

Facility Name: **Metcalf Lumber Co., Inc.**
 City: Metcalf
 County: Thomas
 AIRS #: 04-13-275-00008

Application #: TV- 11591
 Date Application Received: July 20, 1999
 Date Application Deemed
 Administratively Complete: April 12, 2000
 Date of Draft Permit:
 Permit No: 2421-275-0008-V-01-0

Program	Review Engineers	Review Managers
SSPP/ASU	Gabriel Kotsis	John Yntema
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TOXICS	NA	NA

Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being proposed pursuant to: (1) Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to Metcalf Lumber Co., Inc. and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, then the applicable requirements and their significance, and finally the methods for determining compliance with those applicable requirements. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revision made to the permit in response to comments received during the public participation process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: Metcalf Lumber Co., Inc.
2. Parent/Holding Company Name: Metcalf Lumber Co., Inc.
3. Previous and/or Other Name(s): None known
4. Facility Location:

SR 122, Metcalf, GA 31792

5. Attainment or Non-attainment Area Location:

The facility is located in an attainment area.

6. Class I Area Impacts:

The facility is located within 100 km of the class I areas of Bradwell Bay and St. Marks.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1: List of Current Permits, as Amended

Permit Number and/or Purpose of Issuance	Date of Issuance and Date of Amendments (if any)	Comments	
		Yes	No
2421-136-11140	April 22, 1993		x
2421-136-11140 Amendment	September 10, 1997		x

Table 2: Comments on Specific Permits

Permit Number	Comments

D. Process Description

1. SIC Code(s)

Major - 2421

Other -

2. Description of Product(s)

Logs are rough-sawn, dried, and planed to produce dimensional lumber.

3. Overall Facility Process Description

Log Preparation:

Southern yellow pine logs of tree length are received by trucks. The logs are stored on concrete log pads. The logs are sawn to desired length, debarked and scanned for metal.

Bark from the debarker is dropped into a chain conveyor and conveyed to a bark holding bin to be sold off site as fuel.

Poor quality log parts are chipped and used as a paper mill fiber source.

Sawmill:

Sawmills cut the logs into dimensional lumber or timbers. The sawmill equipment includes sets of twin bandsaws, a saw edger and a saw trimmer. Lumber is trimmed, sorted by length and dimension, and stacked on sticks.

Trim blocks and edger strips are chipped and transferred to the paper mill as a fiber source.

Lumber Drying Kilns:

The lumber and timbers are dried in one of the three indirect-fired kilns to approximately 15 percent moisture content.

Planer Mill:

The dried lumber and timbers are planed in one of the two planer mills, and then sorted by length, size, and grade, and transported by truck or rail for delivery to the customer.

Boilers:

The facility has two boilers that burn wood waste and provide steam to the three Drying kilns. Boiler 3 was installed on March 1997 with 28.8 million BTU/hr heat input capacity and Boiler 2 was installed on April 1993 with 29.6 million BTU/hr heat input capacity.

General:

By-products produced at the facility are wood chips, sawdust, bark, and shavings, which are used to fire the two boilers or sold off-site.

4. Overall Process Flow Diagram

Process flow diagrams are included in the application file.

E. Regulatory Status

1. PSD/NSR

The facility is a non-major under PSD/NSR regulations.

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	T			T
PM ₁₀	T			T
SO ₂	T			T
VOC	T	T		
NO _x	T			T
CO	T	T		
TRS	T			T
H ₂ S	T			T
Individual HAP	T			T
Total HAPs	T			T

3. MACT Standards

There are not any applicable MACT standards.

4. Program Applicability

Indicate if the following programs are applicable to the facility (with a "yes" or "no").

Program Code	Applicable (Yes/No)
Program Code 6 - PSD	No
Program Code 8 - Part 61 NESHAP	No
Program Code 9 - NSPS	No
Program Code M - Part 63 NESHAP	No
Program Code V - Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

- A. Emission and Operating Caps: None
- B. Applicable Rules and Regulations: None
- C. Compliance Status

The facility is in compliance. See Section VII.F.

- D. Operational Flexibility

See Section VII.A.

