

Facility Name: **Langboard - Willacoochee**  
 City: Willacoochee  
 County: Atkinson  
 AIRS #: 04-13-003-00013

Application #: TV-43242  
 Date Application Received: February 7, 2017  
 Permit No: 2493-003-0013-V-06-0

<b>Program</b>	<b>Review Engineers</b>	<b>Review Managers</b>
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## Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The 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 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. Facility Identification**

## 1. Facility Name:

Langboard - Willacoochee

## 2. Parent/Holding Company Name

Langdale Industries

## 3. Previous and/or Other Name(s)

Langboard MDF  
TLC Mouldings, Inc.  
Langboard MDF Value Added Products Plant

## 4. Facility Location

548 Langboard Road  
Willacoochee, Georgia 31650

## 5. Attainment, Non-attainment Area Location, or Contributing Area

The Willacoochee facility is located in Atkinson County. Atkinson County has been declared as an attainment or unclassifiable area for all criteria pollutants with respect to the National Ambient Air Quality Standards (NAAQS).

**B. Site Determination**

Langboard MDF and TLC Mouldings, Inc. are one site with regard to the Title V Program. The facilities previously had separate AIRS numbers (003-00013 and 003-00015, respectively) and separate Title V permits. With the issuance of Permit No. 2493-003-0013-V-04-0, the Title V permits for the two companies were combined into one permit.

### C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2493-003-0013-V-05-0	August 7, 2012	Title V renewal permit
2493-003-0013-V-05-1	March 5, 2018	The construction and operation of a Finger-Jointing Line and the addition of a third Painting Line to the existing TLA Painting and Finishing Operations

### D. Process Description

#### 1. SIC Codes(s)

2493  
2431

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

#### 2. Description of Product(s)

The plant produces medium density fiberboard (MDF) and moulded medium density fiberboard.

#### 3. Overall Facility Process Description

##### Raw Material Storage and Handling

Chips, shavings, and sawdust used as raw materials are received at the site by truck or railcar. Shavings and sawdust are also produced at the mill through the board finishing process, and this material is used to supplement the raw material stream or as fuel in the fluidized bed combustion unit.

Chips are stored in an open pile on a concrete pad, while sawdust and shavings are stored in a covered storage structure. The three types of raw materials are transferred from the storage areas to reclaim hoppers by front end loaders. One conveyor is then used to alternately transfer chips or shavings/sawdust to two dedicated silos- the “Shavings” and “Chip” silos.

From the Shavings Silo, a mixture of shavings and sawdust are pneumatically conveyed to the top of the digester area. A baghouse (Shavings and Sawdust Relay System - C003) is used to separate the shavings/sawdust mixture from the air stream. From the Chip Silo, chips are mechanically conveyed to a chips screening and washing system. Fines separated in the chip washing process are used as fuel in the fluidized bed combustion unit while oversized chips are rechipped and sent back through the process. Properly sized chips that pass through the washing system are mechanically conveyed to the top of the digester area.

To reduce potential for fugitive particulate matter (PM) emissions from the chip screening process, a baghouse (Chips Shaker Screen Baghouse - C001) is used to pull a draft on the screen area, which reduces fugitive particulate matter emissions from this process.

#### Refiners and Flash Tube Dryers

In the digester area, the production process is split into three lines termed the face, swing, and core lines. The Face line produces fiber used on the surfaces of the MDF board while the Core line produces fiber used in the middle of the MDF board. The Swing line, as the name implies, can be switched between either producing face or core fibers as needed.

Chips and shavings/sawdust conveyed from the raw material handling area are metered into separate digesters for the face, swing, and core lines. Here steam is added to soften the chips and wax is added to impart desired fiber properties. The material in each digester is then driven by steam pressure through a refiner where a rotating metal disc rips the wood material into fibers of the desired size and characteristic for making MDF board. Steam pressure continues to drive the fiber from the refiners through a blow line to the entrance of the flash tube dryers. A resin mixture is added to the wood fiber in the blowline between each refiner and flash tube dryer.

In the flash tube dryers, the resinated wood fiber is put in direct contact with the hot exhaust gas from the fluidized bed combustion unit. As the fiber exhaust stream is pulled through the flash tubes, the fiber moisture content is reduced to approximately ten percent (10%). After exiting the dryers, the fiber and air are separated by a set of primary cyclones. The air stream exhaust from these cyclones is pulled through a wet electrostatic precipitator (WESP, C005) before exhausting to the Bioscrubber (C006) and then to the atmosphere. The dry resinated fibers from the primary cyclones are relayed through a series of secondary cyclones termed the Face, Swing and Core Relay System (C008, C009, C010) that drop the fibers from each line into storage bins where they are held prior to being introduced to the forming machine.

## Former and Press

At the former, fiber mats are built up on a moving screen with a vacuum hold-down system. Three layers (face, core, then another face) are placed on the screens to form the mats. From the former, the fiber mats are trimmed to proper dimensions by the face and core shaveoff systems and trim saw. From the saws the fiber mats are routed to the mat reject system, which can be used if necessary to remove undesirable mats from the conveyor before they are sent to the press. Relay and transfer systems are used to recover the board trim and rejected mats for reuse as fuel or fiber. A number of bag filters are used to control particulate emissions from these relay and transfer systems (C011, C012, C013, and C014).

From the forming line, the fresh fiber mats are conveyed to a multi-opening batch press. The steam-heated press activates the heat-set resins and binds the fibers together in a panel under high temperature and pressure. Upon removal from the press, the MDF boards are conveyed through a board cooler system before entering the finishing area. A draft is maintained at pick-up ducts in the press area to draw in press exhaust air. Air from the board cooler is also collected and ducted back to the press area to be included in the exhaust drawn from the press area. A portion of the exhaust stream collected from the press area is routed back to the fluidized bed combustion unit for control. The balance is ducted to a packed tower scrubber (C022) before the exhaust stream is controlled by the Bioscrubber (C006) and then to the atmosphere.

## Finishing Operations

After boards have exited from the board cooler, fork trucks are used to move the unfinished boards to the sander line. Langboard uses a primary and secondary sander in the finishing process. Cyclones are used to separate sanderdust from the exhaust air, which is then routed to one of two baghouses (C015 and C016). The sanderdust collected is pneumatically transferred to a baghouse (C017) associated with a sanderdust silo.

After being sanded, the boards are strapped and moved to the warehouse or are taken to the specialty saws for further dimensioning. Depending on production requirements, panel sizing may be done with cross cut saws. Langboard uses one baghouse (C019) to control emissions from the saw operations. Sawdust separated is pneumatically transferred to a baghouse (C021) associated with the sawdust silo. As needed, sanderdust and sawdust from their silos are pneumatically conveyed to the fuel bins serving the fluidized bed combustion unit via the Saw/Sanderdust Relay System (C018).

