	Sent the draft permit to 30-day public notice and 45-day EPA review.
December 30, 2023	Public notice period ended.
January 14, 2024	EPA's comment period ended.
XX	Air permit No. 02330T27 was issued.

4. Permit Changes

The following table describes the modifications to the current permit as part of the renewal process. This summary is not meant to be an exact accounting of each change but a summary of those changes.

Page No(s).	Section	Description of Change(s)
Cover and throughout	Throughout	Added new cover letter with new format. Amended permit numbers and dates. Arranged Section 2.1 sources to match order of Section 1 sources.
4	1	Revised descriptions under Control Device ID No. and Control Device for boilers 1, 2, and 3 on how the controls are arranged in series with each other. Removed footnote ** for the minor modification per 15A NCAC 02Q .0515.
14	2.1 B, regulation table	Revised 02D .0504 particulate matter limit to 0.43 pounds per million Btu heat input. Removed 02D .0521 for visible emissions. Added 02D .0524 for visible emissions and particulate matter.
14	2.1 B.1.a	Revised 02D .0504 particulate matter limit to 0.43 pounds per million Btu heat input.
14*	2.1 B.3*	Removed 02D .0521 for visible emissions.
15*	2.1 B.4*	Removed old 02D .0524 section and renumbered remaining 2.1 B section.
15-17	2.1 B.3 new	Added new 02D .0524 for visible emissions and particulate matter.
22	2.1 C, regulation table	Revised 02D .0504 particulate matter limit to 0.39 pounds per million Btu heat input. Removed reference to 60.47c(f) for 15A NCAC 02D .0524 Particulate Matter.
22	2.1 C.1.a	Revised 02D .0504 particulate matter limit to 0.39 pounds per million Btu heat input.
31	2.1 D, regulation table	Revised 02D .0503 particulate matter limit to 0.31 pounds per million Btu heat input.
31	2.1 D.1.a	
47	2.1 F.2.c	Removed the requirement to establish “normal” for sources ES-PM and ES-SH in the first 30 days of beginning operation.
57	3	Created this new section for insignificant activities.
58-65	4	Created this new section and moved General Conditions to this section. Updated General Conditions to version 7.0, dated 08/21/2023.

* Old page or old condition.

5. Regulatory Evaluation

Troy Lumber Company is or was subject to the following source-by-source regulations, in addition to the requirements in the General Conditions. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

- 15A NCAC 02D .0503 “Particulates from Fuel Burning Indirect Heat Exchangers”
- 15A NCAC 02D .0504 "Particulates from Wood Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0512 "Particulates from Wood Products Finishing Plants"
- 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0516 "Sulfur Dioxide from Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards" (40 CFR Part 60 Subpart Dc)
- 15A NCAC 02D .0530 “Prevention of Significant Deterioration”
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (40 CFR Part 63 Subparts DDDDD, DDDD)
- 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions"
- 15A NCAC 02Q .0317 "Avoidance Conditions" (PSD Avoidance)
- 15A NCAC 02Q .0508(j) “Permit Content”

A. One wood-fired underfired stoker boiler with pre-heater and flyash reinjection (ID No. ES-B1) with associated multicyclones (ID Nos. CD-B-MC1 and CD-B-MC2), installed in series and one electrostatic precipitator (ID No. CD-ESP-1)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

   This is a wood-fired underfired stoker boiler with 44.5 million Btu per hour maximum heat input.

   This Rule applies to fuel burning equipment that burns 100 percent wood. Emissions of particulate matter from the combustion of wood shall not exceed:

Maximum Heat Input in Million Btu/Hour	Allowable Emission Limit For Particulate Matter In lb/Million Btu
Up to and Including 10	0.70
100	0.41
1,000	0.25
10,000 and Greater	0.15

   For a heat input between any two consecutive heat inputs stated in the table set forth in this Paragraph, the allowable emissions of particulate matter shall be calculated by the equation $E=1.1698*Q^{-.2230}$. "E" equals the allowable emission limit for particulate matter in lb/million Btu. "Q" equals the Maximum heat input in million Btu/hour. This Rule applies to installations in which wood is burned for the primary purpose of producing heat or power by indirect heat transfer. For the purpose of this Rule, the heat content of wood shall be 8,000 Btu per pound (dry-weight basis). The sum of maximum heat inputs of all wood burning indirect heat exchangers at a plant site that are in operation, under construction, or permitted shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each wood burning indirect heat exchanger. Wood burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any wood burning indirect heat exchanger whose allowable emission limit has previously been set.

Emission Limit
The affected sources to which this regulation applies are the following:

Source	Heat Input (mmBtu/hr)	Date Operation Began or Permitted
Boiler 1	44.5	1986*
Boiler 2	44.1	2006
Boiler 3	57	2020

* This operation date was shown as April 1986 in the review for the initial (T12) Title V permit. Also, noted in this review was that the boiler plate for this boiler indicates a 38.6 million Btu per hour heat input capacity, but that testing has shown the maximum input capacity for the boiler is 44.5 million Btu per hour.

Boiler 2 was the first wood-fired boiler to be added to the permit. The particulate matter emission limit for Boiler 1 was previously set at 0.50 pounds per million Btu heat input based on a heat input of 44.5 mmBtu/hr and remains at this limit. The emission limit is calculated as follows:

$$E = 1.1698*Q^{-.2230}$$
$$= 1.1698*(44.5)^{-.2230}$$
$$= 0.50 \text{ lb/mmBtu}$$

The emission limit for Boiler 2 is shown in Section 5.B.1 below and the emission limit for Boiler 3 is shown in Section 5.C.1 below.

Testing
To demonstrate compliance with the standards provided above, the Permittee shall conduct a compliance test for particulate matter (including PM_{10}) in accordance with General Condition JJ. The test shall be completed on or before November 16, 2019, and again for each subsequent 5-year period. If the compliance test shows that the emission rate is more than 80 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the emission limit or if the testing is not conducted as described above, the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

This PM testing was completed per test report dated August 6, 2019.

Monitoring
Particulate matter emissions from this source shall be controlled by two multicyclones**,** installed in series and the electrostatic precipitator. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:

a. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;
b. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
c. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
d. inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

Recordkeeping
The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

a. the date and time of each recorded action;
b. the results of each inspection;
c. a report of any maintenance performed on any control device; and
d. any variance from manufacturer's recommendations, if any, and any corrections made.

Reporting

a. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.
b. The Permittee shall submit semiannual summary reports of monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

Emission Limit
Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Wood contains inherently low concentrations of sulfur, therefore sulfur dioxide emissions from the combustion of wood in this boiler is expected to be below 2.3 pounds per million Btu of heat input.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Limit
Visible emissions from this source shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Monitoring
To ensure compliance, once a day the Permittee shall observe the emission points of this boiler for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If visible emissions from this source are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the emission limit.

Recordkeeping
The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

a. the date and time of each recorded action;
b. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
This facility is major for HAPs as emitting or has the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs. Therefore, in accordance with 40 CFR 63.7485, this wood-fired boiler is subject to MACT Subpart DDDDD.

This boiler has a heat input of 44.5 mmBtu/hr and is categorized as an existing source with a heat input capacity equal to or greater than 10 million Btu per hour. A boiler or process heater is existing if it is not constructed or reconstructed after June 4, 2010.

a. For this source (*existing Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart DDDDD), including Subpart A "General Provisions."

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions
c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart DDDDD.

d. Compliance Date
The Permittee shall:

i. complete the initial tune up and the one-time energy assessment as required in Section A.4.m and p below no later than May 20, 2019. [This requirement was met per NOCS received by FRO on September 23, 2019.]
ii. complete the initial compliance requirements in Section A.4.j below no later than November 16, 2019 and according to the applicable provisions in 40 CFR 63.7(a)(2). [This requirement was met on July 24, 2019.]