- E. Permit Conditions

Condition 8.22 limits Fugitive dust emissions at the facility to not exceed 20 percent opacity.

III. Regulated Equipment Requirements

- A. Brief Process Description

Southern yellow pine logs go through debarker, saw and planing machines to produce lumber. The lumber dried in the kilns.

- B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements / Standards	Corresponding Permit Conditions	ID No.	Description
B2	Boiler 2	40 CFR 60, Subpart Dc GA Rule 391-3-1-.02(2)(d) GA Rule 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5, 4.2.1, 4.2.2, 5.2.2, 5.3.2, 6.2.1, 6.1.7	WBC2	Multiclone
B3	Boiler 3	40 CFR 60, Subpart Dc GA Rule 391-3-1-.02(2)(d) GA Rule 391-3-1-.02(2)(g)	3.4.3, 3.4.4, 3.4.5, 4.2.1, 4.2.2, 5.2.2, 5.3.2, 6.1.7, 6.2.1	WBC3	Multiclone
PM1	Planing Mill 1	GA Rule 391-3-1-.02(2)(b) GA Rule 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 5.2.1, 5.3.1, 6.1.7	PM1C1	Cyclone
PM2	Planing Mill 2	GA Rule 391-3-1-.02(2)(b) GA Rule 391-3-1-.02(2)(e)	3.4.1, 3.4.2 5.2.1, 5.3.1, 6.1.7	PM2C2	Cyclone
DK1	Drying Kiln 1	GA Rule 391-3-1-.02(2)(b) GA Rule 391-3-1-.02(2)(e)	3.4.1, 3.4.2		

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements / Standards	Corresponding Permit Conditions	ID No.	Description
DK2	Drying Kiln 2	GA Rule 391-3-1-.02(2)(b) GA Rule 391-3-1-.02(2)(e)	3.4.1, 3.4.2		
DK3	Drying Kiln 3	GA Rule 391-3-1-.02(2)(b) GA Rule 391-3-1-.02(2)(e)	3.4.1, 3.4.2		

* Generally Applicable Requirements contained in this permit may apply also to emission units listed above.

C. Equipment & Rule Applicability

! Emission and Operating Caps - There are not any caps.

! Applicable Rules and Regulations -

Units B2 and B3:

These boilers have a heat input capacity of less than 30 MMBtu/hr and the fuel used is bark wood waste. they provide steam to the kiln dryers. The boilers were installed in 1997 and 1993. Emissions from the boiler B2 are controlled by a multiclone. Being constructed after Jan 1 1972, these boilers are subject to the particulate matter limit outlined in Georgia Rule 391-3-1-.02(2)(d) "Fuel Burning Equipment" based the following equation:

$$E = 0.5 \left(\frac{Q}{R} \right)^{0.75}$$

where E = the allowable PM emission rate in pounds per million Btu,
R = heat input rate in million Btu per hour for the boiler

Such post 1972 boilers are also subject to Georgia Rule for Air Quality Control 391-3-1-.02(2)(d)3. Georgia Rule (d)3 limits the opacity to 20 percent except for one six minute period per hour of not more than 27 percent opacity.

Because of the size and the installation date, these boilers are subject to the New Source Performance Standards (NSPS) found in 40 CFR 60, Subpart Dc. Subpart Dc requires fuel-usage record keeping. Because the boilers each have an input heat capacity which is less than 30 MMBtu/hour, they are not subject to Subpart Dc PM limits nor Subpart Dc opacity limits. Because the boilers do not burn any fossil fuel, they are not subject to any Subpart Dc sulfur dioxide limit.

These boilers are also subject to Georgia Rule for Air Quality Control 391-3-1-.02(2)(g). This rule limit the fuel sulfur content to 2.5%. Because the boilers burn only wood fuel, the sulfur content is much less than 2.5% with no controls.

Units DK1, DK2, and DK3 and Planing Mills 1 and 2:

The three drying kilns dry dimensional lumber from approximately 50 percent moisture content to 19 percent moisture content. During the drying process, VOCs are also emitted. The emission factor for VOCs used by the Permittee for emission calculations is 4 lbs VOC per MBF. This emission factor is acceptable by the Division and indicates a maximum plant wide emission rate of 180 tpy VOCs.

