

NORTH CAROLINA DIVISION OF

Region: Fayetteville Regional Office
County: Montgomery
NC Facility ID: 6200029
Inspector's Name: Robert Kennedy
Date of Last Inspection: 04/07/2005
Compliance Code: C/In Compliance With
Procedural Reqr

Air Permit Review

Permit Issue Date: **date, 2006**

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Troy Lumber Co Facility Address: Troy Lumber Co 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			SIP: NA NSPS: NA NESHAP: NA PSD: NA PSD Avoidance: NA NC Toxics: NA 112(r): NA Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 6200029.05A Date Received: 05/02/2005 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 02330/T12 Existing Permit Issue Date: 03/30/2001 Existing Permit Expiration Date: 02/28/2006
Wayne Gravely General Manager (910) 576-6111 P O Box 748 Troy NC, 27371	Wayne Gravely General Manager (910) 576-6111 P O Box 748 Troy NC, 27371	Wayne Gravely General Manager (910) 576-6111 P O Box 748 Troy NC, 27371	
Review Engineer: Mark Cuilla Review Engineer's Signature: Date: date, 2006		Comments / Recommendations: Issue 02330/T13 Permit Issue Date: date, 2006 Permit Expiration Date: date, 2011	

I. Purpose of Application

Troy Lumber Company is currently operating under permit **02330T12**. This permit is set to expire on February 26, 2006. Per the requirements of the permit, an application for renewal was due by May 31, 2005. This application completes that requirement. The permit is deemed complete for processing.

II. Facility Description

The facility operates a chip and saw mill in Troy. Southern yellow pine logs are trucked into the facility, debarked, and processed through the sawmill where logs are cut into dimensional lumber. The rough cut lumber from the sawmill is stacked and dried in lumber kilns. The kilns are heated by steam produced from a wood-fired boiler. Green woodwaste and some dry planer shavings are the primary fuels for the boiler. The dried lumber is finished by planing and trimming in the planer mill. Finished lumber is sorted by length, size, and grade, packaged and then shipped off site. The remaining green wood chips and planer shavings are sold and shipped off site as byproducts. The maximum production capacity is 70 million board feet of lumber per year.

III. History/Background/Application Chronology

May 2, 2005 – Permit application **6200029.05A** was received and assigned to Steve Proctor for the renewal of the Title V permit. The application was deemed complete for processing.

October 11, 2005 – Application was reassigned to me for processing.

December 1, 2005 – Received email comment response from Regional Office requesting the boiler testing be continued in new five-year permit cycle. As a result the language was retained and will be amended to require submittal of results within one year of permit issuance.

December 5, 2005 – DRAFT permit sent to Permittee and regional office prior to public notice and EPA review.

IV. Permit Modifications/Changes

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Attachment	Insignificant activities	-placed information into tabular form -amended identification numbers to reflect ESM entries
Cover	-	-amended all dates and permit revision numbers
TOC	-	-amended shell titles
All	Header	-amended permit revision number
3	-	-amended shell title
4	2.1 A.1.a 2.1 A.1.b 2.1 A.1.c 2.1 A.1.d 2.1 A.1.e 2.1 A.1.f 2.1 A.1.g	-added equipment identification numbers where needed -added cross reference -amended language to require additional testing -added equipment identification numbers where needed -added equipment identification numbers where needed -added equipment identification numbers where needed -updated shell language
5	2.1 A.2.c 2.1 A.3.c 2.1 A.3.d 2.1 A.3.e	-added equipment identification numbers where needed -added equipment identification numbers where needed/updated shell language -updated shell language -updated shell language
6	2.1 B.1.b 2.1 B.1.c 2.1 B.1.e	-updated shell language -updated shell language -updated shell language
7	2.1 B.2.c 2.1 B.2.d 2.1 B.2.e	-added equipment identification numbers/updated shell language -updated shell language -updated shell language
8	2.2.A.1.a 2.2 A.2	-updated shell language -added equipment identification numbers
9	2.2 A.3	-added pollutant CAS numbers to table
9-17	General Conditions	-updated shell language

The following changes were made in ESM as a result of this renewal:

Current permit listing	Modified permit listing
Multicyclone (24 eight-inch tubes; ID No. CD-B-MC1)	Multicyclone (25 eight-inch tubes; ID No. CD-B-MC1)

V. Regulatory Review

The facility is currently subject to the following regulations:

- 15A NCAC 2D .0504, Particulates from Woodburning Indirect Heat Exchangers
- 15A NCAC 2D .0512, Particulates from Miscellaneous Wood Products Finishing Plants
- 15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
- 15A NCAC 2D .0521, Control of Visible Emissions
- 15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
- 15A NCAC 2D .1100, Control of Toxic Air Pollutants
- 15A NCAC 2Q .0711, Emission Rates Requiring a Permit

No regulatory review is required for these existing permit conditions as part of the renewal process.

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The facility is not subject to any applicable NSPS requirements. This renewal action does not change this status.

NESHAPS/MACT – The facility is not classified as a HAP major facility with emissions of any single hazardous air pollutant in excess of 10 tons per year or a combination of hazardous air pollutants in excess of 25 tons per year. This renewal action does not change this status.

PSD – The facility is not subject to any applicable PSD requirements. This renewal action does not change this status.

112(r) – The facility is not subject to 112(r) requirements because it does not store any of the covered chemicals. This renewal action does not change this status.

CAM – 40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard.