## Fluidized Bed Combustion Unit

A fluidized bed combustion unit is used to generate hot combustion gases for the direct-contact flash tube dryers and steam for the press. Fuels are predominately bark received by truck or railcar, saw and sander dust from the finishing operations, and fines screened from the raw material streams. The fluidized bed receives several volatile organic compound (VOC)-laden streams from the process (Press vent, Boiler vent). The fluidized bed combustion unit is equipped with a selective non-catalytic reduction (SNCR) system, consisting of ammonia injection into the overfire air, for control of nitrogen oxides (NO<sub>x</sub>).

A portion of the combustion gas from the fluidized bed unit is directed through a boiler where steam used in the digester/refiner area and in the press is generated. The boiler exhaust gases are then passed through a multiclone and economizer. Ash fallout from the boiler is reinjected back into the combustion unit. Ash from the multiclone and economizer are both conveyed to an ash storage silo (EU26). The exhaust gases from the boiler system and the balance directly from the combustor are mixed in a blend chamber and are then routed through a dry ESP (C025). The dry ESP removes PM from the combustor exhaust gas before it is delivered to the flash tube dryers. The flash tube dryer cyclones and WESP also provide secondary particulate control for the fluidized bed gases. The large ductwork that transfers the cleaned combustion gases to the flash tube dryers is equipped with an abort stack. A damper on this stack is used to help balance the pressure and heat load on the flash tubes. The abort stack also allows the fluidized bed system to continue operating during flash tube downtimes.

### Wax Plant and Premier Operations

The Willacoochee facility operations include a wax emulsion process that is used to homogenize materials, which are essential to the production of MDF. Tanks are heated using excess steam from the fluidized bed combustion unit. The MDF Mill includes a 10.5 million British thermal unit per hour (MMBtu/hr) propane-fired package boiler to provide backup steam supply source for the Wax Plant operations.<sup>1</sup>

Langboard operations include a mixing process (Premier) that blends several materials, primarily emulsion liquids and powders. The product of the mixing process is used along with other waxes and resins in the production of MDF. Essentially, Langboard purchases the raw materials and blends on-site to reduce costs associated with buying the blended product directly.

### TLC Mouldings Operations

The raw material for the TLC Mouldings operations is principally MDF panels. The panels are first processed through the Sawing and Moulding Lines (T001). Here, the panels are cut into boards, sawed to desired dimensions, and then profiled through moulders that route out designs to create the moulding products. The Sawing and Moulding Lines consist of all moulding equipment and associated sets of saws and sawing equipment at the Willacoochee facility.

After the cutting and routing operations are complete, the mouldings produced can be transferred to the Painting and Finishing Operations (T002), or be shipped out unfinished. Currently, there are three painting lines in place. Paint Line 1 consists of initial sanding, primer coating, drying, secondary sanding, secondary coating, drying, buffing, and packaging. Paint Line 2 consists of sanding, coating, drying, buffing, and packaging. This paint line also employs a small components processing station where mouldings can be cut to particular sizes. The new paint line, Paint Line 3, will also consist of sanding, coating, drying, buffing, and packaging.

Hot air is supplied to two of the drying ovens (one on Paint Line 1 and one on Paint Line 2) using two propane fired small boilers. A separate dryer on Paint Line 1 receives its heat via

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<sup>1</sup> Note that the tanks associated with the wax emulsion process are not subject to NSPS Subpart Kb.

combustion air from a set of propane fired burners. Total heat input to each dryer is less than 1.0 MMBtu/hr. The first drying oven on Paint Line 1, which is directly heated with propane burners, is an insignificant emission source. Likewise, the two small boilers used to provide hot air to the other drying oven on Paint Line 1 and the drying oven on Paint Line 2 are also insignificant emission sources.

The primary source of air emissions at the TLC plant is the Sawing and Moulding Lines (T001), which generate sawdust (i.e., PM). The sawdust from these operations is collected via pickup point ducts and pneumatically conveyed to the Saws and Moulders Baghouse System (TC01). The Painting and Finishing Operations (T002) generate PM emissions at various polish sanding and buffing stations on the lines. Sanderdust generated from these stations is collected via pickup point ducts and pneumatically conveyed to the Painting and Finishing Baghouse System (TC02). Any sawdust generated in the small components area of Paint Line 2 is pulled into the same pneumatic system that controls the entire Painting and Finishing Operations. The Painting and Finishing Operations are also a small source of VOC emissions from the use of water-based coatings.

The pellet mill operations process the sawdust collected in the baghouses into a fuel product. Sawdust collected in the baghouses is pneumatically conveyed to a cyclone on top of the pellet mill (T003). In the pellet mill, water and pressure are used to extrude the sawdust through orifices to form solid pellets, which are mechanically conveyed to a truck loadout storage bin. The solid pellets are loaded into trucks and delivered to the adjacent MDF Mill for use as fuel. The pellets can also be sold to third parties for use as a fuel. Exhaust from the pellet mill cyclone is routed back to the pneumatic system under the Saws and Moulders Baghouse System (TC01), resulting in a closed-loop system.

The finger jointing line operation (Emission Unit ID No. T004) will be a mechanical process that cuts a set of complimentary rectangular cuts into wood to be later interlocked and assembled. PM generated by this process is controlled by Baghouse TC03. The raw material for the TLC Mouldings operations is principally MDF panels. The panels are first processed through the Sawing and Moulding Lines (Emission Unit ID No. T001). After the cutting and routing operations are complete, the mouldings produced can be transferred to the Paintings and Finishing Operations, or be shipped out unfinished.

#### 4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

### E. Regulatory Status

#### 1. PSD/NSR

This facility is classified as a minor source of air emissions according to the new source review (NSR) prevention of significant deterioration of air quality (PSD) regulations. The facility is minor as each pollutant potential to emit (pte) is less than the PSD major source threshold of 250 tons per year (ton/yr).

Note: The manufacture of medium density fiberboard (MDF) is not one of the 28 named categories whose major source threshold is 100 ton/yr.

## 2. Title V Major Source Status by Pollutant

**Table 2: 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	Yes	✓		
PM <sub>10</sub>	Yes	✓		
PM <sub>2.5</sub>	Yes	✓		
SO <sub>2</sub>	Yes			✓
VOC	Yes	✓		
NO <sub>x</sub>	Yes	✓		
CO	Yes	✓		
TRS	N/A			
H <sub>2</sub> S	N/A			
Individual HAP	Yes			✓
Total HAPs	Yes			✓

## 3. MACT Standards

Subpart DDDD regulates HAP emissions from Plywood and Composite Wood Products (PCWP) facilities that are major sources of HAPs. The Plywood and Composite Wood Products (PCWP) MACT, 40 CFR Part 63 Subpart DDDD, published in the Federal Register (Vol. 69, No. 146/Friday, July 30, 2004), indicates that the MACT is applicable to dryers, energy systems, and board press. It is also applicable to green end operations, refining, resin preparation, blending and forming operations, and miscellaneous finishing operations.