The planing mills are used to size the wood to dimensional lumber.

The planing mills and the kilns are subject to the particulate matter limit found in Georgia Rule 391-3-1-.02(2)(e) "Particulate Emission from Manufacturing Processes". The limit must be calculated using the production rate and the following equation:

$$E = 4.1P$$

where E = the allowable PM emission rate in pounds per hour

P = the total dry process weight input rate in tons per hour

The planing mills and the kilns are also subject to Georgia Rule for Air Quality Control 391-3-1-.02(2)(b). Georgia Rule (b) applies to all sources that are subject to at least one other emission limitation and are not subject to any other, more stringent, opacity standard. Georgia Rule (b) limits visible emissions to 40 percent opacity.

D. Compliance Status

The facility operates in compliance.

E. Operational Flexibility

The facility did not request any operational flexibility.

F. Permit Conditions

Condition 3.4.1 limits the PM emissions from the planing mills and the kilns (Source Codes PM1, PM2, DK1, DK2, and DK3) based on Georgia Rule (e).

Condition 3.4.2 limits the visible emissions from the planing mills and the kilns (Source Codes PM1, PM2, DK1, DK2, and DK3) based on Georgia Rule (b) to 40 percent opacity.

Condition 3.4.3 limits the PM emissions from the boilers (Source Codes B2 and B3) based on Georgia Rule (d).

Condition 3.4.4 limits the sulfur fuel content to the boilers (Source Codes B2 and B3) based on Georgia Rule (g).

Condition 3.4.5 limits the visible emissions from the boilers (Source Codes B2 and B3) based on Georgia Rule (d) to 20 percent opacity.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

None of the applicable regulations require performance testing. However, the permit does contain a condition that the Division can require that a performance test be conducted to determine compliance with emissions limits contained in Condition 3.4.

Test methods for determining emissions are listed in Condition 4.1.3

B. Specific Testing Requirements:

Condition 4.2.1 requires that within 120 days of the date of issuance of this permit, the Permittee shall conduct a performance test for particulate matter (PM) emissions from each boiler to determine compliance with the emissions limitation contained in Condition 3.4.1. The condition also requires future compliance at a specified frequency.

Test methods for determining emissions are listed in Condition 4.1.3.

Condition 4.2.2 requires the Permittee to install and maintain pressure monitoring devices for the boiler multiclones.

V. Monitoring Requirements (with Associated Record Keeping and Reporting)

A. General Monitoring Requirements

The general monitoring requirements have been included in this permit.

B. Specific Monitoring Requirements

The Wood Waste Boilers (Source Codes B2 and B3) are subject to Georgia Rule 391-3-1-.02(2)(d) for Particulate Matter and Opacity. Particulate Matter (PM) emissions are controlled using multiclones. Proper operation and maintenance of the PM control equipment will ensure that emissions are low and within allowable limits. To make certain that the multiclones are operating properly, pressure drop monitors must be monitored at least once per shift, any malfunctions must be corrected in an expedient manner, and any adverse condition(s) discovered are required to be reported, according to 6.1.7(c), as excursions.

The Wood Waste Boilers (Source Codes B2 and B3) are subject to Georgia Rule 391-3-1-.02(2)(g) "Sulfur Dioxide." As indicated in the "Regulated Equipment Requirements" section of this narrative, wood (the fuel) has a sulfur content much lower than the Rule(g) limit of 2.5%. Since the Permittee cannot violate Rule(g) when burning wood, there is no need to monitor the sulfur content of this fuel.

The planing mills (Source Codes PM1 and PM2) are subject to Georgia Rules 391-3-1-.02(b) for Visible Emissions and (e) for Particulate Matter (PM). These planing mills use cyclones to control PM emissions. The cyclones are subject to inspection monitoring and record keeping. To make certain that the cyclones are operating properly, weekly visual inspections will be conducted, any malfunctions will be corrected in a matter of expedient matter, any adverse condition(s) discovered by the weekly inspections are required to be reported according to 6.1.7(c), as excursions.