General Compliance Requirements

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section A.4.g below, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with Section 4.n and o below.

f. At all times, the Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Emission Limits

g. The affected unit shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per million Btu of heat input
Mercury (Hg)	5.7E-06 lb per million Btu of heat input
Carbon monoxide (CO)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.7E-02 lb per million Btu of heat input

Testing

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Notifications

i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

Initial compliance requirements

j. The Permittee shall demonstrate compliance with the limits in Section A.4.g above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 40 CFR 63.7525 and 40 CFR 63.7530. [These requirements were met on July 24, 2019.]

Subsequent compliance requirements

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.
      (A) you must conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h).
      (B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.

(C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 4.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

ii. demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

Monitoring Requirements and Operating Limits

l. The Permittee shall:

i. install, operate, and maintain an oxygen trim system, as defined in 40 CFR 63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. The oxygen level shall be no lower than 4.43 percent.

ii install, operate, certify and maintain a COMS (CMS) according to the procedures in 40 CFR 63.7525(c)(1) through (7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed 10 percent.

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. The 30-day rolling average operating load shall not exceed 22,031 lb/hr steam.

iv. meet the requirements for all monitoring systems (CMS) as applicable according to 40 CFR 63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in 40 CFR 63.7505(d)(1) through (4) for the use of any CMS.

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

Work Practice Standards

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source every five years while burning the type of fuel that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:

(A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;

(B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);

(D) optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

(E) measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. This tune-up requirement was met on July 24, 2019.

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Startup Requirements [Table 3 to Subpart DDDDD]

n. During startup, the Permittee shall:

i. operate all CMS during startup.

ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.

iii. have the option of complying using either of the following work practice standards.

(A) if you choose to comply using definition (1) of "startup" in 40 CFR 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR

(B) if you choose to comply using definition (2) of "startup" in 40 CFR 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in 40 CFR 63.7505(e).

iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in 40 CFR 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555.

Shutdown Requirements

o. During shutdown, the Permittee shall:

i. operate all CMS during shutdown.

ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.

iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.

iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in 40 CFR 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in 40 CFR 63.7555.

Energy Assessment Requirements

p. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, Item 4, with the extent of the evaluation for items (a) to (e) in Table 3, Item 4 appropriate for the on-site technical hours listed in 40 CFR 63.7575. [The one-time energy assessment requirement was met on July 24, 2019.]

Recordkeeping Requirements

q. The Permittee shall:
   i. keep 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 semiannual compliance report that has been submitted.
   ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations.
   iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
      (A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      (B) a description of any corrective actions taken as a part of the tune-up; and
      (C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of 40 CFR 63.7555.
   v. keep records required in Table 8 of Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.
   vi. keep the applicable records in paragraphs (d)(1) through (13) of 40 CFR 63.7555.
   vii. (A) maintain records in a form suitable and readily available for expeditious review;
      (B) keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
      (C) keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

Reporting Requirements

r. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit a semiannuall excess emissions and continuous monitoring system performance report and/or a summary report.
      (A) the first compliance report shall be postmarked on or before July 30, 2019 and cover the period from May 20, 2019 through June 30, 2019.
      (B) the compliance reports shall also be submitted electronically to the EPA via the procedures in 40 CFR 63.7550(h).
   ii. The compliance report shall contain:
      (A) the information in 40 CFR 63.7550(c) as applicable.
      (B) for each deviation from an emission limit or operating limit, the report shall contain the information in 40 CFR 63.7550(d) and 40 CFR 63.7550(e) as applicable.
      (C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to 40 CFR 63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in 40 CFR 63.10(e)(3)(v) and (vi).

iii. Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in 40 CFR 63.2) as required by Subpart DDDDD, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in 40 CFR 63.7550(h).
(A) this report must also verify that the operating limits in Section A.4.l above have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550.
(B) if performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in Section A.4.l above the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
(C) if performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits, in Section A.4.l above the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

5. 15A NCAC 02D .1806
See Section G.1 below.

6. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

B. One wood-fired underfire stoker boiler with flyash reinjection (ID No. ES-Boiler2) with associated multicyclones (ID Nos. CD-Boiler2-1 and CD-Boiler2-2), installed in series and one electrostatic precipitator (ID No. CD-ESP-2)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS
This is a wood-fired underfired stoker boiler with 44.1 million Btu per hour maximum heat input. See Section 5.A.1 above for a description of this rule.

Emission Limit
With this application Troy Lumber requested that the rated capacity for Boiler 2 be changed from 28.69 mmBtu/hr to 44.1 mmBtu/hr as a result of recent stack testing performed. (see Section 5.B.3 below for this change). This affects the particulate matter limit calculated below for Boiler 2, Boiler 3 in Section 5.C.1 below, and the 02D .0503 limit for Boiler 4 calculated in Section 5.D.1 below.

Boiler 2 was the second wood-fired boiler to be added to the permit. The particulate matter emission limit for Boiler 2 is calculated for this rule based on the heat inputs of Boiler 1 and Boiler 2 as follows:

Source	Heat Input (mmBtu/hr)	Date Operation Began or Permitted
Boiler 1	44.5	1986
Boiler 2	44.1	2006

$$E = 1.1698*Q^{-.2230}$$
$$= 1.1698*(44.5+ 44.1)^{-.2230}$$
$$= 0.43 \text{ lb/mmBtu}$$

Testing
To demonstrate compliance with the standards provided above, the Permittee shall conduct a compliance test for particulate matter (including PM_{10}) in accordance with General Condition JJ. The test shall be completed on or before November 16, 2019, and again for each subsequent 5-year period. If the compliance test shows that the emission rate is more than 80 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given above or if the testing is not conducted as described above, the shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

This testing was completed on July 23, 2019.

Monitoring
Particulate matter emissions from this source shall be controlled by two multicyclones installed in series and an electrostatic precipitator. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:

a. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;
b. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
c. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
d inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

Recordkeeping
The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

a. the date and time of each recorded action;
b. the results of each inspection;
c. a report of any maintenance performed on any control device; and
d. any variance from manufacturer's recommendations, if any, and any corrections made.

Reporting

a. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.
b. The Permittee shall submit semiannual summary reports of monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing except that the particulate emission limit was revised as discussed under the Emission Limit above. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

Emission Limit
Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Wood contains inherently low concentrations of sulfur, therefore sulfur dioxide emissions from the combustion of wood in this boiler is expected to be below 2.3 pounds per million Btu of heat input.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
In the application addendums received February 4, 2021, and March 3, 2021, Troy Lumber requested the rated capacity for this boiler be changed from 28.69 mmBtu/hr to 44.1 mmBtu/hr as a result of recent stack testing performed to establish worst case operating conditions under the Boiler MACT regulations. Therefore, the NSPS Subpart Dc requirements are being changed to reflect those for boilers with a maximum heat input capacity greater than 30 mmBtu/hr.

a. For this boiler, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions".

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 60.41c shall apply.

Compliance Date
c. Except as specified in 40 CFR 60.8 (a)(1) through (4), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall conduct performance test(s) pursuant to Section B.3.e.i below.

Emission Limitations
d. i. On and after the date on which the initial performance test is completed or required to be completed under Section B.3.c below, whichever date comes first:
(A) PM emissions from the boiler shall not exceed 0.030 lb/million Btu heat input.
(B) Visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.
ii. The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

Testing
e. i. (A) The Permittee shall conduct an initial performance test for PM and opacity consistent with 40 CFR 60.45c and General Condition JJ.
(B) The Permittee shall submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data.
(C) If the results of these or any tests are above any limit given in Section B.3.d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

ii. Under the provisions of NCGS 143-215.108 and pursuant to 40 CFR 60.45c(a), the Permittee shall demonstrate compliance with the PM emission limit in Section B.3.d.i.(A) above on an annual basis in accordance with General Condition JJ. If the results of this test are less than 80 percent of the emission limit in Section B.3.d.i.(A) above, the Permittee shall be required to stack test only once every five years following the previous stack test.

Opacity Monitoring

f. i. The Permittee shall calibrate, maintain, and operate a continuous monitoring system (COMs) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
ii. The COMS shall be calibrated, maintained, and tested in accordance with 40 CFR 60.13 and 15A NCAC 02D .0613.
iii. The COMs shall be operated in accordance with the applicable procedures under 40 CFR 60, Appendix B Performance Specification 1. The span value of the opacity COMS shall be between 60 and 80 percent.