As required by the Clean Air Act Amendments of 1990, the “final” action on the Boiler MACT, found in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD, was published in the Federal Register on January 31, 2013. Because this facility is a major source of HAPs, this MACT is applicable.

Note that the energy system is not subject to Subpart DDDDD as the primary purpose of the combustion unit is to transport and dry wood flakes. Subpart DDDDD regulates combustion units for which the primary purpose is indirect heat exchange.

Note that the Wax Plant Boiler is subject to Subpart DDDDD.



The Clarke Model DDFP-L6A emergency fire pump engine and the Caterpillar LC6 engine are subject to 40 CFR 63, Subpart ZZZZ “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

Pursuant to 40 CFR 63.6590(b)(3)(iii), note that the Caterpillar SR4 engine is not subject to Subpart ZZZZ because it is an existing emergency stationary source since it commenced construction or reconstruction before December 19, 2002.

The TLC Painting and Finishing Operations (T002) is subject to 40 CFR 63, Subpart QQQQ “National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products.”

#### 4. Program Applicability (AIRS Program Codes)

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

## **Regulatory Analysis**

### **II. Facility Wide Requirements**

#### A. Emission and Operating Caps:

None applicable.

#### B. Applicable Rules and Regulations

Not applicable.

#### C. Compliance Status

The facility has not indicated any non-compliance.

#### D. Permit Conditions

None.

### III. Regulated Equipment Requirements

#### A. 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
EU01	Chip Shaker Screen Area	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.1, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C001	Bag Filter
EU03	Shavings and Sawdust Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.2, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C003	Bag Filter
EU05 EU06 EU07	Flash Tube Dryers #1, #2, and #3	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.3, 3.3.5, 3.3.6, 3.3.8, 3.3.9, 3.3.10, 3.3.11, 3.3.13, 3.4.1, 3.4.3, 4.2.1, 4.2.3 through 4.2.6, 5.2.2 through 5.2.6, 5.2.9, 5.2.11, 6.1.7, 6.2.1, 6.2.2, 6.2.10 through 6.2.18	C005 C006	Wet ESP Bioscrubber
EU08	Face Dryer Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.4, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C008	Bag Filter
EU09	Swing Dryer Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.4, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C009	Bag Filter
EU10	Core Dryer Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.4, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C010	Bag Filter
EU11	Face/Core Shave-off Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.5, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C011	Bag Filter
EU12	Former Vacuum System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.6, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C012	Bag Filter
EU13	Reject Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.7, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2, 6.2.3	C013	Bag Filter
EU14	Vacuum Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.8, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C014	Bag Filter
EU15 EU16	Sanderdust Pickup Systems #1 and #2	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.9, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C015 C016	Bag Filter Bag Filter
EU17	Sanderdust Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.10, 3.4.1, 3.4.3, 5.2.8, 6.1.7, 6.2.2	C017	Bag Filter
EU18	Saw/Sanderdust Boiler Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.11, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C018	Bag Filter
EU19	Sawdust Pickup System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.12, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C019	Bag Filter
EU20	Hogged Trim Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.13, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C020	Bag Filter
EU21	Saw Trim Relay System	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.14, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C021	Bag Filter
EU22	Press Vent System	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.3, 3.3.5 through 3.3.13, 3.4.1, 3.4.3, 4.2.1, 4.2.3 through 4.2.5, 5.2.2, 5.2.3, 5.2.5, 5.2.6, 6.1.7, 6.2.2, 6.2.10 through 6.2.18	C022 C006	Packed Tower Scrubber Bioscrubber
EU24	Fluidized Bed Energy System**	40 CFR 60, Subpart A 40 CFR 60, Subpart Db 40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2.	3.2.3, 3.2.15, 3.3.1 through 3.3.11, 3.3.13, 3.4.4, 3.5.1, 4.2.1, 4.2.3 through 4.2.6, 5.2.1 through 5.2.6, 5.2.9, 5.2.10, 6.1.7, 6.2.2, 6.2.4, 6.2.9, 6.2.10 through 6.2.18	C024 C025 (C005) (C006)	SNCR ESP (Wet ESP) (Bioscrubber)

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
EU25	Wax Plant Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2. 40 CFR 63, Subpart A 40 CFR 63, Subpart DDDDD	3.3.26 through 3.3.32, 3.4.2, 3.4.4, 6.2.27 through 6.2.30	None	None
EU26	Ash Storage Silo	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.16, 3.4.1, 3.4.3, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2	C026	Bag Filter
T001	TLC Sawing and Moulding Lines	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.17, 3.3.5, 3.3.11, 3.4.1, 3.4.3, 4.2.2, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2, 6.2.6 through 6.2.8, 6.2.16	TC01	Baghouse
T002	TLC Painting and Finishing Operations	40 CFR 63, Subpart A 40 CFR 63, Subpart QQQQ 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.17, 3.2.18, 3.3.14, 3.3.15, 3.3.16, 3.4.1, 3.4.3, 4.2.2, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2, 6.2.5 through 6.2.8, 6.2.19 through 6.2.25	TC02	Baghouse
T003	Pellet Mill Operations	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.4.1, 3.4.3	None	None
LC6	Emergency Generator Engine	40 CFR 60 Subpart A 40 CFR 60, Subpart IIII 40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	3.2.19, 3.2.20, 3.3.17 through 3.3.21, 5.2.12, 6.1.7	None	None
L6A	Emergency Fire Pump Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	3.3.22 through 3.3.25, 5.2.13, 5.2.14, 6.1.7, 6.2.26	None	None
T004	Finger-Jointing Line	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.2.17, 3.3.5, 3.3.11, 3.4.1, 3.4.3, 4.2.2, 4.2.7, 5.2.2, 5.2.7, 5.2.8, 6.1.7, 6.2.2, 6.2.6 through 6.2.8, 6.2.16	TC03	Baghouse

\* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

\*\* Note that the exhaust from EU24 is first controlled by C024 and C025, then is sent through EU05, EU06, and EU07, and is eventually controlled by C005 and C006.

## B. Equipment & Rule Applicability

The equipment units at the facility have changed with the addition of the Finger-Jointing Line Operation as well as a third painting line to the TLC Painting and Finishing Operations. This permit subjects the following emission units to the following rules:

Wax Plant Boiler (ID No. EU25) is subject to 40 CFR 63, Subpart DDDDD – “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.”

Emergency Generator Engine (ID No. LC6) is subject to 40 CFR 60, Subpart IIII – “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.” Note that Emergency Generator Engine (ID No. SR4) and Emergency Fire Pump Engine (ID No. L6A) are not subject to 40 CFR 60, Subpart IIII because each engine’s construction commenced prior to the applicability date of July 11, 2005.

Emergency Fire Pump Engine (ID No. L6A) is subject to 40 CFR 63, Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines.” Note that Emergency Generator Engine (ID No. SR4) is not subject to 40 CFR 63, Subparts A and ZZZZ because existing engines located at major source of HAP emissions are exempt per 40 CFR 63.6590(b)(3)(iii).