The drying kilns (Source Codes DK1, DK2, and DK3) are subject to Georgia Rules 391-3-1-.02(b) for Visible Emissions and (e) for Particulate Matter (PM). These dryers use steam from the Wood Waste Boilers for drying the wood. There is no equipment for the control of PM emissions on the dryers. However, based on available technical literature, potential PM emissions are less than 40 percent of the allowable PM limitation. A determination was made that PM emissions from the dryers are not likely to exceed the allowable limits under almost any operating scenario and, for this reason, no monitoring is prescribed by the permit.

VI. Other Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all related information to deviations from applicable requirements.

Records, including identification of any deviations from applicable monitoring triggers, the cause of such occurrence and the corrective action taken are required to be kept by the Permittee and reporting is required on a semiannual basis. The permit specifies that these records will form the basis of the compliance certification to be submitted on an annual basis.

B. Specific Record Keeping and Reporting Requirements

The Permittee shall retain records of boilers B2 and B3. The records shall be available for inspection or submittal to the Division upon request and contain quantity of wood-waste or other fuel combusted daily.

The Permittee shall also retain records of pressure monitoring of the multiclones, visual inspections of cyclones, and the actions taken to suppress fugitive dust in the plant.

Sulfur content of wood fuel is low so there are not any record requirements for sulfur content of wood.

VII. Specific Requirements

A. Operational Flexibility

The applicant did not include any alternative operating scenarios in their Title V permit application. Special operational flexibility has not been incorporated into this Title V permit. However, this Title V permit allows operational flexibility which is generally afforded most sawmills. For example, they have the flexibility such that (1) various kinds of wood wastes may be used for fuel in the boilers; (2) different species of wood can be dried in the kiln; and (3) the kilns can be used to dry lumber with various dimensions.

B. Alternative Requirements

There are no alternative requirements that need to be incorporated into the Title V permit.

