

Facility Name: **Langboard, Inc.**
 City: Quitman
 County: Brooks
 AIRS #: 04-13-027-00013
 Application #: TV-14080 (SIP Application # 14079)
 Date SIP Application Received: Oct 25, 2002
 Date Title V Application Received: Oct 25, 2002
 Date of Draft Permit:
 Permit No: 2493-027-0013-V-01-2

Program	Review Engineers	Review Managers
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Toxics	NA	NA

Introduction

This narrative is being provided to assist the reader in understanding the content of the attached SIP permit to construct and/or draft/proposed operating permit amendment. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit amendment is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit amendment is to identify state and federal air requirements applicable to the modification/construction to be performed at **Langboard, Inc.** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit amendment and is presented in the same general order as the permit amendment. It initially describes the facility receiving the permit amendment, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit amendment in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Existing Permits**

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
2493-027-0013-V-01-0	August 31, 1999	✓	
2493-027-0013-V-01-1	July 16, 2002	✓	

Table 2: Comments on Specific Permits

Permit Number	Comments
2493-027-0013-V-01-0	Initial TV Permit
2493-027-0013-V-01-1	502(b)(10) Permit Amendment

B. Regulatory Status**1. PSD/NSR**

The potential to emit (with permit limits) each PSD regulated pollutant by the current Langboard, Inc. plant does not exceed the 250 ton per year PSD major source threshold for this facility. That will also be the case with the replacement plant. The facility is, therefore, not a major source for PSD/NSR regulations. Note that this facility is not one of the 28 named source categories under PSD for which the PTE threshold is 100 tons per year and is not located in an Atlanta non-attainment area.

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	✓	✓		
PM ₁₀	✓	✓		
SO ₂	✓			✓
VOC	✓			✓
NO _x	✓	✓		
CO	✓	✓		
TRS	✓			✓
H ₂ S	✓			✓
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

There are not any applicable MACT standards for the existing facility or the new plant.

The proposed MACT standards (40 CFR part 63 Subpart DDDDD) for Industrial/Commercial/institutional Boilers and Process Heaters (Federal Register, Vol. 68, No. 8/Monday, January 13, 2003/Proposed Rules) will not be applicable to the facility because potential HAP emissions are estimated to be less than 10/25 tpy.

The proposed MACT standards (40 CFR part 63 Subpart DDDD) for Plywood and Composite Wood Products (Federal Register, Vol. 68, No. 6/Thursday, January 9, 2003/Proposed Rules) will not be applicable to the facility because potential HAP emissions are estimated to be less than 10/25 tpy.

4. Program Applicability

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

II. Proposed Modification

A. Description of Modification

Langboard, Inc. currently operates a plant with a capacity to manufacture 220 million square feet per year (MMsf/yr) of Oriented Strand Board (OSB) which was constructed in 1986 and operates under Title V Permit No. 2493-027-0013-V-01-0 which was issued on August 31, 1999. The proposed modification project includes the installation of larger rotary dryers, a new heat source system, upgraded blending/forming machines, and additional finishing capacity. The facility is being completely replaced to increase its capacity. Upon project completion, the facility will have the capacity to produce 500 MMsf/yr of OSB. The existing facility was required to use mainly hardwoods as the OSB raw materials in order to limit VOC emissions since VOC was not controlled. The upgraded plant will be capable of using any combination of hardwoods and softwoods since VOC emissions will be controlled by Energy System. The existing plant will be removed after the operation of the new plant begins. The conditions applying to the existing plant are revoked as of one month after start up of the new plant.

The new energy system will consist of two Wellons wood fired "Detox" combustion systems, each with 160 MMBtu/hr heat input capacity. The combustion gases will supply hot process air to the dryers for flake drying, a thermal oil heater to provide thermal oil for the board press and heat recovery steam generators for electrical power generation. Note that the combustion gases will only be used indirectly. Energy system flue gases will be discharged from a single stack after passing through a common dry electrostatic precipitator (ESP) for particulate matter removal. The process emissions from single pass rotary dryers, blending, and board press will be routed to the energy system for VOC and HAP incineration. Therefore, the only stack emission from all these processes is the energy system stack. In addition to this point source, there are other process emission sources, which will emit particulate matter; these will be controlled by dedicated baghouses.

There are no other facilities which could possibly be contiguous or adjacent and under common control. The source may begin construction upon receipt of this permit amendment but can only begin operation upon receipt of the final Title V permit amendment.

B. Emissions Change

The data regarding emissions provided in Section 2.10 and 2.20 of the Title V applications of the existing and new plant can be compared. Table 4 summarizes the comparison.