Recordkeeping Requirements

g. The Permittee shall maintain:
i. records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
ii. records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection.
iii. records of the amounts of each fuel combusted during each operating day.
iv. retain records for at least two years following the date of such measurements, maintenance, reports, and records.

Reporting/Notifications Requirements

h. The Permittee shall submit:
i. a semiannual excess emissions and continuous monitoring system performance report.
ii. for the COMS, an excess emissions and monitoring system performance report and/or summary reports.
iii. at least 30 days advance notice of any performance test to the Regional Supervisor, DAQ to afford the DAQ the opportunity to have an observer present.
iv. (A) a report containing the results of the initial performance tests conducted pursuant to Section B.3.e.i above postmarked no later than 180 days after initial startup of the boiler.
(B) a report containing the results of subsequent performance tests conducted pursuant to Section B.3.e.i above postmarked no later than 30 days after completion of performance tests.

Initial notification of start-up for this boiler was completed November 20, 2006, in accordance with 40 CFR 60.48c(a).

The applicability of this regulation has changed to reflect the NSPS Subpart Dc requirements for boilers with a maximum heat input capacity greater than 30 mmBtu/hr as noted above as part of this renewal processing. Opacity monitoring is now covered under Subpart Dc, therefore visible emissions under 15A NCAC 02D .0521, previously in the permit, is no longer applicable to this source. Compliance with this regulation is expected.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
This facility is major for HAPs as emitting or has the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs. Therefore, in accordance with 40 CFR 63.7485, this wood-fired boiler is subject to MACT Subpart DDDDD.

This boiler has a heat input of 44.1 mmBtu/hr and is categorized as an existing source with a heat input capacity equal to or greater than 10 million Btu per hour. A boiler or process heater is existing if it is not constructed or reconstructed after June 4, 2010.

a. For this source (*existing Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart DDDDD), including Subpart A "General Provisions."

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart DDDDD.

d. Compliance Date
The Permittee shall:
   i. complete the initial tune up and the one-time energy assessment as required in Section B.4.m and p below no later than May 20, 2019. [This requirement was met per NOCS received by FRO on September 23, 2019.]
   ii. complete the initial compliance requirements in Section B.4.j below no later than November 16, 2019 and according to the applicable provisions in 40 CFR 63.7(a)(2). [This requirement was met on July 23, 2019.]

General Compliance Requirements

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section B.4.g below, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with Section B.4.n and o below.

f. At all times, the Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Emission Limits

g. The affected unit shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per million Btu of heat input
Mercury (Hg)	5.7E-06 lb per million Btu of heat input
Carbon monoxide (CO)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.7E-02 lb per million Btu of heat input

Testing

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Notifications

i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

Initial compliance requirements

j. The Permittee shall demonstrate compliance with the limits in Section B.4.g above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 40 CFR 63.7525 and 40 CFR 63.7530. [These requirements were met on July 23, 2019.]

Subsequent compliance requirements

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.
      (A) you must conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h).
      (B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.
      (C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section B.4.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
   ii. demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

Monitoring Requirements and Operating Limits

l. The Permittee shall:
   i. install, operate, and maintain an oxygen trim system, as defined in 40 CFR 63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. The oxygen level shall be no lower than 4.43 percent.
   ii install, operate, certify and maintain a COMS (CMS) according to the procedures in 40 CFR 63.7525(c)(1) through (7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed 10 percent.
   iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. The 30-day rolling average operating load shall not exceed 22,031 lb/hr steam.
   iv. meet the requirements for all monitoring systems (CMS) as applicable according to 40 CFR 63.7525(d).
   v. develop a site-specific monitoring plan according to the requirements in 40 CFR 63.7505(d)(1) through (4) for the use of any CMS.
   vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

Work Practice Standards

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source every five years while burning the type of fuel that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:
   (A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;
   (B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   (C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
   (D) optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and
   (E) measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
      ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. This tune-up requirement was met on July 23, 2019.
      iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Startup Requirements

n. During startup, the Permittee shall:
   i. operate all CMS during startup.
   ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
   iii. have the option of complying using either of the following work practice standards.
      (A) if you choose to comply using definition (1) of "startup" in 40 CFR 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR
      (B) if you choose to comply using definition (2) of "startup" in 40 CFR 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in 40 CFR 63.7505(e).
   iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in 40 CFR 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555.

Shutdown Requirements

o. During shutdown, the Permittee shall:
   i. operate all CMS during shutdown.
   ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.
   iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
   iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in 40 CFR 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in 40 CFR 63.7555.

Energy Assessment Requirements

p. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, Item 4, with the extent of the evaluation for items (a) to (e) in Table 3, Item 4 appropriate for the on-site technical hours listed in 40 CFR 63.7575. [The one-time energy assessment requirement was met on July 23, 2019.]

Recordkeeping Requirements

q. The Permittee shall:
   i. keep 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 semiannual compliance report that has been submitted.
   ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations.
   iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
      (A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      (B) a description of any corrective actions taken as a part of the tune-up; and
      (C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of 40 CFR 63.7555.
   v. keep records required in Table 8 of Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.
   vi. keep the applicable records in paragraphs (d)(1) through (13) of 40 CFR 63.7555.
   vii. (A) maintain records in a form suitable and readily available for expeditious review;
      (B) keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
      (C) keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

Reporting Requirements

r. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit a semiannual excess emissions and continuous monitoring system performance report and/or a summary report.
      (A) the first compliance report shall be postmarked on or before July 30, 2019 and cover the period from May 20, 2019 through June 30, 2019.
      (B) the compliance reports shall also be submitted electronically to the EPA via the procedures in 40 CFR 63.7550(h).
   ii. The compliance report shall contain:
      (A) the information in 40 CFR 63.7550(c) as applicable.
      (B) for each deviation from an emission limit or operating limit, the report shall contain the information in 40 CFR 63.7550(d) and 40 CFR 63.7550(e) as applicable.
      (C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to 40 CFR 63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in 40 CFR 63.10(e)(3)(v) and (vi).
   iii. Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in 40 CFR 63.2) as required by Subpart DDDDD, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in 40 CFR 63.7550(h).
      (A) this report must also verify that the operating limits in Section B.4.l above have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550.
      (B) if performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in Section B.4.l above the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

(C) if performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits, in Section B.4.1 above the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

5. 15A NCAC 02D .1806
See Section G.1 below.

6. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

C. One wood-fired boiler with flyash reinjection (ID No. ES-Boiler3) with associated multicyclones (ID Nos. CD-Boiler3-1 and CD-Boiler3-2), installed in series and one electrostatic precipitator (ID No. CD-ESP-3)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS
This is a wood-fired boiler with 57 million Btu per hour maximum heat input. See Section 5.A.1 above for a description of this rule.

Emission Limit
Boiler 3 was the third wood-fired boiler to be added to the permit. The particulate matter emission limit for Boiler 3 is calculated for this rule based on the heat inputs of Boiler 1, Boiler 2, and Boiler 3 as follows:

Source	Heat Input (mmBtu/hr)	Date Operation Began or Permitted
Boiler 1	44.5	1986*
Boiler 2	44.1	2006
Boiler 3	57	2020

$$E = 1.1698*Q^{-.2230}$$
$$= 1.1698*(44.5+ 44.1 + 57)^{-.2230}$$
$$= 0.39 \text{ lb/mmBtu}$$

Testing
To demonstrate compliance with the standards provided above, the Permittee shall conduct a compliance test for particulate matter (including PM_{10}) in accordance with General Condition JJ. The test shall be completed on or before November 16, 2019, and again for each subsequent 5-year period. If the compliance test shows that the emission rate is more than 80 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given above or if the testing is not conducted as described above, the shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test. [This testing was completed on May 17, 2022.]