C. Insignificant Activities

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Combustion Equipment	1. Fire fighting and similar safety equipment used to train fire fighters or other emergency personnel.	
	2. Small incinerators that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act and are not considered a "designated facility" as specified in 40 CFR 60.32e of the Federal emissions guidelines for Hospital/Medical/Infectious Waste Incinerators, that are operating as follows:: I) less than 8 million BTU/hr heat input, firing types 0, 1, 2, and/or 3 waste. ii) less than 8 million BTU/hr heat input with no more than 10% pathological (type 4) waste by weight combined with types 0, 1, 2, and/or 3 waste. iii) less than 4 million BTU/hr heat input firing type 4 waste. (Refer to 391-3-1-.03(10)(g)2.(ii) for descriptions of waste types)	
	3. Open burning in compliance with Georgia Rule 391-3-1-.02 (5).	1
	4. Stationary engines burning: I) Natural gas, LPG, gasoline, dual fuel, or diesel fuel which are used exclusively as emergency generators; ii) Natural gas, LPG, and/or diesel fueled generators used for emergency, peaking, and/or standby power generation, where the combined peaking and standby power generation do not exceed 200 hours per year. iii) Natural gas, LPG, and/or diesel fuel used for other purposes, provided that the output of each engine does not exceed 400 horsepower and that no individual engine operates for more than 2,000 hours per year. iv) Gasoline used for other purposes, provided that the output of each engine does not exceed 100 horsepower and that no individual engine operates for more than 500 hours per year.	
Maintenance, Cleaning, and Housekeeping	1. Blast-cleaning equipment using a suspension of abrasive in water and any exhaust system (or collector) serving them exclusively.	
	2. Portable blast-cleaning equipment.	1
	3. Non-Perchloroethylene Dry-cleaning equipment with a capacity of 100 pounds per hour or less of clothes.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
	4. Cold cleaners having an air/vapor interface of not more than 10 square feet and that do not use a halogenated solvent.	4
	5. Non-routine clean out of tanks and equipment for the purposes of worker entry or in preparation for maintenance or decommissioning.	
	6. Devices used exclusively for cleaning metal parts or surfaces by burning off residual amounts of paint, varnish, or other foreign material, provided that such devices are equipped with afterburners.	
	7. Cleaning operations: Alkaline phosphate cleaners and associated cleaners and burners.	
Industrial Operations	1. Concrete block and brick plants, concrete products plants, and ready mix concrete plants producing less than 125,000 tons per year.	
	2. Any of the following processes or process equipment which are electrically heated or which fire natural gas, LPG or distillate fuel oil at a maximum total heat input rate of not more than 5 million BTU's per hour: <ul style="list-style-type: none"> I) Furnaces for heat treating glass or metals, the use of which do not involve molten materials or oil-coated parts. ii) Porcelain enameling furnaces or porcelain enameling drying ovens. iii) Kilns for firing ceramic ware. iv) Crucible furnaces, pot furnaces, or induction melting and holding furnaces with a capacity of 1,000 pounds or less each, in which sweating or distilling is not conducted and in which fluxing is not conducted utilizing free chlorine, chloride or fluoride derivatives, or ammonium compounds. v) Bakery ovens and confection cookers. 	
	3. Carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, shot blasting, shot peening, or polishing; ceramics, glass, leather, metals, plastics, rubber, concrete, paper stock or wood, also including roll grinding and ground wood pulping stone sharpening, provided that: <ul style="list-style-type: none"> I) Activity is performed indoors; & ii) No significant fugitive particulate emissions enter the environment; & iii) No visible emissions enter the outdoor atmosphere. 	16
	4. Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy (e.g., blueprint activity, photographic developing and microfiche).	
	5. Grain, food, or mineral extrusion processes	
	6. Equipment used exclusively for sintering of glass or metals, but not including equipment used for sintering metal-bearing ores, metal scale, clay, fly ash, or metal compounds.	
	7. Equipment for the mining and screening of uncrushed native sand and gravel.	
	8. Ozonization process or process equipment.	
	9. Electrostatic powder coating booths with an appropriately designed and operated particulate control system.	
	10. Activities involving the application of hot melt adhesives where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
Industrial Operations (continued)	11. Equipment used exclusively for the mixing and blending water-based adhesives and coatings at ambient temperatures.	
	12. Equipment used for compression, molding and injection of plastics where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
	13. Ultraviolet curing processes where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
Storage Tanks and Equipment	1. All petroleum liquid storage tanks storing a liquid with a true vapor pressure of equal to or less than 0.50 psia as stored.	
	2. All petroleum liquid storage tanks with a capacity of less than 40,000 gallons storing a liquid with a true vapor pressure of equal to or less than 2.0 psia as stored that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	3. All petroleum liquid storage tanks with a capacity of less than 10,000 gallons storing a petroleum liquid.	11
	4. All pressurized vessels designed to operate in excess of 30 psig storing petroleum fuels that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	5. Gasoline storage and handling equipment at loading facilities handling less than 20,000 gallons per day or at vehicle dispensing facilities that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	6. Portable drums, barrels, and totes provided that the volume of each container does not exceed 550 gallons.	
	7. All chemical storage tanks used to store a chemical with a true vapor pressure of less than or equal to 10 millimeters of mercury (0.19 psia).	

D. Temporary Sources

This TV application did not include a request to operate any temporary sources.

E. Short-Term Activities

This TV application did not report any short-term activities.

F. Compliance Schedule/Progress Reports

The facility is in compliance with all Air Quality Regulations. Therefore, no compliance schedule or process reports are necessary.

G. Emissions Trading

This facility is not involved in any emission trading program.

H. Acid Rain Requirements

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

I. Prevention of Accidental Releases

The facility is subject to the requirements of 40 CFR 68.

J. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V Permit. These Title VI requirements apply to all air conditioning and refrigeration units containing ozone-depleting substances regardless of the size of the unit or of the source. Since this facility has at least some air conditioners, chillers, and refrigerators, Subpart F is an applicable requirement

K. Pollution Prevention

There are no pollution prevention provisions incorporated into this Title V Permit.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply all stationary sources of air pollution.

Addendum to Narrative

There is no addendum at this time.

Draft Permit Review		
Reviewing Program	Comments Received? (y/n)	Comments Taken Into Consideration In Draft Permit? (y/n)
ISMP	Yes	Yes
SSCP	Yes	Yes

SSPP Unit Manager:

_____ Date

John Yntema

SSPP Program Manager:

_____ Date

SSPP Program Manager