40 CFR 63, Subpart DDDDD - “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.”

The Wax Plant Boiler (ID No. EU25) is an existing source at the facility because it was installed prior to June 4, 2010 and has not undergone reconstruction since then. It has a maximum heat input capacity of 10.5 million British thermal units per hour (MMBtu/hr) firing propane. Langboard has requested that the Wax boiler be permitted as “limited use” boiler. 40 CFR 63.7575 defines “limited use” boiler or process heater as any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent. This permit has incorporated the necessary conditions which will ensure that the wax plant boiler meets federally enforceable requirements for “limited use” boiler. The annual capacity factor of less than or equal to 10 percent is equivalent to a propane gas usage of less than or equal to 3.7 million cubic feet during any consecutive 12-month period using a heat content of 2,500 Btu per cubic feet of propane gas burned.

Note that the Fluidized Bed Energy System (ID No. EU24) is not subject to 40 CFR 63, Subpart DDDDD because its exhaust stream is used to directly fire process units such as flash tube dryers and thus subject to 40 CFR 63, Subpart DDDD.

40 CFR 60, Subpart IIII - "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines."

The emergency generator engine (ID No. LC6) is potentially subject to 40 CFR 60, Subpart IIII:

“The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured: .....

(i) Manufactured after April 1, 2006, and are not fire pump engines”

The Caterpillar LC6 engine was manufactured after July 11, 2005, and installed at the facility in 2009. Thus the engine is subject to 40 CFR 60, Subpart IIII.

40 CFR 63, Subpart ZZZZ – “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

The Emergency Fire Pump Engine (ID No. L6A) and the Emergency Generator Engine (ID No. LC6) are potentially subject to 40 CFR 63, Subpart ZZZZ because they are a stationary reciprocating internal combustion engine (RICE) located at a major source of HAP emissions. Since the emergency generator engine and the emergency fire pump engine are not being tested at a stationary RICE test cell/stand, they are subject to this rule. However, the Emergency Generator Engine (ID No. LC6) is exempt from 40 CFR 63, Subpart ZZZZ per 40 CFR 63.6590(c)(7) because it is subject to 40 CFR 60, Subpart IIII.

#### Finger-Jointing Line Operation.

The facility is also adding a new finger-jointing line operation with Emission Unit ID No. T004. The input material for this operation is MDF produced in the facility. Note that the facility has not increased the MDF production capacity. The emission from this unit is PM produced during cutting. The PM emission from the new finger-jointing line operation will be controlled by the new APCD No. TC03, a baghouse. The emission unit with ID No. T004 is subject to the following rules:

40 CFR 63, Subpart A  
40 CFR 63, Subpart DDDD  
391-3-1-.02(2)(b)1.  
391-3-1-.02(2)(e)1.(i)

The facility will continue to comply with Georgia Rules (b) and (e) with the baghouse with APCD No. TC03. There is no Subpart DDDD compliance or work practice standards for the finger-jointing line operation.

#### TLC Painting and Finishing Operation

As indicated, the facility is adding a third paint line to the existing emission unit with Emission Unit ID No. T002. The input material for this operation is MDF produced in the facility. Note that the facility has not increased the MDF production capacity. The emissions from this unit are PM and VOC. The PM emissions from the new painting line will be controlled by the existing APCD No. TC02, a baghouse. The VOC emission rate is negligible. The TLC painting and finishing operation with ID No. T002 is subject to the following rules:

40 CFR 63, Subpart A  
40 CFR 63, Subpart QQQQ  
391-3-1-.02(2)(b)1.  
391-3-1-.02(2)(e)1.(i)

The facility will continue to comply with Georgia Rules (b) and (e) with the baghouse with APCD No. TC02 and will continue to comply with Subpart QQQQ with the compliant material option.

### Flash Tube Dryer Nos. 1, 2, and 3 (EU05, EU06, and EU07)

Each flash tube dryer is an existing unit. Flash Tube Dryer Nos. 2 and 3 were installed in 1988 and Flash Tube Dryer No. 1 was installed in 1998. Pursuant to 40 CFR 63.2232, each flash tube dryer is subject to 40 CFR 63, Subpart DDDD – “National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products.” The flash tube dryers are subject to the requirement to reduce formaldehyde emissions by at least 90 percent, confirmed through performance testing. PM emission from this unit is controlled by a wet electrostatic precipitator (ID No C005). Compliance with Rules (b) and (e) is likely. Formaldehyde emission from this unit is controlled by a bioscrubber (ID No. C006). Compliance with the requirement to reduce formaldehyde emission by at least 90 percent was confirmed via a performance test conducted on May 2, 2017 which indicated a formaldehyde reduction of 93 percent.

### Press Vent System (EU24)

The press was installed in 1998. It is a steam heated, multi-opening press. The press utilizes steam energy to apply heat and pressure to formed mats. There are two reasons for applying heat and pressure: (1) to press the material into a thin layer, and (2) to activate the thermosetting resins. The press loader accumulates screens, containing the medium density fiberboard (MDF) mats, and then simultaneously loads them into the openings of the press. The pressing operation is achieved at a temperature ranging from 300 to 360 °F and a pressure of 550 pounds per square inch (psi) and can take up to 300 seconds. As the board is pressed into a desired thickness by an automatic adjustment of the hydraulic pressure of the rams, the resin aids in bonding the fibers together. The heat and pressure cure the mat into a hard, dense material known as MDF. The press is subject to the following rules:

40 CFR 63, Subpart A – General Provisions

40 CFR 63, Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

GA Rule 391-3-1-.02(2)(b)

GA Rule 391-3-1-.02(2)(e)

### Fluidized Bed Energy System (EU24)

As indicated, the Fluidized Energy System is not subject to 40 CFR 63, Subpart DDDDD [5D] “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” because its exhaust stream is used to directly fire process units such as flash tube dryers and thus subject to 40 CFR 63, Subpart DDDD.

The existing Fluidized Energy System has a heat input capacity of 185 MMBtu/hr and has been in operation since 1998. It is subject to 40 CFR 60, Subpart Db-“Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units” (effective after June 19, 1984). This rule sets a PM emission limit of 0.10 lb/MMBtu heat input, limits opacity to 20 percent, and requires the installation of a continuous opacity monitoring system (COMS).

The Fluidized Bed Energy System is subject to the particulate matter limit outlined in Georgia Rule 391-3-1-.02(2)(d) “Fuel Burning Equipment”. It is subject to paragraph 391-3-1-.02(2)(d)2.(ii)

because it was constructed after January 1, 1972. Georgia Rule 391-3-1-.02(2)(d)2.(ii) limits the emission of fly ash and/or other particulate matter from any fuel burning equipment based on the following:

For equipment equal to or greater than 10 million BTU heat input per hour, and equal to or less than 250 million BTU heat input per hour:

$$P = 0.5 \left( \frac{10}{R} \right)^{0.5} \text{ Pounds per million BTU heat input;}$$

Where:

- P = the allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input, and
- R = the heat input of fuel-burning equipment in million BTU per hour.