Table 4: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	✓	27.4	No change*
PM ₁₀	✓	27.4	No change*
SO ₂	✓	30	No change**
VOC	✓	6.8	No change**
NO _x	✓	245.7	No change*
CO	✓		150
TRS	✓	No Information	No change**
H ₂ S	✓	No Information	No change**
Total HAPs	✓	21.3	No change***

Note: 1) The potential to emit (PTE) pollutant marked by single (*), by the existing and new facility, is less than 250 tpy.

2) The potential to emit (PTE) pollutant marked by double (**), by the existing and new facility, is less than 100 tpy.

3) The potential to emit (PTE) pollutant marked by triple (***), by the existing and new facility, is less than 25 tpy.

C. PSD/NSR Applicability

Since the potential to emit all PSD regulated pollutants by the new plant will not exceed 250 tons per year upon project completion, the facility will remain a PSD minor source.

III. Facility Wide Requirements

A. Emission and Operating Caps:

Langboard's existing Title V permit includes a facility-wide condition limiting the use of pine wood to no more than 94 cords per day to limit facility-wide VOC emissions below 250 tons per year. That limit was necessary for the existing configuration since it includes no control of VOC emissions from dryer and press. However, in the new plant configuration, VOC emissions are controlled by Energy System incineration and emissions are predicted to be less than 100 tpy. Hence the condition limiting pine usage is not applicable to the new plant and thus not included in the permit amendment. However, since the new plant's PTE individual and total HAPs emission are 8.5 and 24.3 tpy, which is very close to 10/25 tpy HAP major source thresholds, emissions of HAPs will be capped by the Title V permit amendment. Since all emissions are to be routed through the Energy System, limiting HAP emissions from the Energy System will effectively limit HAP emissions facility wide.

B. Applicable Rules and Regulations

Rules and Regulations Assessment – None applicable.

C. Compliance Status

No noncompliance issues exist. See Section VIII.F.

D. Operational Flexibility

None requested by the facility. See Section VIII.A.

E. Permit Conditions

As this amendment is for the purpose of allowing the construction and operation of a new plant, only conditions pertaining to the new plant are included in Permit Amendment No. 2493-027-0013-V-01-2. Note: The existing plant, before modification, will be operating under Permits No. 2493-027-0013-V-01-0 (Initial TV Permit issued on August 31, 1999), No. 2493-027-0013-V-01-1 (502(b)(10) Permit Amendment issued on July 16, 2002), and an off permit amendment dated October 1, 2002. One month after startup of the new plant, the existing OSB plant must cease to operate; all permit conditions in the initial permit, plus its subsequent amendments (except this one), will be revoked, with the exception of the General Conditions in Sections 4.0, 5.0 and 6.0, as well as entire Sections 7.0 and 8.0.

Condition No. 2.1.2 requires the Permittee to limit individual and total HAP emissions to less than 10/25 tons per year to avoid to being a major source of HAPs.

IV. Regulated Equipment Requirements

A. Brief Process Description

Langboard, Inc. currently operates a plant with a capacity to manufacture 220 million square feet per year (MMsf/yr) of Oriented Strand Board (OSB). Upon project completion, the facility will have the capacity to produce 500 MMsf/yr of OSB. For the manufacturing of OSB, mixed southern hardwoods and pine are received by truck, debarked, cut to length, flaked, and conveyed to dryer metering bins and dried. Single pass rotary dryers are indirectly heated by the hot air supplied by the energy systems. The dried flakes are screened for fines removal, and conveyed to blender metering bins. The flakes are mixed with wax and phenol-formaldehyde resin in the blenders. Flakes are then aligned in a continuous mat. The mat is cut into sections and pressed at high temperature and pressure. Finally, the boards are sanded, trimmed to size, graded, edge coated, and packaged for shipment. Note that, in the new plant, all emissions from the OSB dryers, blending, and board press will be routed to the energy system for incineration.