The wood-fired boiler (**ID No. ES-B1**) is controlled by two multicyclones (**ID Nos. CD-B-MC1 and CD-B-MC2**). This boiler is subject to the particulate standard of 15A NCAC 2D .0504, sulfur dioxide standard of 15A NCAC 2D .0516, visible emission standard of 15A NCAC 2D .0521, and the odor rule 15A NCAC 2D .1806. The control device is installed for particulate control only; therefore, CAM is not required for sulfur dioxide. Neither visible emissions or odor are criteria pollutants; therefore CAM is not required. The DAQ worksheet for wood combustion estimates uncontrolled PM₁₀ emissions from this 44.5 million Btu per hour boiler combusting green wood at 59.84 tons per year (well below the major source threshold of 100 tons per year. Therefore, CAM for particulate control is not required.

The three woodwaste collection systems (**ID Nos. ES-WCS, ES-PM, and ES-SH**) are controlled by simple cyclones (**ID Nos. CD-C2, CD-C3, and CD-C4**) respectively. These operations are subject to the particulate standard of 15A NCAC 2D .0512, visible emission standard of 15A NCAC 2D .0521, and odor rule of 15A NCAC 2D .1806. Neither visible emissions or odor are criteria pollutants, therefore CAM is not required. The Permittee has estimated pre-controlled PM₁₀ emissions as follows:

1. Wood collection system (ID No. ES-WCS) controlled by simple cyclone (ID No. CD-C2):

$$PM_{10(\text{actual})} = \frac{0.36 \text{ (lbs PM}_{10}\text{/ton fuel)} \times (700 \text{ lbs fuel/1000 bd-ft}) \times (69,317,375 \text{ bd-ft/year})}{(2000 \text{ lb fuel/ton fuel}) \times (2000 \text{ lb PM}_{10}\text{/ton PM}_{10})}$$

$$= 4.37 \text{ tons PM}_{10}\text{/year} \quad \text{Where } 0.36 \text{ lb PM}_{10}\text{/ton fuel (AIRS SCC-3-07-008-3)} \\ 700 \text{ lbs fuel/1000 bd-ft (Permittee records)}$$

$$PM_{10(\text{potential})} = 4.37 \text{ tons PM}_{10}\text{/year} \times (110,000,000 \text{ bd-ft/69,317,375 bd-ft})$$

$$= 6.93 \text{ tons PM}_{10}/\text{year}$$

Therefore CAM is not required for this control device.

2. Planer mill waste collection system (ID No. ES-PM) controlled by simple cyclone (ID No. CD-C3):

No CAM is required for this operation because planing operations are not expected to generate PM10 emissions (see Woodworking spreadsheet emission factor for planing).

3. Trim saw and wood hog waste collection system (ID No. ES-SH) controlled by simple cyclone (ID No. CD-C4):

$$\text{PM}_{10(\text{actual})} = \frac{(69,317,375 \text{ bd-ft/year}) \times (4.89 \times 10^{-5} \text{ lb PM}_{10}/\text{bd-ft})}{2000 \text{ lb PM}_{10}/\text{ton PM}_{10}}$$

$$= 1.69 \text{ tons PM}_{10}/\text{year}$$

$$\begin{aligned} \text{PM}_{10(\text{potential})} &= 1.69 \text{ tons PM}_{10}/\text{year} \times (110,000,000 \text{ bd-ft}/69,317,375 \text{ bd-ft}) \\ &= 2.68 \text{ tons PM}_{10}/\text{year} \end{aligned}$$

Therefore CAM is not required for this control device. It should be noted that this calculation only indicates PM10 emissions from the trim saw operation. Per the DAQ woodwaste spreadsheet, no PM10 emissions are expected from the wood hog operations.

VII. Facility Wide Air Toxics

The facility is currently subject to both the 15A NCAC 2Q .0711 toxic pollutant emission rates for acetaldehyde and methyl ethyl ketone and the modeled emission rates of 15A NCAC 2D .1100 for phenol and formaldehyde as a result of a modeling demonstration completed on January 29, 2001. The compliance modeling at that time demonstrated the maximum formaldehyde concentration at 86% of the acceptable ambient level (AAL) on an hourly basis and the maximum phenol concentration at 82% of the 1 hour AAL. These were modeled at the maximum emission rates of 0.038 and 0.027 pounds per thousand board feet, respectively. This renewal action does not change this status.

VIII. Facility Emissions Review

The following table represents the latest years emission inventory from the facility:

Pollutant(s)	2004 Actual Emissions (tpy)
CO	26.08
NO _x	33.74
PM ₁₀	81.03
SO ₂	3.83
VOC	136.14
HAPs	8.934

IX. Stipulation Review

The following items were listed as permit issues by the regional office as part of this renewal process:

1. During the April 7, 2005 annual inspection, Franklin Suggs, Boiler Supervisor stated that the control device (ID No. CD-B-MC1) is a 25-cone multicyclone, not a 24-cone as listed in the current permit. The description needs to be changed. *Agree; change will be made on permit and in ESM.*

2. In the current permit, the kilns are tagged with IDs ES-KILN-1 and ES-KILN-2 in Section 1, Section 2.1 C and in Section 2.2 A.3.a, but in Section 2.2 A.2.a, these kilns are tagged with IDs ES-1 and ES-2. This correction should be made. *Agree; the permit will be made consistent.*

X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. Both South Carolina and Mecklenburg County Local Program are affected States or local programs.

XI. Conclusions, Comments, and Recommendations

FRO recommends issuance of renewed permit and was presented with a DRAFT permit prior to public notice and EPA review.

RCO concurs with this recommendation.