The Fluidized Bed Energy System is also subject to Georgia Rule 391-3-1-.02(2)(g) “Sulfur Dioxide.” Rule (g)2 sets a sulfur limit of not more than 3 percent. Compliance with this rule is likely since the energy system burns wood whose sulfur content is much less than 3 percent.

For the following existing emission units in the table below, compliance with Rules (b) and (e) is likely with bag filter control equipment.

Emission Unit	Year Installed	Applicable Requirements	Control Device
Chip Shaker Screen	1998	Rule (b) Rule (e)	Bag Filter
Shavings and Sawdust Relay System			
Face Dryer Relay System			
Swing Dryer Relay System			
Core Dryer Relay System			
Face/Core Shave-off Relay System			
Former Vacuum System			
Reject Relay System			
Vacuum Relay System			
Sanderdust Pickup Systems #1 and #2			
Sanderdust Relay System			
Sawdust Pick-up System			
Hogged Trim Relay System			
Saw Trim Relay System			
Pellet Mill Operations			None



## C. Permit Conditions

Condition No.	Description
3.2.1	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.00 lb/hr for the Chip Shaker Screen Area.
3.2.2	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 3.50 lb/hr for the Shavings and Sawdust Relay System.
3.2.3	<i>Unchanged.</i> Sets VOC, CO, and PM PSD avoidance limits of 54.4, 50.0, and 25.0 lb/hr, respectively, for the exhaust stream of the bioscrubber.
3.2.4	<i>Unchanged.</i> Sets PM PSD avoidance limits of 1.50 lb/hr each for the Face Dryer Relay System, the Swing Dryer Relay System, and the Core Dryer Relay System.
3.2.5	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 2.30 lb/hr for the Face/Core Shave-Off Relay System.
3.2.6	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 3.00 lb/hr for the Former Vacuum System.
3.2.7	<i>Unchanged.</i> Requires that the Reject Relay System be operated for no more than seven hours per week and sets a PM PSD avoidance limit of 3.00 lb/hr for the Reject Relay System.
3.2.8	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.36 lb/hr for the Vacuum Relay System.
3.2.9	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 2.40 lb/hr for each of the Sanderdust Pick-up Systems.
3.2.10	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.36 lb/hr for the Sanderdust Relay System.
3.2.11	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.36 lb/hr for the Saw/Sannderdust Boiler Relay System.
3.2.12	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.70 lb/hr for the Sawdust Pick-up System.
3.2.13	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.00 lb/hr for the Hogged Trim Relay System.
3.2.14	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.00 lb/hr for the Saw Trim Relay System.
3.2.15	<i>Unchanged.</i> Sets a NO <sub>x</sub> PSD avoidance limit of 50.00 lb/hr for the Fluidized Bed Energy System.
3.2.16	<i>Unchanged.</i> Sets a PM PSD avoidance limit of 1.00 lb/hr for the Ash Storage Silo.
3.2.17	<i>Modified.</i> Sets PM PSD avoidance limits of 4.00, 4.00, and 4.00 tons during any twelve consecutive month period for the baghouses that control the TLC Sawing and Molding Lines, the TLC Painting and Finishing operations, and the Finger-Jointing Line operation.

Condition No.	Description
3.2.18	<i>Unchanged.</i> Sets a VOC PSD avoidance limit of 9.00 during any twelve consecutive months for the TLC Painting and Finishing operations.
3.2.19	<i>New.</i> Sets the indicated operating limits for the engine-driven emergency generator with ID No. LC6.
3.2.20	<i>New.</i> Sets the indicated operating limits for the engine-driven emergency fire pump with ID No. L6A.
3.3.1	<i>Unchanged.</i> Requires that the fluidized bed energy system comply with the provisions of 40 CFR 60, Subparts A and Db in case any requirement is unintentionally omitted from the permit.
3.3.2	<i>Unchanged.</i> Pursuant to 40 CFR 60.41b, the Permittee is allowed to burn plant and office waste in the fluidized bed energy system upto 2 percent of total fuel heat input.
3.3.3	<i>Unchanged.</i> Pursuant to 40 CFR 60.43b(c)(1), PM emissions from the fluidized bed energy system cannot exceed 0.10 lb/MMBtu heat input.
3.3.4	<i>Unchanged.</i> Pursuant to 40 CFR 60.43b(f), visible emissions from the fluidized bed energy system cannot equal or exceed 20 percent opacity except for one 6-minute period per hour of not more than 27 percent opacity.
3.3.5	<i>Modified.</i> Requires that the flash tube dryers, the press vent system, the fluidized bed energy system, the TLC sawing and molding lines operation, and the finger-jointing line operation comply with the provisions of 40 CFR 63, Subparts A and DDDD in case any requirement is unintentionally omitted from the permit.
3.3.6	<i>Unchanged.</i> Pursuant to 40 CFR 63.2240(b), requires that the wet electrostatic precipitator with ID No. C005, the packed tower scrubber with ID No. C022, and the bioscrubber with ID No. C006 be operated at all times that the flash tube dryers, the press vent system, and the fluidized bed energy system are in operation and reduce formaldehyde emissions by 90 percent or more.
3.3.7	<i>Unchanged.</i> Pursuant to 40 CFR 63.2240(b), requires that the packed tower scrubber maintain the indicated flow rate, pH, and differential pressure.
3.3.8	<i>Unchanged.</i> Pursuant to 40 CFR 63.2240(b), the bioscrubber with ID No. C006 is required to maintain the indicated flow rate, aeration tank temperature, pH, and oxygen level.
3.3.9	<i>Unchanged.</i> Pursuant to 40 CFR 63.2250(a), the Permittee is required to be in compliance with Conditions 3.3.6 through 3.3.8 at all times except during startup, shutdown, or malfunction of process unit or control device.
3.3.10	<i>Unchanged.</i> Pursuant to 40 CFR 63.2250(b), the Permittee is required to maintain air pollution control equipment and monitoring equipment in manner consistent with good air pollution control practices that minimizes emissions.