Monitoring
Particulate matter emissions from this source shall be controlled by two multicyclones installed in series and an electrostatic precipitator. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:

a. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;

b. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
c. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
d inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

Recordkeeping
The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
a. the date and time of each recorded action;
b. the results of each inspection;
c. a report of any maintenance performed on any control device; and
d. any variance from manufacturer's recommendations, if any, and any corrections made.

Reporting
a. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.
b. The Permittee shall submit semiannual summary reports of monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing except that the particulate emission limit was revised as discussed under the Emission Limit above. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

Emission Limit
Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Wood contains inherently low concentrations of sulfur, therefore sulfur dioxide emissions from the combustion of wood in this boiler is expected to be below 2.3 pounds per million Btu of heat input.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
This boiler has a maximum heat input of 57 million Btu per hour. Therefore, the NSPS Subpart Dc requirements reflect those for boilers with a maximum heat input capacity greater than 30 mmBtu/hr.

a. For this boiler, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions".

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 60.41c shall apply.

Compliance Date

c. Except as specified in 40 CFR 60.8 (a)(1) through (4), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall conduct performance test(s) pursuant to Section C.3.e.i below.

Emission Limitations

d. i. On and after the date on which the initial performance test is completed or required to be completed under Section C.3.c below, whichever date comes first:
   (A) PM emissions from the boiler shall not exceed 0.030 lb/million Btu heat input.
   (B) Visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.
   ii. The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

Testing

e. i. (A) The Permittee shall conduct an initial performance test for PM and opacity consistent with 40 CFR 60.45c and General Condition JJ.
   (B) The Permittee shall submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data.
   (C) If the results of these or any tests are above any limit given in Section C.3.d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
   ii. Under the provisions of NCGS 143-215.108 and pursuant to 40 CFR 60.45c(a), the Permittee shall demonstrate compliance with the PM emission limit in section C.3.d.i.(A) above on an annual basis in accordance with General Condition JJ. If the results of this test are less than 80 percent of the emission limit in Section C.3.d.i.(A) above, the Permittee shall be required to stack test only once every five years following the previous stack test.

Opacity Monitoring

f. i. The Permittee shall calibrate, maintain, and operate a continuous monitoring system (COMs) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
   ii. The COMS shall be calibrated, maintained, and tested in accordance with 40 CFR 60.13 and 15A NCAC 02D .0613.
   iii. The COMs shall be operated in accordance with the applicable procedures under 40 CFR 60, Appendix B Performance Specification 1. The span value of the opacity COMS shall be between 60 and 80 percent.

Recordkeeping Requirements

g. The Permittee shall maintain:
   i. records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
   ii. records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection.

iii. records of the amounts of each fuel combusted during each operating day.
iv. retain records for at least two years following the date of such measurements, maintenance, reports, and records.

Reporting/Notifications Requirements

h. The Permittee shall submit:
i. a semiannual excess emissions and continuous monitoring system performance report.
ii. for the COMS, an excess emissions and monitoring system performance report and/or summary reports.
iii. at least 30 days advance notice of any performance test to the Regional Supervisor, DAQ to afford the DAQ the opportunity to have an observer present.
iv. (A) a report containing the results of the initial performance tests conducted pursuant to Section C.3.e.i above postmarked no later than 180 days after initial startup of the boiler.
(B) a report containing the results of subsequent performance tests conducted pursuant to Section C.3.e.i above postmarked no later than 30 days after completion of performance tests.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
This facility is major for HAPs as emitting or has the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs. Therefore, in accordance with 40 CFR 63.7485, this wood-fired boiler is subject to MACT Subpart DDDDD.

a. For this source (*i.e., new Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart DDDDD), including Subpart A "General Provisions."

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart DDDDD.

Compliance Date

d. The Permittee shall:
i. complete the initial tune up by the date specified in Section C.4.m.ii below.
ii.. complete the initial compliance testing and monitoring requirements in Section C.4.j below within 180 days after startup.

General Compliance Requirements

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section C.4.g below, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with Section C.4.n and o below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

f. At all times, the Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Emission Limits

g. The affected unit(s) shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per million Btu of heat input
Mercury (Hg)	8.0E-07 lb per million Btu of heat input
Carbon monoxide (CO)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.0E-02 lb per million Btu of heat input

Testing

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section C.4.g above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications

i. i. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source.

ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

iii. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status (NOCS), including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. The NOCS report must contain all the information specified in paragraphs (e)(1) through (8) of 40 CFR 63.7545 as applicable.

iv. The Permittee shall submit a permit application with the NOCS to establish the monitoring parameters in Section C.4.l below.

Initial Compliance Requirements

j. The Permittee shall demonstrate compliance with the limits in Section C.4.g above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 40 CFR 63.7525 and 40 CFR 63.7530.

Subsequent Compliance Requirements

k. The Permittee shall:

i. conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.

(A) you must conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h).

(B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.

(C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section C.4.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

ii.. demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

Monitoring Requirements and Operating Limits

l. The Permittee shall:

i. install, operate, and maintain an oxygen trim system, as defined in 40 CFR 63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. The oxygen level shall be no lower than XX percent.

ii install, operate, certify and maintain a COMS (CMS) according to the procedures in 40 CFR 63.7525(c)(1) through (7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed X percent.

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. The 30-day rolling average operating load shall not exceed X lb/hr steam.

iv. meet the requirements for all monitoring systems (CMS) as applicable according to 40 CFR 63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in 40 CFR 63.7505(d)(1) through (4) for the use of any CMS.

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

Work Practice Standards

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source(s) ever five years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:

(A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;

(B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
(D) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and
(E) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source.
iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Startup Requirements

n. During startup, the Permittee shall:
i. operate all CMS during startup.
ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
iii. have the option of complying using either of the following work practice standards.
(A) If you choose to comply using definition (1) of "startup" in 40 CFR 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR
(B) If you choose to comply using definition (2) of "startup" in 40 CFR 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in 40 CFR 63.7505(e).
iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in 40 CFR 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555.

Shutdown Requirements

o. During shutdown, the Permittee shall:
i. operate all CMS during shutdown.
ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.

iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in 40 CFR 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in 40 CFR 63.7555.

Recordkeeping Requirements

p. The Permittee shall:
i. keep 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 semiannual compliance report that has been submitted.
ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations.
iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
(B) A description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of 40 CFR 63.7555.
v. keep records required in Table 8 of Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.
vi. keep the applicable records in paragraphs (d)(1) through (13) of 40 CFR 63.7555.
vii. keep:
(A) records in a form suitable and readily available for expeditious review;
(B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
(C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

Reporting Requirements

q. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit semiannually an excess emissions and continuous monitoring system performance report and/or a summary report. The semiannual report shall be calculated on a quarterly basis and contain the monitoring and recordkeeping activities given in Section C.4. l through p above. The semiannual report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
(A) The first semiannual compliance report shall cover the period beginning on the compliance date specified in Section C.4.d (i.e., start-up) above and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified in Section C.4.d above.
(B) The compliance reports shall also be submitted electronically to the EPA via the procedures in 40 CFR 63.7550(h).

ii. The compliance report shall contain:
(A) The information in 40 CFR 63.7550(c) as applicable.
(B) For each deviation from an emission limit or operating limit, the report shall contain the information in 40 CFR 63.7550(d) and (e) as applicable.
(C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to 40 CFR 63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in 40 CFR 63.10(e)(3)(v) and (vi).

iii. Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in 40 CFR 63.2) as required by Subpart DDDDD, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in 40 CFR 63.7550(h).
(A) This report must also verify that the operating limits in Section C.4.l above have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550.
(B) If performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in Section C.4.l above, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
(C) If performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits in Section C.4.l above, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

5. 15A NCAC 02D .1806
See Section G.1 below.

6. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

D. One ultra-low sulfur distillate fuel oil-fired boiler (ID No. ES-Boiler4)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS
This is an ultra-low sulfur distillate fuel oil fired boiler with 32.66 million Btu per hour maximum heat input. This is the third boiler to be added to the permit.

