Facility Name: **Varn Wood Products, LLC**
City: Hoboken
County: Brantley
AIRS #: 04-13-0250001

Application #: TV- 40703
Date Application Received: March 3, 2016
Permit No: 2421-025-0001-V-04-0

Program	Review Engineers	Review Managers
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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: Varn Wood Products, LLC

2. Parent/Holding Company Name

   Varn Wood Products, LLC

3. Previous and/or Other Name(s)

   Varn Wood Products Company

4. Facility Location

   107 N. Brantley Street
   Hoboken, Georgia 31542

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

   The facility is located in an attainment area.

B. Site Determination

Per the narrative associated with Permit Number 2421-025-001-V-03-0, Varn Wood Products, LLC (AIRS No. 04-13-025-00001) and Varn Wood Preserving Company (a facility that would not need a permit by itself) are one 40 CFR 70 source because they are under common control, located on contiguous and/or adjacent property, and part of the same industrial grouping (i.e., they have the same first 2-digit SIC code). They are both owned and managed by Varn Wood Products, LLC Varn Wood Products, LLC is located at 107 N. Brantley Street, Hoboken, Georgia 31542. Varn Wood Preserving Company is located at 112 N. Brantley Street, Hoboken, Georgia 31542 (across Highway 15 from Varn Wood Products, LLC). Varn Wood Products, LLC produces lumber (SIC code 2421) while Varn Wood Preserving Company treats the wood with preservatives (SIC code 2491); therefore, they share the same first 2-digit SIC code. Varn Wood Products, LLC and Varn Wood Preserving Company are therefore one Title V major source because the combined potential emissions of at least one Title V criteria pollutant exceed 100 tons per year (tpy). In this case, volatile organic compounds (VOC), carbon monoxide (CO), and particulate matter (PM/PM10) emissions each exceed 100 tpy. Both facilities have been permitted under the name of Varn Wood Products, LLC.

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
2421-025-0001-V-03-0	September 8, 2011	Renewal Title V Permit
2421-025-0001-V-03-1	July 31, 2012	Significant modification with construction to add a wood pellet plant.
2421-025-0001-V-03-2	July 26, 2013	502(b)10 Modification to reskin Drying Kiln K01 and change existing direct fired heating system to negative system.
2421-025-0001-V-03-3	December 10, 2013	Minor Modification with construction to delete initial performance test condition 4.2.1 and remove testing of HAPs from periodic performance test condition 4.2.5.
Off Permit Change	January 4, 2016	Off Permit Change to reduce the stack height of the Drum Dryer (DD1), multiclone exhaust stack (CS05) from 80 feet to 50 feet above ground level to address concerns of neighbors regarding visible emissions of water vapor plume from the stack.
2421-025-0001-V-03-4	April 4, 2017	Minor Modification with construction to construct and operate a new silo with a cyclone C07.

D. Process Description

1. SIC Codes(s)

2421

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)

Softwood Lumber

3. Overall Facility Process Description

Per Application Number 40703, the facility consists of three related but separate processes: a softwood lumber mill, a lumber preserving operation and a wood pellet plant. The softwood lumber mill consists of a sawmill (Source Code S01), two direct-fired drying kilns (Source Codes K01 and K02) and planer mill (Source Code P01). Planer mill particulate emissions are controlled by a cyclone (Air Pollution Control Device Source Code C02). Wood waste (saw dust, chips and trim ends) is hogged in a Hammer Mill (Source Code H01) controlled by cyclone (Air Pollution Control Device Source Code C01) or Wood Hog (Source Code H02) controlled by a cyclone (Air Pollution Control Device Source Code C03). Wood waste is used as fuel in Kilns K01 and K02, used as raw material at the pellet plant or sold to customers.

The lumber preserving operation consists of a single 50-foot by 6-foot cylinder for pressure treating dried lumber with various preservatives. The cylinder is an Insignificant Activity based upon modeled potential emissions.

The wood pellet plant consists of a pre-grind Hammermill (Source Code PH1), a triple-pass drum dryer (Source Code DD1) with a 40 million British Thermal Units per hour (10^6 Btu/hr) wood burner (Source Code WB1), controlled by a high efficiency multiclone (Air Pollution Control Device Source Code C05), a Hammermill (Source Code HM2), controlled by a baghouse (Air Pollution Control Device Source Code BH1), three pellet mills (Source Codes PM1, PM2 and PM3), a pellet cooler (Source Code PC1), controlled by a high efficiency cyclone (Air Pollution Control Device Source Code C06), and finished product handling, storage and loadout (Source Codes VS, PS and TLO).