Condition No.	Description
3.3.11	<i>Unchanged.</i> Pursuant to 40 CFR 63.2250(c), the Permittee is required to develop a written startup, shutdown, and malfunction plan (SSMP).
3.3.12	<i>Unchanged.</i> Pursuant to 40 CFR 63.2267 and 40 CFR 63.2292, the Permittee is required to have a wood products enclosure with the indicated criteria.
3.3.13	<i>Unchanged.</i> Pursuant to 40 CFR 63.2268, the Permittee is required to develop and implement a plan that addresses how organic HAP captured in the wastewater from the wet ESP with ID No. C005 and the packed tower scrubber with ID No. C022 is contained or destroyed.
3.3.14	<i>Unchanged.</i> Requires the TLC painting and finishing operation with ID No. T002 comply with the provisions of 40 CFR 63, Subpart QQQQ in case any requirement is unintentionally omitted from the permit.
3.3.15	<i>Unchanged.</i> Pursuant to 40 CFR 63.4690(b), the Permittee is required to limit the organic HAP emissions from the TLC painting and finishing operations with ID No. T002 to no more than the emission limit specified in the table therein.
3.3.16	<i>Unchanged.</i> Pursuant to 40 CFR 63.4691, the Permittee is required to use coatings, thinners, and cleaning materials that comply with the limits indicated therein.
3.3.17	<i>New.</i> Requires that the emergency generator engine with ID No. LC6 comply with the provisions of 40 CFR 60, Subparts A and IIII in case any requirement is unintentionally omitted from the permit.
3.3.18	<i>New.</i> Pursuant to 40 CFR 60.4205(b) and 40 CFR 89.112, the Permittee is required to not discharge into the atmosphere any emissions in excess of those indicated for the emergency generator engine with ID No. LC6.
3.3.19	<i>New.</i> Pursuant to 40 CFR 60.4206, the Permittee is required to operate the emergency generator engine with ID No. LC6 such that it achieves the emission standard in Condition 3.3.18 over the entire life of the engine.
3.3.20	<i>New.</i> Pursuant to 40 CFR 60.4207(b), 40 CFR 63.6604(c), and 40 CFR 80.510(b), the Permittee is required to use for the emergency generator engine with ID No. LC6 ultra-low sulfur diesel oil that meets a maximum sulfur content, by weight of no greater than 15 parts per million, a minimum Cetane Index of 40, and a maximum Aromatic content by volume of 35 percent.
3.3.21	<i>New.</i> Pursuant to 40 CFR 60.4211(g)(2), the Permittee is required to demonstrate compliance for the emergency generator engine with ID No. LC6 as indicated in the condition if the Permittee does not install, configure, operate, and maintain the engine according to the manufacturer's instructions.
3.3.22	<i>New.</i> Requires the Permittee to comply with 40 CFR 63, Subpart A for the emergency fire pump engine with ID No. L6A.

Condition No.	Description
3.3.23	<i>New.</i> Requires the Permittee to comply with 40 CFR 63, Subpart ZZZZ for the emergency fire pump engine with ID No. L6A and the emergency generator engine with ID No. LC6.
3.3.24	<i>New.</i> Pursuant to 40 CFR 63.6602, the Permittee is required to comply with the provisions indicated therein for the emergency fire pump engine with ID No. L6A.
3.3.25	<i>New.</i> Pursuant to 40 CFR 63.6602, the Permittee is required to minimize the emergency fire pump engine with ID No. L6A startup time to 30 minutes or less.
3.3.26	<i>New.</i> Requires that the wax plant boiler with ID No. EU25 comply with 40 CFR 63, Subpart A in case any requirement is unintentionally omitted from the permit.
3.3.27	<i>New.</i> Requires that the wax plant boiler with ID No. EU25 comply with 40 CFR 63, Subpart DDDDD in case any requirement is unintentionally omitted from the permit.
3.3.28	<i>New.</i> Pursuant to 40 CFR 63.7575, the Permittee is required to not combust propane gas in the wax plant boiler with ID No. EU25 in excess of 3.7 million cubic feet (equivalent to an annual capacity factor of 10 percent or less) during any consecutive 12-month period.
3.3.29	<i>New.</i> Pursuant to 40 CFR 63.7500(c) and 40 CFR 63.7540, the Permittee is required to conduct a tune-up for the wax plant boiler with ID No. EU 25 every five years as indicated therein.
3.3.30	<i>New.</i> Pursuant to 40 CFR 63.7515(d), the Permittee is required to conduct the 5-year tune-up of the wax plant boiler with ID No. EU25 no more than 61 months after the previous tune-up.
3.3.31	<i>New.</i> Pursuant to 40 CFR 63.7510(e) and 40 CFR 63.7495(b), the Permittee is required to conduct the initial tune-up of the wax plant boiler with ID No. EU25 as specified in Condition 3.3.29 no later than January 31, 2016 except as provided in 40 CFR 63.6(i). [Note that the facility has not conducted the initial tune-up of the wax plant boiler as required by 40 CFR 63, Subpart DDDDD.]
3.3.32	<i>New.</i> Pursuant to 40 CFR 63.7540(a)(13), the Permittee is required to conduct a tune-up of the wax plant boiler with ID No. EU25 within 30 calendar days of startup if the boiler is not operating on the required day for a tune-up.
3.4.1	<i>Unchanged.</i> Sets a visible emissions limit of less than 40 percent opacity from any emissions unit except the fluidized bed energy system and the wax plant boiler.
3.4.2	<i>Unchanged.</i> Sets a PM limit of less than the Rule (d) limit and a visible emissions limit of less than 20 percent opacity for the wax plant boiler.
3.4.3	<i>Unchanged.</i> Sets a PM emission limit of less than the Rule (e) limit from any process except the fluidized bed energy system and the wax plant boiler.

Condition No.	Description
3.4.4	<i>Unchanged.</i> Sets a weight percent sulfur limit of less than or equal to 2.5 percent for the fluidized bed energy system and the wax plant boiler.
3.5.1	<i>Unchanged.</i> Requires the Permittee to maintain the temperature in the main chamber of the fluidized bed energy system at or above 1,400°F at all times the system is in operation, except during periods of startup, shutdown, and malfunction.

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

##### A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

##### B. Specific Testing Requirements

Condition No.	Description
4.2.1	<i>Unchanged.</i> Requires the Permittee to conduct VOC and PM performance tests on the outlet of the bioscrubber with ID No. C006 at the indicated intervals to confirm compliance with Conditions 3.2.3.a and c.
4.2.2	<i>Modified.</i> Requires the Permittee to conduct PM performance tests from the baghouses with ID Nos. TC01 through TC03 at the indicated intervals to confirm compliance with Condition 3.2.17.
4.2.3	<i>Unchanged.</i> Pursuant to 40 CFR 63.2260(a), 40 CFR 63.2261(a), and 40 CFR 63.2262(a), the Permittee is required to conduct a formaldehyde performance test on the exhaust of the bioscrubber with ID No. C006 to confirm the 90 percent formaldehyde destruction efficiency requirement at the indicated intervals.
4.2.4	<i>Unchanged.</i> Requires the Permittee to use the operating parameters determined from the performance tests to establish the operating parameters specified in Conditions 3.3.7 and 3.3.8.
4.2.5	<i>Unchanged.</i> Pursuant to 40 CFR 63.2280(d)(2), the Permittee is required to submit a Notification of Compliance Status as indicated therein.
4.2.6	<i>Unchanged.</i> Indicates that the Permittee is allowed to reestablish the secondary power to the wet ESP with ID No. C005 following a successful performance test.
4.2.7	<i>New.</i> Pursuant to PSD avoidance, Condition No. 4.2.7 requires the Permittee to conduct a PM performance test for the new finger-jointing line operation controlled with Baghouse TC03 to verify compliance with Condition No. 3.2.17.c.