This rule applies to installations burning fuel, including natural gas and fuel oils, for the purpose of producing heat or power by indirect heat transfer. For the purpose of this rule, the maximum heat input shall be the total heat content of all fuels which are burned in a fuel burning indirect heat exchanger, of which the combustion products are emitted through a stack or stacks. The sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each fuel burning indirect heat exchanger. Fuel burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a fuel burning indirect heat exchanger shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been established. However, for any fuel burning indirect heat exchanger constructed after, or in conjunction with, the removal of another fuel burning indirect heat exchanger at the plant site, the maximum heat input of the

removed fuel burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any fuel burning indirect heat exchanger constructed after or in conjunction with the removal.

Emission Limit

The particulate matter emission limit for Boiler 4 is calculated based on the heat inputs of Boiler 1, Boiler 2, and Boiler 4 which were permitted at the time Boiler 4 was added as follows:

Source	Heat Input (mmBtu/hr)	Date Operation Began or Permitted
Boiler 1	44.5	1986
Boiler 2	44.1	2006
Boiler 4	32.66	2019
Total	121.26	

Allowable emissions of particulate matter from fuel combustion shall be calculated as follows:

$$E = 1.090\ Q^{-0.2594}$$
$$= 1.090\ (44.5 + 44.1 + 32.66)^{-.2594}$$
$$= 0.31\ \text{lb/mmBtu}$$

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 fuel oil in this boiler.

The applicability of this regulation has not changed as part of this renewal processing except that the particulate emission limit was revised as discussed under the Emission Limit above. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0524: New Source Performance Standards

This boiler has a maximum heat input of 32.66 million Btu per hour. Therefore, the NSPS Subpart Dc requirements reflect those for boilers with a maximum heat input capacity greater than 30 mmBtu/hr.

a. For the affected boiler, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions."

Emission Limitations

b. The maximum sulfur content of any fuel oil received and fired in the affected boiler shall not exceed 0.5 percent by weight.
c. Visible emissions from the affected boiler shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.
d. The opacity standards above apply at all times, except during periods of startup, shutdown or malfunction.

Testing

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

f. The Permittee shall conduct an initial performance tests as specified in the following paragraphs:
   i. To demonstrate compliance with the opacity limit in Section D.2.c, above, the initial performance test shall be conducted using Method 9 of Appendix A-4 of 40 CFR Part 60 and in accordance with General Condition JJ and as specified in the following paragraphs.
      (A) the Permittee shall conduct the performance test within 180 days of initial startup.
      (B) the Permittee shall conduct subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests according to the schedule specified in Section D.2.h, below.
      (C) the observation period for Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.
   ii. To demonstrate compliance with the SO_2 limits in Section D.2.b, above, the performance test shall consist of the certification from the fuel supplier, according to Section D.2.g, below.

Fuel Sulfur Monitoring

g. To ensure compliance with the fuel sulfur limit in Section D.2.b, above, the Permittee shall retain a copy of the fuel supplier certification for any fuel oil fired in this boiler. The fuel supplier certification shall include the following information:
   i. The name of the oil supplier;
   ii. The sulfur content of the oil (in percent by weight); and
   iii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c.

Opacity Monitoring

h. After completion of the initial performance testing in Section D.2.f, above, the Permittee shall comply with visible emissions monitoring according to the following:
   i. The Permittee shall conduct subsequent Method 9 performance tests using the applicable schedule in Section D.2.h.i.(A) through D.2.h.i.(D), below, as determined by the most recent Method 9 performance test results. The observation period for Method 9 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.
      (A) if no visible emissions are observed, a subsequent Method 9 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;
      (B) if visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;
      (C) if the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or
      (D) if the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.
   ii. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 performance test, the Permittee may, as an alternative to performing subsequent Method 9 performance tests, elect to perform subsequent monitoring using Method 22 according to the procedures specified in Section D.2.h.ii.(A) and D.2.h.ii.(B) below.

(A) the Permittee shall conduct 10-minute observations (during normal operation) each operating day the affected boiler fires No. 2 fuel oil using Method 22 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10-minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10-minute observation, immediately conduct a 30-minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30-minute observation (i.e., 90 seconds) or conduct a new Method 9 performance test using the procedures in conditions i.(A) through (D), above, within 45 calendar days.

(B) if no visible emissions are observed for 10 operating days during which No. 2 fuel oil is fired, observations can be reduced to once every 7 operating days during which No. 2 fuel oil is fired. If any visible emissions are observed, daily observations shall be resumed.

iii. If the source is not operating on the required date for the Method 9 performance test, the performance test shall be conducted the next time the source is operated for three or more daylight hours.

Recordkeeping Requirements

i. The Permittee shall record and maintain records of the amounts of No. 2 fuel fired in the boiler during each month.

j. The Permittee shall maintain records of No. 2 fuel oil supplier certifications as specified in Section D.2.g.i, above.

k. The Permittee shall keep the following opacity monitoring records:

i. For each performance test conducted using Method 9 of appendix A-4 of 40 CFR Part 60, the Permittee shall keep the records including the following:

(A) dates and time intervals of all opacity observation periods;

(B) name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(C) copies of all visible emission observer opacity field data sheets.

ii. For each performance test conducted using Method 22 of appendix A-4 of 40 CFR Part 60, the Permittee shall keep the records including the following:

(A) dates and time intervals of all visible emissions observation periods;

(B) name and affiliation for each visible emission observer participating in the performance test;

(C) copies of all visible emission observer opacity field data sheets; and

(D) documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the Permittee to demonstrate compliance with the applicable monitoring requirements.

l. The Permittee shall maintain records of any occurrence and duration of any startup, shutdown, or malfunction in the operation the affected boiler.

m. All records required under Section D.2.i through D.2.l, above, shall be maintained by the Permittee for a period of two years following the date of such record.

Notification

n. The Permittee shall submit a construction notification of the date construction of the affected boiler is commenced, postmarked no later than 30 days after such date.

o. The Permittee shall submit an initial notification to the Regional Supervisor within 15 days of actual startup of the affected boiler. The notification shall include the design heat input capacity of the boiler and identification of fuels to be combusted in the boiler. [The initial notification requirement was met on January 24, 2020.]

p. The Permittee shall submit at least 30 days advance notice of a performance test conducted pursuant to Section D.2.f or D.2.h to the Regional Supervisor, DAQ to afford the DAQ the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the Regional Supervisor as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Regional Supervisor by mutual agreement.

Reporting Requirements

q. The Permittee shall submit performance test data from the initial and any subsequent opacity performance tests to NC DAQ the following:
   i. a report containing the results of the initial performance tests conducted pursuant to Section D.2.f.i postmarked no later than 180 days after initial startup of the boiler.
   ii. a report containing the results of subsequent performance tests conducted pursuant to Section D.2.h postmarked no later than 30 days after completion of performance tests.

r. The Permittee shall submit semiannual summary reports. The summary report shall include the following information:
   i. Fuel supplier certification(s) for distillate fuel oil, as provided in Section D.2.g of this permit; and
   ii. A certified statement signed by the Permittee that the records of fuel supplier certification(s) submitted represents all of the fuel fired at the affected boiler during the semiannual period.
   iii. Records from any subsequent performance tests as required in Section D.2.k, above.
   iv. Excess emission reports for any excess visible emissions from Boiler 4 that occur during the reporting period. The report shall contain the information recorded in Section D.2.k, above.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Primary Operating Scenario (POS)

This facility is major for HAPs as emitting or has the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs. Therefore, in accordance with 40 CFR 63.7485, this distillate fuel oil-fired boiler is subject to MACT Subpart DDDDD.

a. For this boiler (*i.e., Limited -use boilers or process heaters*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart DDDDD), including and Subpart A "General Provisions."

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date

d. The Permittee shall comply with the applicable requirements upon startup of this source.
   i. Pursuant to 40 CFR 63.7495(i) you must be in compliance with the applicable new source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory.