B. Equipment List for the Process

3.1 Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
P01	Energy System A (160 MMBtu/hr heat input capacity, wood-fired combustion system)	40 CFR 60, Subpart A 40 CFR 60, Subpart Db GA Rule 391-3-1-.02(2)(d) GA Rule 391-3-1-.02(2)(g)	3.2.5, 3.2.7, 3.3.1, 3.4.7, 3.4.8, 3.5.3, 3.5.4, 3.5.6, 4.2.3-11, 4.2.15-17, 5.2.7-8, 5.2.14, 5.3.5-6, 6.1.7, 6.2.6, 6.2.8, 6.2.9, 6.2.12	C01	Electrostatic Precipitator (ESP)
P02	Energy System B (160 MMBtu/hr heat input capacity, wood-fired combustion system)	40 CFR 60, Subpart A 40 CFR 60, Subpart Db GA Rule 391-3-1-.02(2)(d) GA Rule 391-3-1-.02(2)(g)	3.2.5, 3.2.7, 3.3.1, 3.4.7, 3.4.8, 3.5.3, 3.5.4, 3.5.6, 4.2.3-11, 4.2.15-17, 5.2.7-8, 5.2.14, 5.3.5-6, 6.1.7, 6.2.6, 6.2.8, 6.2.9, 6.2.12	C01	Electrostatic Precipitator (ESP)
P03	Rotary Flake Dryer A	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.4.9, 3.4.10-11, 3.5.3, 4.2.10-11, 5.2.13, 5.3.5, 6.1.7, 6.2.7, 6.2.8	P01 and P02	Energy System A And Energy System B
P04	Rotary Flake Dryer B	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.4.9, 3.4.10-11, 3.5.3, 4.2.10-11, 5.2.13, 5.3.5, 6.1.7, 6.2.7, 6.2.8	P01 and P02	Energy System A And Energy System B
P05	Flake Screening	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10, 3.4.11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C02	Baghouse
P06	Blending	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.4.9, 3.4.10-11, 3.5.3, 4.2.10-11, 5.3.5, 6.1.7, 6.2.7, 6.2.8, 6.2.11	P01 and P02	Energy System A And Energy System B

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
P07	Forming	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10-11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C03	Baghouse
P08	Board Press	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.4.9, 3.4.10-11, 3.5.3, 3.5.5, 3.5.7, 4.2.14, 5.3.5, 6.1.7, 6.2.5, 6.2.7, 6.2.8, 6.2.9, 6.2.10	P01 and P02	Energy System A And Energy System B
P09	Sander Line	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10-11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C04	Baghouse
P10	Saw Line	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10-11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C05	Baghouse
P11	Fuel Relay System 1	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10-11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C06	Baghouse
P12	Fuel Relay System 2 / Fuel Bin	GA Rule 391-3-1-.02(2)(e) GA Rule 391-3-1-.02(2)(b)	3.2.6, 3.4.9, 3.4.10-11, 3.5.4, 3.5.5, 3.5.6, 4.2.12-13, 5.2.9-12, 5.3.5, 6.1.7, 6.2.6, 6.2.8, 6.2.11	C07	Baghouse

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The equipment list contains only the new and/or modified equipment with new emission unit IDs.

C. Equipment & Rule Applicability

Emission and Operating Caps –

The Title V application indicates that, for the new plant, the facility wide PTE PM is 222.5 tpy. It also states that the Energy System PTE is 84.5 tpy and a total of about 1.0 tpy is emitted from a group of sources which includes the debarker, the bark hog, the bark bin, the bark file, truck unloading, finishing, and resin/wax storage. I therefore deduce $[222.5 - (84.5 + 1.0)]$ that the remaining PTE of about 137.0 tpy is emitted by the Flake Screening (Emission Unit ID No. P05), Forming (Emission Unit ID No. P07), Sander Line (Emission Unit ID No. P09), Saw Line (Emission Unit ID No. P10), Fuel Relay System 1 (Emission Unit ID No. P11), and Fuel Relay System 2 / Fuel Bin (Emission Unit ID No. P12). The Permittee has accepted the following limits for the above manufacturing processes, each of whose PM emissions are controlled by a dedicated baghouse, to ensure that PM emissions stay under the PSD major source threshold of 250 tpy, facility wide. The operating emission caps are found in Condition 3.2.6:

- 3.2.6 The Permittee shall not discharge or cause the discharge into the atmosphere from the following process equipment, any gases that contain Particulate Matter (PM) in excess of the indicated rates:
[PSD Avoidance Limits]
- a. From Flake Screening (Emission Unit ID No. P05): 4.3 lb/hr.
 - b. From Forming (Emission Unit ID No. P07): 3.2 lb/hr.
 - c. From Sander Line (Emission Unit ID No. P09): 10.7 lb/hr.
 - d. From Saw Line (Emission Unit ID No. P10): 10.7 lb/hr.
 - e. From Fuel Relay System 1 (Emission Unit ID No. P11): 1.2 lb/hr.
 - f. From Fuel Relay System 2 / Fuel Bin (Emission Unit ID No. P12): 1.2 lb/hr.

The Energy System will emit NO_x and CO. The PTE indicated in the application, for each of these pollutants, is not much less than the 250 tpy PSD major source threshold for each. To help assure that the facility stays a minor source for PSD, the following facility wide limits for NO_x and CO emissions are imposed.

- 3.2.5 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from Energy System A and Energy System B (Emission Units ID Nos. P01 and P02), combined, nitrogen oxide (NO_x) or carbon monoxide (CO) equal to or in excess of 57.05 lb/hr (30 day rolling average).