## V. Monitoring Requirements

### A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

### B. Specific Monitoring Requirements

Condition No.	Description
5.2.1	<i>Unchanged.</i> Requires the installation of a Continuous Emission Rate Monitoring System (CERMS) for the measurement of the NO <sub>x</sub> emission rate and the flue gas flow rate from the fluidized bed energy system (ID No. EU24). Pursuant to 40 CFR 60.48b(a), requires the installation of a Continuous Opacity Monitoring System (COMS) for the measurement of the visible emissions from the fluidized bed energy system (ID No. EU24).
5.2.2	<i>Modified.</i> Requires the installation of different systems to monitor the indicated parameters.
5.2.3	<i>Unchanged.</i> Requires the weekly measurement of the oxygen level in the aeration tank of the Bioscrubber (ID No. C006). Also requires the dosing of water samples from the aeration tank to monitor the decrease in the oxygen level.
5.2.4	<i>Unchanged.</i> Requires the Permittee to determine the secondary power using the hourly data derived from Condition No. 5.2.2 for the ESPs (ID Nos. C005 and C025).
5.2.5	<i>Unchanged.</i> Requires the Permittee to meet the indicated requirements for each Continuous Parameter Monitoring System (CPMS) identified in Condition Nos. 5.2.2.d through i.
5.2.6	<i>Unchanged.</i> Requires the Permittee to meet the indicated requirements for operating the temperature sensor identified in Condition No. 5.2.2.h.
5.2.7	<i>Modified.</i> Requires the Permittee to establish a Preventive Maintenance Program for the Bag Filters (ID Nos. C001, C003, C008 through C016, C018 through C021, C026, and TC01 through TC03) to minimize emissions.
5.2.8	<i>Modified.</i> Requires the Permittee to daily perform a visible emissions check for the Bag Filters (ID Nos. C001, C003, C008 through C021, C026, TC01 through TC03) to minimize emissions.
5.2.9	<i>Unchanged.</i> Indicates that the PM emitted from the fluidized bed energy system (ID No. EU24) and the flash tube dryers #1, #2, and #3 (ID Nos. EU05, EU06, and EU07) are subject to Compliance Assurance Monitoring (CAM) Rule.

Condition No.	Description
5.2.10	<i>Unchanged.</i> Requires the Permittee to comply with the identified performance criteria for the ESP (ID No. C025) which controls the PM emissions from the fluidized bed energy system (ID No EU24).
5.2.11	<i>Unchanged.</i> Requires the Permittee to comply with the identified performance criteria for the wet ESP (ID No. C005) which controls the PM emissions from the flash tube dryers (ID Nos. EU05, EU06, and EU07).
5.2.12	<i>New.</i> Pursuant to 40 CFR 60.4209(a), requires the Permittee to operate a non-resettable hour meter on the emergency generator engine (ID No. LC6).
5.2.13	<i>New.</i> Pursuant to 40 CFR 63.6625(f), requires the Permittee to operate a non-resettable hour meter on the emergency fire pump engine (ID No. L6A).
5.2.14	<i>New.</i> Pursuant to 40 CFR 63.6625(e), requires the Permittee to operate the emergency fire pump engine (ID No. L6A) in a manner consistent with the manufacturer's emission-related written instructions or develop a maintenance plan.



## VI. 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 information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the 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.

### B. Specific Record Keeping and Reporting Requirements

Condition No.	Description
6.1.7.a.i	<i>Unchanged.</i> Pursuant to 40 CFR 60.49b(h)(3), defines as excess emissions any visible emissions recorded by the COMS installed on the fluidized bed energy system stack that exceeds 20 percent.
6.1.7.b.i	<i>Unchanged.</i> Defines as an exceedance any 30-day rolling average NO <sub>x</sub> emission rate measured by the CERMS installed on the fluidized bed energy system that exceeds 50.0 lb/hr.
6.1.7.b.ii	<i>Unchanged.</i> Defines as an exceedance any rolling 12-month total of VOC emissions from the TLC painting and finishing operations that exceeds 7.2 tons.
6.1.7.b.iii	<i>Unchanged.</i> Defines as an exceedance any use of a coating, thinner, or cleaning material at the TLC painting and finishing operations that does not meet the emission limits in Condition No. 3.3.15.
6.1.7.b.iv	<i>New.</i> Defines as an exceedance any 12-month rolling period during which the emergency generator engine is operated for more than 100 hours.
6.1.7.b.v	<i>New.</i> Defines as an exceedance any 12-month rolling period during which the emergency fire pump engine is operated for more than 100 hours.
6.1.7.c.i	<i>Unchanged.</i> Defines as an excursion any 3-hr period during which the average total secondary power of the ESP is less than 5.04 kW.
6.1.7.c.ii	<i>Unchanged.</i> Defines as an excursion any 3-hr period during which the average total secondary power of the wet ESP is less than 15.8 kW or 70 percent of the value determined during the performance test required in Condition No. 4.2.6.
6.1.7.c.iii	<i>Unchanged.</i> Defines as an excursion any 12-hour period during which the average of the inlet or the outlet temperature of the wet ESP exceeds 150 °F.

Condition No.	Description
6.1.7.c.iv	<i>Unchanged.</i> Defines as an excursion any 3-hr block average scrubbant flow rate of the packed tower scrubber that is less than 400 gallons per minute (gpm) or is outside the acceptable scrubbant flow rate range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.v	<i>Modified.</i> Defines as an excursion any 3-hr block average scrubbant pH of the packed tower scrubber that is less than 6 or is outside the acceptable scrubbant pH range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.vi	<i>Modified.</i> Defines as an excursion any 3-hr block average pressure drop across the packed tower scrubber that is outside the acceptable pressure drop range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.vii	<i>Unchanged.</i> Defines as an excursion any 3-hr block average scrubbant flow rate of the bioscrubber that is outside the acceptable scrubbant flow rate range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.viii	<i>Unchanged.</i> Defines as an excursion any 3-hr block average aeration tank temperature that is outside the acceptable temperature range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.ix	<i>Unchanged.</i> Defines as an excursion any 3-hr block average scrubbant pH at the aeration tank of the bioscrubber that is outside the acceptable scrubbant pH range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.x	<i>Unchanged.</i> Defines as an excursion any 3-hr period during which the fluidized bed energy system's average combustion temperature is less than 1400 °F.
6.1.7.c.xi	<i>Unchanged.</i> Defines as an excursion any weekly dissolved oxygen content of the bioscrubber aeration tank which is outside the acceptable range established during the performance test required by Condition Nos. 4.2.3.d and 4.2.4.
6.1.7.c.xii	<i>Unchanged.</i> Defines as an excursion any weekly aeration tank water sample dosing test that does not result in a decrease in the dissolved oxygen content in the water sample.
6.1.7.c.xiii	<i>Unchanged.</i> Defines as an excursion any visible emissions from the bag filters (ID Nos. C001, C003, C008 through C021, C026, and TC01 through TC03) which occurs for two consecutive determinations.
6.1.7.c.xiv	<i>Unchanged.</i> Defines as an excursion any calendar week during which the reject relay system operates for more than 7 hours.
6.1.7.c.xv	<i>Unchanged.</i> Defines as an excursion any time fuel containing more than 2.5 percent sulfur by weight is fired in the fluidized bed energy system or the wax plant boiler.