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Per the narrative associated with Permit Number 2421-025-0001-V-03-4, the facility is located in an attainment area. It is not one of the 28 named source categories in the prevention of significant deterioration (PSD) regulations. Without any operating/emission limit, the facility is potentially a major source under PSD/NSR regulations because potential-to-emit (PTE) for volatile organic compounds (VOC) is greater than 250 tons per year.

In 2012 (Permit Number 2421-025-0001-V-03-1), the facility added a pellet mill and became major for VOC under the PSD rules. The facility avoided a new source review by limiting potential VOC emissions from addition of the pellet mill to less than 250 tpy since the facility was a PSD minor source prior to addition of the pellet mill.

In July 2013 (Permit Number 2421-025-0001-V-03-2), drying kiln K01 was reskinned. The facility avoided a new source review by keeping the increase in potential emissions of VOC to below the PSD significance threshold of 40 tons per year by limiting the throughput through Kiln K01 to 49.4 million board feet per year.

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_{10}	Yes	✓		
$PM_{2.5}$	Yes			✓
SO_2	Yes	✓		
VOC	Yes	✓		
NO_x	Yes	✓		
CO	Yes	✓		
TRS	no			
H_2S	no			
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

3. MACT Standards

Not Applicable.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	N
Program Code 8 – Part 61 NESHAP	N
Program Code 9 - NSPS	N
Program Code M – Part 63 NESHAP	N
Program Code V – Title V	Y

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 did not identify any non-compliance issues.

D. Permit Conditions

Not Applicable.

III. Regulated Equipment Requirements

A. 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
LUMBER MILL					
K01	Drying Kiln No. 1	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i) 391-3-1-.02(2)(g)2.	3.2.1, 3.2.2, 3.4.1, 3.4.2, 3.4.4, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
K02	Drying Kiln No. 2	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i) 391-3-1-.02(2)(g)2.	3.2.1, 3.4.1, 3.4.2, 3.4.4, 6.2.1, 6.2.2, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
S01	Sawmill	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(ii)	3.4.1, 3.4.3, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
P01	Planer Mill	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.4.1, 3.4.2, 5.2.1, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C02	Cyclone
H01	Hammer Mill	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.4.1, 3.4.2, 5.2.1, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C01 C07	Cyclone Cyclone
H02	Wood Hog	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	3.4.1, 3.4.2, 5.2.1, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C03	Cyclone
PELLET MILL					
PH1	Pre-Grind Hammermill	391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.2, 3.4.5, 3.4.6, 5.2.8, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
WB1	Wood Burner – 40 MMBtu/hr Suspension Direct-Fired Furnace	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.4.1, 3.4.2, 3.4.4, 4.2.1, 4.2.2, 5.2.1, 5.2.2, 5.2.4, 5.2.8, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C05	High- Efficiency Multiclone
DD1	Triple-Pass rotary drum dryer with 15 ODT/hr capacity	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 5.2.2, 5.2.4, 5.2.5, 5.2.6, 5.2.7, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C05 WB1	High- Efficiency Multiclone Wood Burner (50% recycle)
HM2	Hammermill with 15 ODT/hr capacity	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 4.2.1, 5.2.2, 5.2.3, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	BH1	Baghouse
PM1, PM2 and PM3	Pellet Mills rated at 5 ODT/hr each	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.2, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
PC1	Pellet Cooler with 15 ODT/hr capacity	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.1, 4.2.1, 4.2.2,5.2.1, 5.2.2, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	C06	High -Efficiency Cyclone

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
VS	Vibrating Screen	391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.2, 3.4.5, 3.4.6, 5.2.8, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
PS	Pellet Silo	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1,3.4.2, 3.4.5, 3.4.6, 5.2.8, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA
TLO	Truck Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.2, 3.4.5, 3.4.6, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10	None	NA

B. Equipment & Rule Applicability

Emission and Operating Caps:

The annual Kiln K01 and Kiln K02 throughput cap, specified in Condition 3.2.1, is 120 million board feet per year (Mbf/yr) to avoid applicability of PSD and 40 CFR 63, Subpart DDDD - "NESHAP for Plywood and Composite Wood Products".

Kiln K01 production was limited to 49.4 million board feet per year in order to avoid a new source review of the proposed modification under the PSD rules.