Georgia Rule 391-3-1-.02(2)(g) requires that all fuel burning sources having heat input of 100 million BTU's per hour or greater shall not burn a fuel containing more than 3 percent sulfur, by weight. The Energy System (Emission Unit ID Nos. P01 and P02) is subject to Rule (g) for sulfur dioxide. It will burn only wood waste and so the sulfur content will always be much less than 3 percent; hence no monitoring is needed for sulfur dioxide.

Applicable Rules and Regulations -

Rules and Regulations Assessment:

Energy System A and B (Emission Unit ID No. P01 and P02)

The new energy system will be a Wellons wood-fired "Detox" combustion system which includes two 160 MMBtu/hr heat input capacity combustion units (for a combined output of 320 MMBtu/hr). The combustion gases will supply hot process air to (1) the dryers for flake drying, (2) the thermal oil heater to provide thermal oil for the board press and (3) produce heat recovery steam for electrical power generation. Energy system flue gas will be discharged from a single stack after passing through a common dry electrostatic precipitator (ESP) for particulate matter removal.

Since Energy Systems A and B employ indirect heat transfer, they are thus considered to be “fuel-burning equipment” according to the Georgia Rules for Air Quality Control. Therefore, emissions from these units are subject to Rule (d).

Being constructed after January 1, 1972, the Energy Systems A and B (Emission Unit ID Nos. P01 and P02) are subject to the particulate matter limit outlined in Georgia Rule 391-3-1-.02(2)(d) for "Fuel Burning Equipment" which contains the following equation:

$$P = 0.5 (10/R)^{0.5} \text{ pounds per million BTU heat input;}$$

Where:

P = allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input

R = heat input of fuel-burning equipment in million BTU per hour.

Per Rule (d) the allowable PM emission rate for Energy System A or Energy System B can be calculated, for maximum heat input, as follows:

$$P = 0.5 (10/160)^{0.5} = 0.125 \text{ lb/MMBtu}$$

On an hourly basis, that is $(0.125 \text{ lb/MMBtu}) (160 \text{ MMBtu/hr}) = \mathbf{20.0 \text{ lb/hr of PM}}$

Because the fuel burning equipment is to be constructed after January 1, 1972, the Energy Systems are also subject to Georgia Rule for Air Quality Control 391-3-1-.02(2)(d) 3, which limits the opacity to 20 percent except for one six-minute period per hour of not more than 27 percent opacity.

As per 40 CFR Part 60, Subpart Db, these fuel-burning units are defined as steam generating units. Being each above 100 MMBtu/hr heat input capacity and constructed after June 19, 1984, they are subject to the New Source Performance Standards (NSPS) found in 40 CFR 60, Subpart Db-“Standards of Performance for industrial-Commercial Institutional Steam Generating Units”. As per the NSPS, the units shall not cause to be discharged any gases that contain PM in excess of the following emission limits:

- a. Contain PM in excess of 0.10 lb/MMBtu
[40 CFR 60.43b(c)]
- b. Exhibit equal to or greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. The opacity standard shall apply at all times except periods of startup, shutdown, and malfunction of the boiler.
[40 CFR 60.43b(f)]

NSPS requires start-up notification, an initial performance test for PM, fuel-usage record keeping, and calculation of annual capacity factor for wood. Because neither Energy System A nor B use any fossil fuel, they are not subject to any Subpart Db sulfur dioxide or nitrogen oxides

limits but are required to calculate capacity factors. The condition to keep records of wood burned in the combustion units and to calculate the annual factor is included in the permit amendment (Condition 6.2.12).

The NSPS particulate matter emission standard of 0.10 lb/MMBtu is more stringent than the limit of 0.125 lb/MMBtu calculated as per Georgia Rule (d). Therefore, the Energy System will always be in compliance with Rule (d) while complying with the provisions of the NSPS.

The potential to emit, which is defined by the Rule Db allowable, is 70.08 TPY@ 8760 hours of operation of each system and 140.16 TPY combined. Title V application indicates that 84.5 tpy of PM will be released from the energy system, after controls. It is therefore expected that the energy system will be in compliance with the NSPS.

The Permittee has accepted a limit of 0.065 lb/MMBtu of PM emissions from the Energy System A and B (Emission Unit ID Nos. P01 and P02) combined which means the Energy System PTE is 91.1 tpy. The PM emissions are controlled by a dedicated ESP. To ensure that facility wide PM emissions may not exceed the 250 tpy PSD major source threshold facility wide, an emission limit of 0.065 lb/MMBtu is included in Condition 3.2.7. Total PM potential to emit facility wide is then 229.1 tpy (91.1 tpy from energy system and 138 tpy from other emission sources) instead of 222.5 tpy as estimated by the facility.