Condition No.	Description
6.1.7.c.xvi	<i>Unchanged.</i> Defines as an excursion any failure to collect and keep appropriate records as required by Condition Nos. 6.1.5 and 6.2.20 through 6.2.25 per 40 CFR 63, Subpart QQQQ.
6.1.7.c.xvii	<i>Unchanged.</i> Defines as an excursion any recorded bypass period determined in accordance with Condition No. 5.2.2.1 that is more than 1 hour.
6.2.1	<i>Unchanged.</i> Requires the Permittee to maintain a record of the wood chips dry weight per hour processed in the flash tube dryers.
6.2.2	<i>Unchanged.</i> Requires the Permittee to maintain a record of the maintenance performed on the air pollution control equipment.
6.2.3	<i>Unchanged.</i> Requires the Permittee to record, weekly, the hours of operation of the reject relay system.
6.2.4	<i>Unchanged.</i> Requires the Permittee to daily calculate and record from the CERMS on the fluidized bed energy system the average hourly NO <sub>x</sub> emission rate on a 30-day rolling basis.
6.2.5	<i>Unchanged.</i> Requires the Permittee to keep a record of the VOC coating material usage and the VOC content of all materials used in the TLC painting and finishing operations and to calculate the monthly and the 12-month consecutive period VOC emissions.
6.2.6	<i>Modified.</i> Requires the Permittee to maintain daily records of the hour of operation of the TLC sawing and moulding lines, the TLC painting and finishing operations, and the finger-jointing line operation.
6.2.7	<i>Modified.</i> Requires the Permittee to calculate monthly the PM emission rate for each baghouse using the indicated equation.
6.2.8	<i>Modified.</i> Requires the Permittee to use the monthly PM emission rate calculated in Condition No. 6.2.7 to calculate the 12-month consecutive period PM emission rate for TC01 through TC03 and to notify the Division if the threshold in Condition No. 3.2.17 is exceeded.
6.2.9	<i>Unchanged.</i> Pursuant to 40 CFR 60.49b(d), requires the Permittee to maintain daily records of the amount of each fuel combusted in the fluidized bed energy system and calculate the annual capacity factor.
6.2.10	<i>Unchanged.</i> Pursuant to 40 CFR 63.2270(d) and 40 CFR 63.2271(a), requires the Permittee to use the CPMS to determine, record, and maintain records of the parameters indicated therein.
6.2.11	<i>Unchanged.</i> Requires the Permittee to monitor and collect data required by Condition Nos. 5.2.2.d through i and 6.2.10 as indicated therein.
6.2.12	<i>Unchanged.</i> Pursuant to 40 CFR 63.2280(g), requires the Permittee to notify the Director within 30 days before any of the indicated actions is taken.

Condition No.	Description
6.2.13	<i>Unchanged.</i> Pursuant to 40 CFR 63.2281(a) and 40 CFR 63.2281(b)(5), requires the Permittee to submit a semiannual compliance report that contains the indicated records.
6.2.14	<i>Unchanged.</i> Pursuant to 40 CFR 63.2281(g), requires the Permittee to report all deviations.
6.2.15	<i>Unchanged.</i> Pursuant to 40 CFR 63.2281(a), requires the Permittee to submit a startup, shutdown, and malfunction plan (SSMP) report if a startup, shutdown, or malfunction is inconsistent with the SSMP specified in Condition No. 3.3.11.
6.2.16	<i>Unchanged</i> Pursuant to 40 CFR 63.2282(a), requires the Permittee to keep the indicated records.
6.2.17	<i>Unchanged.</i> Pursuant to 40 CFR 63.2282(b), requires the Permittee to maintain records required by Condition Nos. 6.2.10 through 6.2.13.
6.2.18	<i>Unchanged.</i> Pursuant to 40 CFR 63.2283, requires the Permittee to maintain records specified in Condition Nos. 6.2.10 through 6.2.13 and 6.2.15 through 6.2.17 as stated therein.
6.2.19	<i>Unchanged.</i> Pursuant to 40 CFR 63.4720(a), requires the Permittee to submit a semiannual compliance report that contains the indicated records for the painting and finishing operations.
6.2.20	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(b), the Permittee is required to maintain the indicated formulation data and other such data for the painting and finishing operations.
6.2.21	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(c)(1), the Permittee is required to maintain a record of the painting operations that each compliance option was used and the beginning and ending times for the compliance option.
6.2.22	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(c)(2), the Permittee is required to maintain a record of the calculation of the organic HAP content for each coating used in the painting and finishing operations using the indicated equation.
6.2.23	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(d), the Permittee is required to maintain a record of the name and volume of each coating, thinner and cleaning material used during each compliance option for the painting and finishing operations.
6.2.24	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(e), the Permittee is required to maintain a record of the mass fraction of organic HAP in each coating, thinner, and cleaning materials used during each compliance period for the painting and finishing operations.
6.2.25	<i>Unchanged.</i> Pursuant to 40 CFR 63.4730(f), the Permittee is required to maintain a record of the density and volume fraction of coating solids for each coating used during each compliance period for the painting and finishing operations.

Condition No.	Description
6.2.26	<i>New.</i> Pursuant to 40 CFR 63.6655(f), requires the Permittee to maintain records of the hours of operation of the emergency fire pump engine.
6.2.27	<i>New.</i> Pursuant to 40 CFR 63.7543(e), requires the Permittee to submit a notification of compliance status report which contains the information specified therein for the wax plant boiler.
6.2.28	<i>New.</i> Pursuant to 40 CFR 63.7550(b), indicates that the Permittee may submit a 5-year compliance report, as applicable, in place of the semiannual report as stated therein for the wax plant boiler.
6.2.29	<i>New.</i> Pursuant to 40 CFR 63.7550(c), requires the Permittee to submit a compliance report containing the information indicated therein for the wax plant boiler.
6.2.30	<i>New.</i> Pursuant to 40 CFR 63.7555(a), requires the Permittee to keep the records indicated therein for the wax plant boiler.

**VII. Specific Requirements**

A. Operational Flexibility

A. Operational Flexibility - None applicable

B. Alternative Requirements – None applicable

C. Insignificant Activities

Refer to <http://gatv.georgiaair.org/GATV/default.asp> for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

D. Temporary Sources - None

E. Short-Term Activities - None

F. Compliance Schedule/Progress Reports - None

H. Acid Rain Requirements - None

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V permit. The facility operates equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

J. Pollution Prevention - None

K. Specific Conditions - None

**VIII. General Provisions**

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

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

**Addendum to Narrative**