Operating Restriction

e. This boiler shall meet the definition of a limited use boiler by maintaining an annual capacity factor of no more than 10 percent.[1]

Notifications

f. i. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source. [The initial notification requirement was met on January 24, 2020.]
   ii. The Permittee shall submit an initial Notification of Compliance Status to the DAQ within 60 days of startup. The notification shall contain the following:
      (A) a description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned. [This requirement was met on March 9, 2020.]
   iii. Pursuant to 40 CFR 63.7545(h), if the Permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, a notice of the date upon which you switched fuels or made the physical change must be made within 30 days of the switch/change. The notification must include the requirements found in 40 CFR 63.7545(h).

Work Practice Standards

g. i. The Permittee shall conduct a tune-up every 5 years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up, as specified below:
      (A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled shutdown but the burner must be inspected at least once every 72 months.
      (B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
      (C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
      (D) optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject.
      (E) measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
   ii. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source. Initial tune-up is due no later than February 10, 2025. [Boiler 4 commenced operation on January 10, 2020 per NOCS.]
   iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[1]No more than 28,610.2 million Btu per year heat input (204,358 gallons per year ultra-low sulfur liquid fuel).

iv. At all times, you 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. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Recordkeeping Requirements

h. The Permittee shall:
   i. keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
   ii. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
      (A) the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      (B) a description of any corrective actions taken as a part of the tune-up; and
      (C) the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iii. keep the associated records for Section D.3.g above.
   iv. keep fuel use records for the days the boiler or process heater was operating.
   v. keep records of the annual capacity factor calculation;
   vi. keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent as specified in paragraph (a)(3) of 40 CFR 63.7555
   vii. keep:
      (A) records in a form suitable and readily available for expeditious review;
      (B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record;
      (C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

Reporting Requirements

i. i. The Permittee shall submit compliance reports to the DAQ on a 5-year basis.
   ii. The compliance report must also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.
   iii. The compliance report must contain the following information:
      (A) Company 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) Include the date of the most recent tune-up for each unit required according to Section D.3.f above. Include the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(E) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
(F) The total operating time during the reporting period.

iv. The compliance report shall contain the calculations for the annual capacity factor for the previous calendar year.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
Alternative Operating Scenario (AOS)

a. For this boiler (*i.e., units designed to burn light liquid fuel greater than 10 million Btu/hr with oxygen trim*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (40 CFR Subpart DDDDD), including Subpart A "General Provisions."

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Dates

d. The Permittee shall:
i. complete the initial tune up by the date specified in Section D.4.m.ii below.
i.. complete the initial compliance testing and monitoring requirements in Sections D.4.j and l below within 180 days after startup.
iii. be in compliance with the applicable new source provisions of 40 CFR Part 63, Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory pursuant to 40 CFR 63.7495(i).

General Compliance Requirements

e. At all times the affected unit is operating, the Permittee shall be in compliance with the emission standards in Section D.4.g below, except during periods of startup and shutdown, and burn ultra-low sulfur distillate fuel oil. During startup and shutdown, the Permittee shall comply only with items 5 and 6 of Table 3 of 40 CFR Part 63, Subpart DDDDD.

f. At all times, the Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Emission Limits

g. The affected units shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	4.4E-04 lb per million Btu of heat input
Mercury (Hg)	4.8E-07 lb per million Btu of heat input
Carbon monoxide (CO)	130 ppm by volume on a dry basis corrected to 3 percent oxygen
Filterable Particulate Matter (PM) or Total Suspended Metals (TSM)	1.1E-03 lb per million Btu of heat input or 2.9E-05 lb per million Btu of heat input

Testing

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Notifications

i. i. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source.
   ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.
   iii. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of 40 CFR 63.7545 as applicable.
   iv. Pursuant to 40 CFR 63.7545(h), if the Permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, a notice of the date upon which you switched fuels or made the physical change must be made within 30 days of the switch/change. The notification must include the requirements found in 40 CFR 63.7545(h).

Initial compliance requirements

j. The Permittee shall demonstrate compliance with the limits in Section D.4.g above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 40 CFR 63.7525 and 40 CFR 63.7530 within 180 days of startup. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

Subsequent compliance requirements

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.
   ii. burn ultra-low sulfur distillate fuel at all times. If the affected boiler or process heater combusts ultra-low sulfur liquid fuel, the Permittee does not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Section D.4.g above, providing the Permittee demonstrates ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis.
   iii. demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

Monitoring Requirements and Operating Limits

l. The Permittee shall:
   i. install, operate, and maintain an oxygen trim system, as defined in 40 CFR 63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. The oxygen level shall be no lower than X percent.
   ii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. The 30-day rolling average operating load shall not exceed XYZ *(in appropriate units).*
   iii. meet the requirements for all monitoring systems (CMS) as applicable according to 40 CFR 63.7525(d).
   iv. develop a site-specific monitoring plan according to the requirements in 40 CFR 63.7505(d)(1) through (4) for the use of any CMS.
   v. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

Work Practice Standards

m. i. The Permittee shall conduct a tune-up every 5 years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up, as specified below:
      (A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled shutdown but the burner must be inspected at least once every 72 months.
      (B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
      (C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
      (D) optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject.
      (E) measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
   ii. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source.
   iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
   iv. At all times, you 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. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

Recordkeeping Requirements

n. The Permittee shall:
   i. keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
   ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations.
   iii. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
      (A) the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      (B) a description of any corrective actions taken as a part of the tune-up; and
      (C) the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iv. for each continuous monitoring system (CPMS and CMS), keep records according to paragraphs (b)(1) through (5) of 40 CFR 63.7555.
   v. keep records required in Table 8 of Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies.
   vi. keep the applicable records in paragraphs (d)(1) through (13) of 40 CFR 63.7555.
   vii. keep:
      (A) records in a form suitable and readily available for expeditious review;
      (B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record;
      (C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

Reporting Requirements

o. i. The Permittee shall submit a compliance report to the DAQ on a semiannual basis.
      (A) The first semiannual compliance report shall cover the period beginning on the compliance date specified in Section D.4.d above (i.e., start-up) and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified in Section D.4.d above.
      (B) The compliance reports shall also be submitted electronically to the EPA via the procedures in 40 CFR 63.7550(h).
   ii. The compliance report shall contain:
      (A) The information in 40 CFR 63.7550(c) as applicable.
      (B) For each deviation from an emission limit or operating limit, the report shall contain the information in 40 CFR 63.7550(d) and (e) as applicable.
   iii. Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in 40 CFR 63.2) as required by Subpart DDDDD, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in 40 CFR 63.7550(h).
      (A) This report must also verify that the operating limits in Section D.4.l above have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550.

(B) If performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in Section D.4.l above, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
(C) If performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits in Section D.4.l above, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

5. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS
The Permittee, contemporaneously with making a change from one alternative operating scenario to another, while operating the boiler shall record in a logbook (written or electronic format) the scenario under which it is operating.

The Permittee shall submit a permit application to the DAQ within 30 days to remove the limited-use operating scenario from the permit in the event the 10% annual capacity factor is exceeded and the boiler will revert to the light liquid fuel subcategory per 40 CFR 63.7499(u) permanently.

Pursuant to 40 CFR 63.7495(i) you must be in compliance with the applicable new source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory.

Pursuant to 40 CFR 63.7545(h), if the Permittee exceeds the 10% annual capacity factor, a notice of the date upon which you switched operating scenarios must be made within 30 days of the switch/change. The notification must identify:
a. The name of the owner or operator of the affected source, as defined in 40 CFR 63.7490, the location of the source, the boiler and process heater that have switched fuels or were physically changed, and the date of the notice.
b. The currently applicable subcategory under Subpart DDDDD.
c. The date upon which the fuel switch or physical change occurred.

Approved DAQ fuel heating value of 140,000 Btu per gallon shall be used when calculating fuel usage.

The boiler, while operating as a limited-use boiler shall not exceed more than 204,362.0 gallons per consecutive 12-month period.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

6. 15A NCAC 02D .1806
See Section G.1 below.

7. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

E. Kilns:
Three steam-heated indirect-fired continuous lumber drying kilns (ID No. ES-KILN-1, ES-KILN-2 and ES-KILN-3)

Emission Source ID No.(s)	Operating Scenario
Phase I: Defined as the time period between permit issuance date and the date of Kiln 2 restart	
ES-KILN-1 and ES-KILN-3	Two steam-heated indirect-fired continuous lumber drying kilns
ES-KILN-2	One steam-heated batch lumber drying kiln
Phase II: Defined as the time period between Kiln 2 restart and the date of Kiln 2 conversion from Batch to Continuous Operation	
ES-KILN-1, ES-KILN-2 and ES-KILN-3	Three steam-heated indirect-fired continuous lumber drying kilns

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION
The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166.

a. The following emission limits shall not be exceeded:

Emission Source	Pollutant	BACT	Units	Technology
Continuous indirect-fired steam heated lumber kilns (ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)	VOC (as pinene)	4.78	pound per thousand board feet (lb/MBF)	Good design and operating practices
		634.33	ton per year (tpy)	

To ensure compliance with the above emission limits, the Permittee shall not exceed a maximum combined lumber throughput of 265.41 million board feet (MMBF) per year of lumber dried in the three indirect-fired steam heated continuous kilns (ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3) per consecutive 12-month period.

Monitoring/Recordkeeping
The Permittee shall operate and maintain the three continuous dry kilns in accordance with the manufacturer's specifications or a site-specific plan[2] approved by the NC DAQ Regional Administrator. The Permittee shall record any maintenance performed on the kilns each month in a logbook (written or electronic format).

To ensure compliance with the above limits, the Permittee shall calculate the following:
i. the monthly production rate and the 12-month production rate of the three indirect-fired continuous kilns, and
ii. the monthly VOC emissions and the 12-month VOC emissions from the three indirect-fired continuous kilns. VOC emissions shall be determined by multiplying the total amount of lumber dried in the kilns by an emission factor of 4.78 pounds of VOC emissions per thousand board feet (MBF) of lumber dried.

The Permittee shall record the production rates and VOC emissions specified in Sections i and ii above each month in a logbook (written or electronic format).

[2] Troy Lumber Company (Application No. 6200029.19A) – Appendix H – Kiln Operating Procedures to Demonstrate BACT of revised application received April 1, 2020

Reporting

The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities given above. The report shall contain the following:

a. The monthly volatile organic compound emissions from the three indirect-fired continuous kilns for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months; and
b. The monthly quantities of lumber dried in each of the three indirect-fired continuous kilns (ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3) for the previous 17 months. The amount of lumber dried must be calculated for each of the 12-month periods over the previous 17 months.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR 63 Subpart DDDD)

This facility is major for HAPs as emitting or has the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs. Therefore, these kilns are subject to MACT Subpart DDDD.

For these kilns subject to "MACT Subpart DDDD", the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDD National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products, including Subpart A "General Provisions."

40 CFR Part 63 Subpart A General Provisions

The Permittee shall comply with the requirements of 40 CFR Part 63, Subpart A General Provisions according to the applicability of Subpart A to such sources, as identified in Table 10 to 40 CFR Part 63, Subpart DDDD.

Compliance Options and Operating Requirements

For the emission sources subject to "MACT Subpart DDDD" as indicated above and in the permitted equipment list the Permittee shall comply with compliance options and operating requirements described in paragraph 40 CFR 63.2252 by submitting an initial compliance notification pursuant to 40 CFR 63.9.

Notification Requirements

The owner or operator shall notify the DAQ and the EPA in writing that this kiln (ID No. ES-KILN-2) is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the source becomes subject to the relevant standard, shall provide the following information:

a. The name and address of the owner or operator;
b. The address (i.e., physical location) of the affected source;
c. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
d. A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and
e. A statement of whether the affected source is a major source or an area source.
[Application No. 6200029.19A fulfilled this requirement in accordance with 40 CFR 63.9(b)(iii)]

Within 15 days of startup of this kiln (ID No. ES-KILN-2), the Permittee shall submit an initial notification of MACT applicability as an affected source as defined in 40 CFR 63.2231(a). No other requirements are necessary for this source as part of the MACT pursuant to 40 CFR 63.2252.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS
The Permittee, contemporaneously with making a change from one alternate operating scenario to another, shall record in a logbook (written or electronic format) the scenario under which it is operating.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emissions of particulate matter from these kilns shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Monitoring/Recordkeeping/Reporting
The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above (or the formulas contained in 15A NCAC 2D .0515) can be derived, and shall make these records available to a DAQ authorized representative upon request.

No reporting is required for particulate emissions from these kilns.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

5. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

Visible emissions from these kilns shall not exceed 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required for visible emissions from these kilns.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

6. 15A NCAC 02D .1806
See Section G.1 below.

7. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

F. Wood waste collection:

- **One sawmill wood (sawdust) collection system discharging into the wood fuel silo (ID No. ES-WCS) with associated cyclone (ID No. CD-C2)**
- **One planer mill wood waste collection system (ID No. ES-PM) with associated cyclone (ID No. CD-C3)**
- **One trim saw and wood hog waste collection system (ID No. ES-SH) with associated cyclone (ID No. CD-C4)**
- **One sawmill wood (sawdust) collection system for Boiler 3 - wood fuel silo (ID No. ES-WCS-2) with associated cyclone (ID No. CD-C5)**

1. 15A NCAC 02D .0512: PARTICULATES FROM WOOD PRODUCTS FINISHING PLANTS
The Permittee shall not cause, allow, or permit particulate matter caused by the working, sanding, or finishing of wood to be discharged from any stack, vent, or building into the atmosphere without providing, as a minimum for its collection, adequate ductwork and properly designed collectors. In no case shall the ambient air quality standards be exceeded beyond the property line.

Monitoring
Particulate matter emissions from these sources shall be controlled by cyclones. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer, if any. As a minimum, the inspection and maintenance program shall include a monthly external inspection of the ductwork and cyclones noting the structural integrity.

Recordkeeping
The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
i. the date and time of each recorded action;
ii. the results of each inspection; and
iii. the results of maintenance performed on any control device.

Reporting
The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by DAQ.

The Permittee shall submit semiannual summary reports of monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS
Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Monitoring
To ensure compliance, once a week the Permittee shall observe the emission points of these sources for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit,

Recordkeeping
The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
i. the date and time of each recorded action;
ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
iii. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed except that the previous requirement in the above monitoring to establish "normal" for sources ES-PM and ES-SH in the first 30 days of beginning operation has been removed as part of this renewal processing. These sources were shown to have no visible emissions per the inspection report dated 4/24/23. Continued compliance with this regulation is expected.

3. 15A NCAC 02D .1806
See Section G.1 below.

4. 15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
See Section G.2 below.

G. Facility-wide Affected Sources

State-enforceable only
1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for Avoidance of 15A NCAC 02D .0530 PREVENTION OF SIGNIFICANT DETERIORATION

In order to avoid applicability of this regulation, 15A NCAC 02D .0530(g), facility-wide emission sources shall discharge into the atmosphere less than the limits of nitrogen oxides (NOx), particulate matter (PM), and carbon dioxide equivalent ($CO_{2\ eqv}$) per consecutive 12-month period as provided in the summary table below:

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	Less than 88.99 tons per consecutive 12-month period	15A NCAC 02Q .0317 for 15A NCAC 02D .0530
Nitrogen Oxides	Less than 78.86 tons per consecutive 12-month period	
CO_2 Equivalent	Less than 111,529.83 tons per consecutive 12-month period	

Production/Operational Limits

To ensure compliance with the avoidance limits above, the following production/operational limits shall apply:

a. The maximum annual combined heat input to all boilers (ID Nos. ES-B1, ES-Boiler2, ES-Boiler3, and ES-Boiler4) shall not exceed 669,731 million Btu per year per consecutive 12-month period using DAQ approved default heating values of:
   i. 4,500 Btu/lb for wood residue (sawdust) on a wet, as-fired basis for the wood-fired boilers, and
   ii. 140,000 Btu/gallon for the No. 2 fuel oil-fired boiler.
b. The annual wood (sawdust) throughput from both wood fuel silos shall not exceed 132,827 tons per consecutive 12-month period sawdust.