Manufacturing Processes

Georgia Rule (e) "Particulate Emissions from Manufacturing Processes." limits particulate emissions from all manufacturing processes. From new sources (those constructed after July 2, 1968) with process rates up to 30 tons per hour, it limits emissions according to the rate calculated using the formula: $E = 4.1P^{0.67}$; and with process rates above 30 tons per hour, it limits emissions according to the rate calculated using the formula: $E = 55P^{0.11} - 40$; where E equals the allowable emission rate in pounds per hour and P equals the process input weight rate in tons per hour. The following emission units are subject to these limits: Rotary Flake Dryers A and B (Emission Units ID No. P03 and P04), Flake Screening (Emission Unit ID No. P05), Blending (Emission Unit ID No. P06), Forming (Emission Unit ID No. P07), Board Press (Emission Unit ID No. P08), Sander Line (P09), Saw line (P10), Fuel Relay System 1 (P11), and Fuel Relay System 2 / Fuel Bin (P12). Condition 3.4.9 subjects these units to Rule (e).

Georgia Rule (b) "Visible Emissions" limits opacity to 40% and applies to most sources that are not subject to another more stringent opacity limit. Processes that are subject to this rule at Langboard, Inc. include Rotary Flake Dryers A and B (Emission Units ID No. P03 and P04), Flake Screening (Emission Unit ID No. P05), Blending (Emission Unit ID No. P06), Forming (Emission Unit ID No. P07), Board Press (Emission Unit ID No. P08), Sander Line (P09), Saw line (P10), Fuel Relay System 1 (P11), and Fuel Relay System 2 / Fuel Bin (P12), which are also all subject to Rule (e) as indicated above. Condition 3.4.10 subjects these units to Rule (b).

D. Compliance Status

The facility has not submitted Section 11.10 forms of the Title V permit application. The facility is presumed to be in compliance.

E. Operational Flexibility

The facility did not request any operational flexibility. See Section VIII.A.

F. Permit Conditions

Condition 3.2.5 limits the NO_x and CO emissions from the Energy Systems (Emission Unit ID Nos. P01 and P02) to 57.05 lb/hr (30 day rolling average) each to ensure that the facility wide emissions are less than 250 tpy for PSD avoidance.

Condition 3.2.6 limits the emissions of PM from Flake Screening (Emission Unit ID No. P05), Forming (Emission Unit ID No. P07), Sander Line (P09), Saw line (P10), Fuel Relay System 1 (P11), Fuel Relay System 2 / Fuel Bin (P12), and other sources, equal to or less than 138 tpy and to ensure that the facility wide emissions are now 229.1 tpy, which is less than 250 tpy when combined with PM PTE of 91.1 tpy from the energy system.

Condition No. 3.2.7 limits the emissions of PM from the Energy System (Emission unit ID Nos. P01 and P02) to 0.065 lb/MMBtu to ensure that emissions are not more than 91.1 tpy.

Condition No. 3.3.1 limits visible emissions, from the Energy System (Emission unit ID Nos. P01 and P02), based on Subpart Db and Georgia Rule (d) to 20% except for one six-minute period per hour of not more than 27 %.

Condition No. 3.4.7 limits the emissions of PM from the Energy System (Emission unit ID Nos. P01 and P02), based on Georgia Rule (d).

Condition No. 3.4.8 limits the sulfur content of fuel to be fired in the Energy System (Emission unit ID No. P01 and P02) based on Rule (g).

Conditions 3.4.9 and 3.4.10 limit the emissions of PM from Rotary Flake Dryers A and B (Emission Units ID No. P03 and P04), Flake Screening (Emission Unit ID No. P05), Blending (Emission Unit ID No. P06), Forming (Emission Unit ID No. P07), Board Press (Emission Unit ID No. P08), Sander Line (P09), Saw line (P10), Fuel Relay System 1 (P11), and Fuel Relay System 2 / Fuel Bin (P12) based on Georgia Rule (e) and visible emissions opacity to 40% based on Rule (b).

Condition No. 3.4.11 requires that fugitive dust generation be minimized from any process or process equipment and other miscellaneous PM emission sources, such as material handling, storage, and roads, by adopting reasonable precautions such as the application of water on dirt roads, materials and stockpiles. The percent opacity from any fugitive dust source shall not equal or exceed 20%. This operational limitation is based on Georgia Rule (n).

The process emissions from rotary dryers, blending, and board press will be routed to the energy system for VOC and HAP control by incineration. The significant point source of air emissions associated with the project is the energy system stack. Energy system flue gas will be discharged from a single stack after passing through a common dry electrostatic precipitator (ESP) for particulate matter removal. Condition No. 3.5.3 requires the Permittee to ensure that the process

emissions are routed through the Energy System; the emissions from the Energy System will be vented to the ESP for control of PM.

Condition No. 3.5.4 requires that routine maintenance be done on all air pollution control equipment and that records be maintained for inspection. This condition is based on Georgia Rule 391-3-1-.02(2) (a) 10.