Rules and Regulations Assessment:

Georgia Rule for Air Quality Control (Georgia Rule) 391-3-1-.02(2)(b) Emission Limitations and Standards Visible Emissions
This regulation limits opacity to less than forty (40) percent, except as may be provided in other more restrictive or specific rules or subdivisions of Georgia Rule 391-3-1-.02(2). This limitation applies to direct sources of emissions such as stationary structures, equipment, machinery, stacks, flues, pipes, exhausts, vents, tubes, chimneys or similar structures. This regulation is applicable to from the drying kilns with Source Codes K01 and K02, the sawmill with Source Code S01, the planer mill with Source Code P01, the hammer mill with Source Code H01, Wood Hog with Source Code H02, the Wood Burner (Source Code WB1)/Dryer Drum (Source Code DD1), Hammer mills (Source Code HM2) and the Pellet Cooler (Source Code PC1).

Georgia Rule 391-3-1-.02(2)(e) – Emission Limitations and Standards – Particulate Emission from Manufacturing Processes
Equipment as specified in Table 3.1 are subject to Georgia Rule 391-3-1-.02(2)(e)1(i) because it is a source of particulate emissions and will be put into operation or extensively altered after July 2, 1968 Georgia Rule 391-3-1-.02(2)(e)1(i) limits PM emissions based on the following equations:

$E = 4.1P^{0.67}$; for process input weight rate up to and including 30 tons per hour.

$E = 55P^{0.11} - 40$; for process input weight rate greater than 30 tons per hour.

In the equation, E is the emission rate in pounds per hour and P is the process input weight rate in tons per hour. This regulation is applicable to the drying kilns with Source Codes K01 and K02, the planer mill with Source Code P01, the hammer mill with Source Code H01, the wood hog with Source Code H02, Drum Dryer/Wood Burner (Source Code DD1/WB1), the Hammermills (Source Codes PH1 and HM2), the Pellet Mills (Source Codes PM1, PM2 and PM3), the Pellet Cooler (Source Code PC1), the Pellet Silo (Source Code PS), the Vibrating Screen (Source Code VS), and the Truck Loadout (Source Code TLO).

For equipment in operation or under construction contract on or before July 2, 1968, Georgia Rule 391-3-1-.02(2)(e)1(i) limits PM emissions based on the following equation:

$$E = 4.1P^{0.67}$$

The sawmill with Source Code S01 is subject to this regulation.

Georgia Rule 391-3-1-.02(2)(g) – Sulfur Dioxide
This regulation regulates fuel sulfur content, by weight. All fuel burning sources having a heat input below 100 million BTUs of heat input per hour shall not burn fuel containing more than 2.5 percent sulfur, by weight. This regulation is applicable to the in the drying kilns with Source Codes K01 and K02 and Wood Burner (Source Code WB1).

Georgia Rule 391-3-1-.02(2)(n) – Fugitive Dust
This regulation requires the facility to prevent fugitive dust from becoming airborne from any operation, process, handling, and transportation or storage facility. The opacity from any fugitive dust source is also limited to twenty percent. This regulation is applicable to fugitive dust sources at the facility including, but are not limited to, the following Source Codes: PH1, PM1 to PM3, VS, PS, and TLO.

C. Permit Conditions

Table 3.1 was updated to add Pre-Grind Hammermill PH1, Wood Burner Suspension Direct-Fired Furnace WB1, Triple-Pass rotary drum dryer DD1, Hammermill HM2, Pellet Mills PM1, PM2 and PM3, Pellet Cooler PC1, Vibrating Screen VS, Pellet Silo PS, and Truck Loadout TLO included in Table 3.1.1 of Permit Number 2421-025-0001-V-03-1. Per Permit Number 2421-025-0001-V-03-4, a new fuel (planer mill shaving) silo with a new cyclone (C07) resulted in the modification of Table 3.1. The overs chipper and the cyclone C04 were removed from the facility and have been removed from the emission source Table 3.1.

The following table summarizes applicable emission limits included in this permit.