Monitoring/Recordkeeping Requirements

The Permittee shall keep monthly records in a logbook (written or electronic format) of:

a. The combined heat input to all boilers using DAQ approved heating values shall be recorded monthly;
b. The pounds of boiler fuel (wet wood/sawdust) input for each wood-fired boiler shall be recorded on a monthly basis;
c. The gallons of No. 2 fuel oil consumed shall be recorded on a monthly basis; and
d. The tons of wood (sawdust) throughput from both wood fuel silos on a monthly basis.

The Permittee shall calculate and record the monthly heat input for all boilers determined by the equations and DAQ approved default heating values in Section 2.2 A.2.e of the permit.

NOx emissions

Each calendar month, the Permittee shall calculate and record the NOx emissions for the previous month and the previous 12-month period to ensure compliance. Monthly NOx emissions, in tons, shall be calculated as shown in Section 2.2 A.2.f of the permit.

CO_2 equivalent emissions

Each calendar month, the Permittee shall calculate and record the CO_2 equivalent emissions for the previous month and the previous 12-month period to ensure compliance. Monthly CO_2 equivalent emissions, in tons, shall be calculated as shown in Section 2.2 A.2.g of the permit.

Total PM emissions

Each calendar month, the Permittee shall calculate and record the PM emissions for the previous month and the previous 12-month period to ensure compliance. Monthly PM emissions, in tons, shall be calculated as shown in Section 2.2 A.2.h of the permit:

The NOx, PM, and $CO_{2\ eqv}$ emissions shall be recorded monthly.

Each month, the Permittee shall calculate the total combined heat input and the resulting NOx, PM, and $CO_{2\ eqv}$ emissions (facility-wide) for the previous calendar month and the previous consecutive 12-month period using actual production data, emission rates and/or control efficiencies listed above, as appropriate.

The above records shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality (DAQ), upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years.

Reporting Requirements
The Permittee shall submit semiannual summary reports of monitoring and recordkeeping activities. The report shall contain the following:

a. The monthly heat input to each boiler and the combined heat input to all boilers using DAQ approved default heating values must be calculated for each of the 12-month periods over the previous 17 months;
b. The monthly pounds of boiler fuel (wet wood/sawdust) input for each wood-fired boiler for the previous 17 months;
c. The monthly gallons of No. 2 fuel oil consumed for the previous 17 months;
d. The monthly tons of tons of wood (sawdust) through both wood fuel silos for the previous 17 months; and
e. The monthly NOx, PM, and $CO_{2\ eqv}$ emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

3. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS

The Permittee, contemporaneously with making a change from one alternative operating scenario to another, while operating the wood-fired boilers (ID Nos. ES-B1 and ES-Boiler2) and the No. 2 fuel oil-fired boiler (ID No. ES-Boiler4) shall record in a logbook (written or electronic format) the scenario under which it is operating.

a. *Primary Operating Scenario* is defined as follows:
When both wood-fired boilers (ID Nos. ES-B1 and ES-Boiler2) are operating as permitted.
b. *Alternative Operating Scenario* is defined as follows:
When the No. 2 fuel oil-fired boiler (ID No. ES-Boiler4) is operating as a backup boiler for one of the two wood-fired boilers (ID Nos. ES-B1 or ES-Boiler2) for maintenance or servicing.

The Permittee shall not operate more than three boilers (ID Nos. ES-B1, ES-Boiler2 through ES-Boiler4), simultaneously.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING (40 CFR 64)

This facility is subject to a CAM analysis as required for renewal of a Title V permit for a pollutant specific emission unit (PSEU). The CAM rule applies to each emissions unit (source) at a Title V facility if the individual emissions unit uses a control device to achieve compliance with any non-exempt regulated air pollutant emission limit or standard (as defined by 02D .0614(b)(1)), and if the potential pre-control emissions from that specific source are equal to or greater than the major source thresholds of the applicable regulated air pollutant. The only control devices at the facility are cyclones to control PM10. None of the sources of PM10 at the facility have potential emissions that are equal to or greater than the major source thresholds (i.e., either 100 tpy for

criteria pollutants or 10 tpy of any individual or 25 tpy of any combination of HAP). Therefore, CAM does not apply to the facility.

6. Public Notice

Pursuant to 15A NCAC 02Q .0521, a notice of the draft Title V Operating Permit will be published on the DAQ website to provide for a 30-day comment period with an opportunity for a public hearing. Copies of the draft (proposed) permit, review and public notice will be sent to EPA for their 45-day review, to persons on the Title V mailing list, to the Fayetteville Regional Office, and to the Permittee.

7. Other Requirements

PE Seal
NA. No controls are being added.

Zoning
There is no expansion of the facility, therefore zoning consistency is not needed.

Fee Classification
The facility fee classification before and after this modification will remain as "Title V".

Removing the emergency affirmative defense provisions in operating permits
EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions[3]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[4] and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

[3] NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).
[4] In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

Facility Review of 1-Bromopropane
The EPA has added a new HAP (1-bromopropane) to the CAA §112(b) list and started regulating its emissions effective February 4, 2022.

Troy Lumber was asked that this Title V application, received August 6, 2020, be updated for any emissions of this pollutant, both on an equipment-specific basis and facility-wide total basis for both actual and PTE emissions.

If the facility is not expected to emit this pollutant, please certify indicating that the emissions of 1-BP are not expected from the facility, and that the emissions summaries (for both individual HAP and total HAPs, and VOC) provided previously in the application are still accurate.

In an email on November 7, 2023, Troy Lumber responded that they have reviewed its most recent air permit applications, as well as available emission factor documents applicable to sources present at the Troy Lumber facility (e.g. – AP-42 for wood combustion and fuel oil combustion, NCASI Technical Documents relating to lumber facilities with drying kilns, etc.) and has determined that 1-Bromopropane is not listed as a pollutant that would be emitted from any of its facility's sources. Therefore, Troy Lumber stated with this email, we are certifying that 1-Bromopropane is not believed to be emitted from the Troy Lumber facility and no modifications to the emissions summaries previously submitted to DEQ are required.

8. Comments on the Draft Permit

The draft permit was sent to the to the Applicant, Stationary Source Compliance Branch, and the Fayetteville Regional Office on October 20, 2023, for review.

Troy Lumber Comments (email to Ed Martin from Mike Deyo dated November 7, 2023)
Troy Lumber provided the following comments:

1. Troy Lumber believes the basis for how the particulate matter emission limits for Boilers 1, 2, 3, and 4, under either 02D .0503 or 02D .0504, as applicable, should be established were provided.

Response
DAQ agrees with the limits provided and has revised the permit and the review calculations accordingly.

2. It was requested that the reference to §60.47c(f) be removed from the regulation tables at 40 CFR Part 60.43c(e) in Sections 2.1 B and 2.1 C of the permit for the NSPS Subpart Dc particulate matter emission standard. The reference to §60.47c(f) only applies to the NSPS opacity standard.

Response
This was corrected.

3. Troy Lumber believes there is a typographical error as noted in the "Summary of Changes to Permit" where it indicates that permit condition 2.1 F.2.a has been removed from the permit. The correct reference is to permit condition 2.1 F.2.c.

Response
This was corrected.

SSCB Comments (email to Ed Martin from Samir Parekh dated October 26, 2023)
SSCB had no comments.

Fayetteville Regional Office Comments (email to Ed Martin from Joshua Loehman and Jeffrey Cole dated October 27, 2023)
Marked-up copies of the permit and review were attached with comments. FRO had the following comments:

1. In the permit, add revised descriptions to the Section 1 table, under Control Device ID No. and Control Device for boilers 1, 2, and 3 on how the controls are arranged in series with each other.

2. In the permit and review, several comments were made to move text at the bottom of a page to the next page.

Response
For comment 1, these changes were made. For comment 2, the permit and review spacing at the bottom of pages will be made in the final drafts before sending to public notice after all other changes that may affect the spacing are made.

9. Recommendations

TBD