There are several baghouses for the control of PM emissions from various manufacturing processes. Having an adequate supply of bags on hand for replacements of defective bags is required to help assure the control equipment is operating properly. Condition No. 3.5.5 requires the Permittee to maintain an inventory of filter bags so that defective bags in a baghouse may be replaced when needed.

Condition No. 3.5.6 requires the Permittee to operate all particulate matter control devices (baghouses and ESP) when their associated processes are in operation.

Condition No. 3.5.7 requires the Permittee to install capture devices on the board press and the board cooling area, which either meet the criteria of Method 204 for permanent enclosure or achieve 95% capture efficiency.

V. Testing Requirements (with Associated Record Keeping and Reporting)**A. General Testing Requirements**

The permit amendment contains specific test methods for measuring pollutants that we expect to be emitted from sources at the new plant. These are listed in Condition 4.1.4.

B. Specific Testing Requirements**Individual Equipment:****Energy System (Emission Unit ID No. P01 and P02).**

The major pollutant of concern from wood fired combustion systems is particulate matter (PM). PM emissions depend primarily on the composition of the wood fuel burned and the particulate control device. Oxides of nitrogen (NO_x) may also be emitted in significant quantities when certain types of wood residue are combusted or under certain operating conditions. Carbon monoxide (CO) can be emitted in large amounts under conditions of partial combustion. The Energy Systems A and B will mainly consume bark as per data provided in the Title V application. However, wood residue generated from the various OSB manufacturing processes can also be consumed. The Title V application indicates that PTE PM, NO_x and CO are all close to the 250 tpy PSD major source threshold.

The Energy System units are each subject to the provisions of the NSPS for PM standards and opacity limit so the Permittee is required to conduct performance tests to demonstrate compliance with the NSPS rules. Condition 4.2.3 requires the Permittee to conduct tests on the Energy System controlled by the electrostatic precipitator (ESP) (APCD ID No. C01) within 60 days after achieving the maximum production rate and within 180 days after the initial start-up of the system. The performance test will be used to determine compliance with the particulate matter emission limit and to establish a power level for the ESP at which compliance with the PM emissions limit is assured. The report of the test results for PM and opacity is required to be submitted within 45 days of completion of testing. Condition 4.2.6 requires routine tests for PM and Condition 4.2.7 requires to conduct additional tests if fuel material is changed.

Since the PTE NO_x and CO is near 250 tpy, to ensure that the emissions are less than the 250 tpy PSD thresholds, and so to remain a minor source for PSD, the permit requires that initial performance tests be conducted by the Permittee within 180 days of start up of the system. To assure continuous compliance with the facility wide limits of 249.9 tpy each for NO_x and CO, the Permittee is also required to install Continuous Emission Rate Monitoring Systems (CERMS) for measuring and recording NO_x and CO emissions (Condition 5.2.7). Conditions 4.2.4 and 4.2.8 requires the Permittee to conduct initial performance tests using the CERMS. The reports are to be submitted within 45 days of completion of the testing.

Following the initial performance tests conducted, as per requirements of Conditions 4.2.4 and 4.2.8, the Permittee is required to determine compliance with the NO_x and CO emissions limitations as required by Conditions 4.2.5 and 4.2.9. Also the Permittee is required to calculate the 30-day rolling average emission rate on a daily basis.

Equipment Groups (all subject to the same test requirements):

The process emissions from Rotary Flake Dryers A and B (Emission Units ID No. P03 and P04), Blending (Emission Unit ID No. P06), and Board Press (Emission Unit ID No. P08) which include VOC and HAPs, in addition to PM emissions, will be routed through the Energy System for control via incineration. Since the dry ESP controls the emissions from the Energy System, PM emissions from the above-indicated processes would be controlled via the ESP. Therefore the Permittee is required to conduct initial performance tests for the HAPs (acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) emissions at the outlet of the Energy System, per Condition 4.2.10, in addition to tests for PM emissions as required by Condition 4.2.3. The performance tests are required to be conducted within 180 days after start-up of the plant. Condition 4.2.11 requires the Permittee to thereafter conduct performance tests at approximately 24-month interval to establish total HAPs emission factors.

The process emissions, which mainly contain PM, from emission units of Flake Screening (Emission Unit ID No. P05), Forming (Emission Unit ID No. P07), Sander Line (Emission Unit ID No. P09), Saw Line (Emission Unit ID No. P10), Fuel Relay System 1 (Emission Unit ID No. P11), and Fuel Relay System 2 / Fuel Bin (Emission Unit ID No. P12) are controlled by dedicated baghouses, APCD ID Nos. C02, C03, C04, C05, C06, and C07. Each of these processes is subject to a PM limit specified in Condition 3.2.6. To ensure that PM emissions from these processes, vented through a baghouse, are not more than their PM limits, performance tests are required to be conducted within 180 days after the initial start-up of the plant, per Condition 4.2.12. During these tests, the Permittee is required to acquire data of the pressure drop across each baghouse to establish ranges for the proper functioning of each baghouse which will assure continuous compliance with the PM emissions limits for each process. The reports are to be submitted within 45 days of completion of the testing (Condition 4.2.13).