Summary of Permit Conditions in Section 3.0 of Permit Number 2421-025-0001-V-04-0

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
Section 3.2 – Equipment Emission Caps and Operating Limits				
3.2.1	3.2.1	No	NA	This condition limits the board feet of wood products

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
				from the drying kilns K01 and K02 to avoid being a major source under the PSD regulations and the applicability of 40 CFR 63, Subpart DDDD.
3.2.2	-	3.2.2	Added per Permit Number 2421-025-0001-V-03-2	This condition limits the production of kiln K01 to 49.4 million board feet per year in order to avoid a new source review under the PSD rules.
3.2.3		New Condition	Added in Permit Number 2421-025-0001-V-04-0	This condition sets the wood burner operating temperature and also the recycle ratio to assure the VOC emissions are destroyed in the wood burner.
Section 3.3 – Equipment Federal Rule Standards				
Not Applicable				
Section 3.4 – Equipment SIP Rule Standards				
3.4.1	3.4.1	Modified	Modified per Permit Number 2421-025-0001-V-03-4 Modified per Permit Number 2421-025-0001-V-04-0	This condition limits the opacity per Georgia Rule (b) from the drying kilns K01 and K02, the sawmill S01, the planer mill P01, the hammer mill H01 and the Wood Hog H02. The condition was modified to correct the source ID numbers for the planer mill, hammermill and the wood hog and remove the Overs chipper OC1 from the condition. The condition was also modified as part of this renewal to add the Drum Dryer/WoodBurner DD1/WB1), the Hammermill (HM2) and the Pellet Cooler (PC1).
3.4.2	3.4.1	Modified	Modified per Permit Number 2421-025-0001-V-03-4 Modified per Permit Number 2421-025-0001-V-04-0	This condition specifies particulate matter emission limits to demonstrate compliance with Georgia Rule (e) for the drying kilns K01 and K02, the planer mill P01, the hammer mill H01 and the Wood Hog H02, which were installed after 1965. The condition was modified to correct the source ID numbers for the planer mill, hammermill and the wood hog and remove the Overs chipper OC1 from the condition. The condition was also modified as part of this renewal to add

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
				the Drum Dryer/Wood Burner (DD1/WB1) (C05), the Hammermills (PH1 and HM2), the Pellet Mills (PM1, PM2 and PM3), the Pellet cooler (PC1), the Pellet Silo (PS), the Vibrating Screen (VS), and the Truck Loadout (TLO).
3.4.3	3.4.3	No	NA	This condition specifies particulate matter emission limits to demonstrate compliance with Georgia Rule (e) for the sawmill S01 which was installed before 1965.
3.4.4	3.4.4	Modified	Modified per Permit Number 2421-025-0001-V-04-0	This condition specifies fuel sulfur content per Georgia Rule 391-3-1-.02(2)(g) for the drying kilns K01 and K02. The condition was also modified as part of this renewal to add the wood fuel burned in the Wood Burner (WB1).
-	-	3.4.5	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit Number 2421-025-0001-V-04-0	This condition limited allowable PM emissions from the Drum Dryer/Wood Burner (DD1/WB1) (C05), the Hammermills (PH1 and HM2), the Pellet Mills (PM1, PM2 and PM3), the Pellet cooler (PC1), the Pellet Silo (PS), the Vibrating Screen (VS), and the Truck Loadout (TLO) per Georgia Rule (e). The requirements of this condition are now in Permit Condition 3.4.2.
-	-	3.4.6	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit Number 2421-025-0001-V-04-0	This condition limits opacity of visible emissions from all stacks at the lumber mill and pellet mill including the Drum Dryer/WoodBurner DD1/WB1), the Hammermill (HM2) and the Pellet Cooler (PC1) to 40% per Georgia Rule (b). The requirements of this condition are now in Permit Condition 3.4.1.
-	-	3.4.7	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit Number 2421-025-0001-V-04-0	This condition limits the sulfur content of the wood fuel burned in the Wood Burner (WB1) to 2.5 wt.% per Georgia Rule (g).

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
3.4.5	-	3.4.8	Added per Permit Number 2421-025-0001-V-03-1	This condition requires measures be taken to prevent and minimize fugitive dust from the pellet mill per Georgia Rule (n).
3.4.6	-	3.4.9	Added per Permit Number 2421-025-0001-V-03-1	This condition limits the opacity of fugitive emissions from the pellet mill to 20% per Georgia Rule (n). This limit applies to the pre-grind Hammermill (PH1), the pellet mills (PM1, PM2 and PM3), the pellet cooler (PC1), the pellet silo (PS), the vibrating screen (VS) and the truck load out (TLO) at the pellet mill.
Section 3.5 – Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit				
Not Applicable				

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.

Permit Condition 4.1.3 has been modified since the issuance of Permit Number 2421-025-0001-V-03-0 to update it with applicable testing conditions. Permit Condition 4.1.3.g through 4.1.3.j were added per Permit Number 2421-025-0001-V-03-1 to list the test methods for the VOC and HAPs tests (Formaldehyde, Acetaldehyde and Methanol) to be used in testing the Hammermill and Pellet Cooler emissions. Permit Condition 4.1.3.k and 4.1.3.l were added per Permit Number 2421-025-0001-V-03-4.