Condition 4.2.14 requires the Permittee to submit a test plan within 60 days after initial start-up, to determine board press and board cooling area enclosure capture efficiency for the Division's approval. Further, this condition requires that the test be conducted within 90 days of approval of the test plan and that test results be submitted within 45 days of completion of testing. This testing is not required if the capture device meets the criteria of Method 204 for permanent enclosure.

Condition 4.2.15 defines an operating day which is a 24-hour period between 12:00 midnight and the following midnight.

Condition 4.2.16 requires the Permittee to submit a report containing the results of the performance test required by Condition 4.2.3, the secondary voltages and secondary currents recorded during the testing, and the average power level of the ESP at which compliance with the PM emissions limitation is achieved.

Condition 4.2.17 requires the Permittee to measure and record the combustion zone temperatures for each Energy System. These measurements must then be used to establish the minimum temperature at which the Energy System should operate to demonstrate compliance with the HAP emission limits of Condition 2.1.2.

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**A. General Monitoring Requirements**

Condition No. 5.1.1 requires that all monitors required by the Division and installed by the Permittee be operated continuously except during breakdowns and repairs. Any repairs or maintenance should be completed in an expeditious manner so downtime is minimized. All data should also be recorded during any calibration activity to help verify that the calibration was performed and completed properly.

B. Specific Monitoring Requirements**1. Individual Equipment:**

Proper operation of the Energy Systems can be assured by monitoring the combustion zone temperature. This will provide reasonable assurance that the emissions limitations for HAPs are not exceeded. Condition 5.2.8 requires the Permittee to install combustion zone temperature monitors for each of the Energy Systems. The exceedances and excursions, as defined in Condition 6.1.7, are required to be reported by the Permittee.

Proper operation also will help assure that the PM, Visible Emissions (opacity), NO_x, and CO emissions limitations for the Energy System will not be exceeded. Also, Condition 5.2.7 requires the installation of a Continuous Emissions Rate Monitoring System (CERMS) for measuring and recording NO_x and CO concentration and COMS for measuring visible emissions.

The proper operation of the ESP will provide reasonable assurance that the applicable PM and Visible Emissions (opacity) limitations for the Energy System will not be exceeded. The total power level of an ESP is the single most useful operating parameter related to ESP performance. By maintaining an adequate level of power, emissions are assured to be controlled to below applicable PM limit. Condition 5.2.8 requires the installation of monitoring devices for measuring both secondary voltage and secondary current (amperage); readings of these monitors must be made continuously. Langboard, Inc. can install a data logger to record the information automatically. The secondary voltages and currents must be used to calculate the total ESP power level. The calculations must be made according to the equation in Condition 5.2.14. An excursion is defined, in Condition 6.1.7, as each three-hour total power average for the electrostatic precipitator (APCD ID No. C01), as determined in accordance with Condition 4.2.3, that is less than 75 percent or higher than 130 percent of the value determined and reported in accordance with Conditions 4.2.3 and 4.2.16.

The Energy System (Emission Unit ID No. P01 and P02) is subject to Georgia Rule (g) for Sulfur Dioxide. Waste woods consistently have sulfur contents much lower than the Rule (g) limit of 3.0 percent. Since Rule (g) is not likely to be violated by the Permittee, there is no need to monitor the sulfur content of these fuels.

2. Equipment Groups (all subject to the same monitoring requirements):

The manufacturing process emission sources of Flake Screening (Emission Unit ID No. P05), Forming (Emission Unit ID No. P07), Sander Line (Emission Unit ID No. P09), Saw Line (Emission Unit ID No. P10), Fuel Relay System 1 (Emission Unit ID No. P11), and Fuel Relay System 2 / Fuel Bin (Emission Unit ID No. P12) are all subject to Georgia Rule (b) for visible emissions and Rule (e) for particulate matter (PM) and are subject to the monitoring requirements of Conditions 5.2.9 and 5.2.11. The PM emissions from each of these emission units are controlled by a dedicated baghouse (APCD ID Nos. C02, C03, C04, C05, C06, and C07). To reasonably assure compliance with applicable PM limitations, a Visible Emissions (VE) check is required each day of operation of the emissions units controlled by the baghouses. Corrective actions are required for either the presence of visible emissions. In addition, a Preventive Maintenance Program is required on these baghouses. The program requires weekly monitoring of baghouse pressure drop and the weekly performance of operation and maintenance checks on the baghouses. Any malfunctions discovered in the functioning of a baghouse must be corrected in an expedient manner and any adverse condition(s) discovered by weekly inspections are required to be reported.

Condition 5.2.10 requires the Permittee to make weekly inspections of the baghouses to determine if either is malfunctioning and to make repairs in an expedient manner. Condition 6.1.7c. requires that these must be reported semi-annually as excursions.

Condition 5.2.11 requires the Permittee to check visible emissions of each specified baghouse daily.

Condition No. 5.2.12 requires the Permittee to develop and implement a preventive maintenance program for each baghouse.

Condition No. 5.2.13 requires the Permittee to determine all 12-hour block averages of combustion zone temperatures for each Energy System.

Condition No. 5.2.14 requires the Permittee to determine and record the total ESP power for each hour of operation, using the data required to be collected by Condition 5.2.8. The equation to be used to calculate the ESP power is included in the condition.

C. Record keeping and Reporting Requirements (associated with Specific Monitoring)

Condition 5.3.5 requires the Permittee to maintain records of all data and information required by Conditions No. 5.2.7 through 5.2.14. Reports are to be submitted semiannually in accordance with Condition 6.1.4.

Condition 5.3.6 requires the Permittee to maintain specified records of required data for each unit-operating day for the Energy System (Emission Units ID No. P01 and P02).

VII. Other Record Keeping and Reporting Requirements**A. General Record Keeping and Reporting Requirements**

The submission of written reports (semiannually) of any failure to meet an applicable emission and/or any failure to comply with or complete any work practice or standard contained in this permit is required by Conditions 6.1.3 and 6.1.4. Condition 6.1.7 requires the Permittee to report departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of monitoring. Note: Conditions 6.1.1 and 6.1.2 of the permit will also be applicable to the new plant in addition to other general conditions included in this permit amendment.

B. Specific Record Keeping and Reporting Requirements

Condition No. 6.2.5 requires the Permittee to maintain records of the hourly production rates of the board press.

Condition No. 6.2.6 requires the Permittee to maintain records of routine maintenance performed on all APCDs.

Condition No. 6.2.7 requires the Permittee to maintain records of the date, time and duration when the emissions from the manufacturing units of flake dryers, board press and blending process are not vented to the energy system for control.

Condition No. 6.2.8 requires the Permittee to submit notification regarding completion of emission units, date of initial startup of the Energy System and other emission units, and date of decommissioning of the existing plant.

Condition No. 6.2.9 provides a detailed procedure for calculating total monthly emissions of HAPs. It also requires the Permittee to report if individual or total HAP emissions exceed 1/12 the annual limit.

Condition No. 6.2.10 requires the Permittee to calculate 12-month rolling totals for individual and total HAPs emissions and to include this in the semiannual reports specified in Condition 6.1.4.

To assure that fugitive dust rules are being complied with, Condition 6.2.11 requires the Permittee to maintain a record of all actions taken to suppress fugitive dust from various sources to help assure compliance with Rule (n).

Condition No. 6.2.12 require the Permittee to maintain records of the fuel combusted in the Energy System and to calculate the annual capacity factors, on a 12-month rolling basis, as per the requirement of 40 CFR 60.49b (d).

VIII. Specific Requirements**A. Operational Flexibility**

The applicant did not include any alternative operating scenarios in their Title V permit application or SIP application. Special operational flexibility has therefore not been incorporated into this Title V permit. However, this Title V permit allows the operational flexibility that is generally afforded to sawmills and other wood processing plants. For example, they have the flexibility such that (1) different species soft wood and hard wood can be used to manufacture OSB, (2) different species of wood flakes can be dried in the Rotary Flake Dryers and (3) the facility can produce OSB in various thicknesses and dimensions.

Note: Condition 7.1.1 of the permit will be applicable to the new plant.

B. Alternative Requirements

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

C. Insignificant Activities

Refer to §4.10 of the Title V permit application

D. Temporary Sources

The Permittee has not requested to operate any temporary sources.

E. Short-Term Activities

The Permittee did not report any short-term activities.

F. Compliance Schedule/Progress Reports

The facility indicates in their Title V application that it is in compliance with all Air Quality Regulations. Therefore, no compliance schedule or progress reports were necessary.

G. Emissions Trading

This facility is not involved in any emissions 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

This 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

L. Specific Conditions

Condition 7.12 provides details regarding the applicability of conditions of the permit and permit amendment related to the new plant.

Conditions 7.14.1 and 7.14.2 require the Permittee to decommission the existing plant upon commissioning of the new plant.

Addendum to Narrative

The public notice for this permit amendment dated April 23, 2003 was published in the “Quitman Free Press” on May 7, 2003. The public comment period ended on June 6, 2003. No comments were received from the facility, public or from EPA. A letter to confirm the permit amendment is issued.