Permit Number 2421-025-0001-V-03-2 added Permit Condition 4.1.5 as a standard condition in all Title V permits and requires electronic reporting of source test results for EPA. This condition has been updated to reflect current standard condition wording as part of this renewal.

B. Specific Testing Requirements

The facility is required perform periodic testing of VOC emissions from the Hammermill and Pellet Cooler exhaust once every four years.

The following table summarizes applicable testing requirements included in this permit.

Summary of Permit Conditions in Section 4.0 of Permit Number 2421-025-0001-V-04-0

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
4.2.1	-	4.2.1	Added per Permit Number 2421-025-0001-V-03-1 Modified per Permit Number 2421-025-0001-V-04-0	This condition requires source testing the Hammermill, Pellet cooler and the Dryer Drum exhaust (DD1) for VOC, methanol, formaldehyde, and acetaldehyde emissions in order to determine the emission rate in lb/hr and lb/ODT (oven dry tons). This condition was modified as part of this renewal and requires retesting every 24 months.
-	-	4.2.2	Added per Permit Number 2421-025-0001-V-03-1	This condition requires collecting the temperature data from the Wood Burner

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
			Deleted per Permit Number 2421-025-0001-V-04-0	exit and determining the minimum operating temperature for the Wood Burner. Until testing is performed the burner exit temperature shall be 1800 ^{o}F or higher. The facility has met initial testing requirements. Therefore, this condition has been deleted as part of this renewal.
-	-	4.2.3	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit Number 2421-025-0001-V-04-0	This condition requires monitoring the pressure drop across the multiclone (C05) during the source tests required by Condition 4.2.1 and recording the pressure drop at least once during each 15 minutes of testing. It also requires determination of the average pressure drop during testing. The facility has met initial testing requirements. Therefore, this condition has been deleted as part of this renewal.
-	-	4.2.4	Added per Permit Number 2421-025-0001-V-03-2 Deleted per Permit Number 2421-025-0001-V-03-3	This condition required requires initial testing of VOC and HAPs (Formaldehyde, Acetaldehyde and Methanol) emissions from the Hammermill and Pellet Cooler exhaust. The facility tested in April 2013 had met the initial testing requirement. Therefore, this condition was deleted.
-		4.2.5	Added per Permit Number 2421-025-0001-V-03-2 Modified per Permit Number 2421-025-0001-V-03-3 Deleted per Permit Number 2421-025-0001-V-04-0	This condition requires periodic testing of VOC and HAPs (Formaldehyde, Acetaldehyde and Methanol) emissions from the Hammermill and Pellet Cooler exhaust once every four years. It was modified to require periodic performance testing for VOC from the Hammermills, pellet press aspiration and pellet coolers downstream from the dryer once every four years, removing the HAPs emissions testing. This condition was also modified to add operating conditions during performance testing specified in now deleted Condition 4.2.4. This condition was

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
				deleted as part of this renewal as it is addressed by Permit Condition 4.2.1
-	-	4.2.6	Added per Permit Number 2421-025-0001-V-03-2 Deleted per Permit Numbers 2421-025-0001-V-03-3 and 2421-025-0001-V-03-4	This condition required continuous monitoring of combustion zone temperatures and oxygen levels during the performance tests. This condition was deleted since initial performance test required by deleted Condition 4.2.4 was deleted in December 2013.
4.2.2	-	-	New	This condition prohibits the facility from using any monitor not used in day to day operation prior to testing.

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

The facility must perform cyclone checks to all cyclones at the facility. Per the narrative associated with Permit Number 2421-025-0001-V-03-1, the facility must install, calibrate, maintain and operate a pressure drop recorder to measure the pressure drop across the multiclones and the Hammermill (Source Code HM2) baghouse. The pressure drop must be recorded at least once each operating day in a logbook and have it available for inspection or submittal to Division. The facility must develop and implement a preventive maintenance (PM) program for the Hammermill baghouse (Air Pollution Control Source Code BH1). In addition, the facility must continuously measure and record the temperature at the exit of the wood burner (WB1) and determine three-hour average of the burner temperature.

C. Compliance Assurance Monitoring (CAM)

Per the narrative associated with Permit Number 2421-025-0001-V-03-1, the Dryer Drum is subject to CAM for PM, since pre-controlled PM emissions from the Dryer is in excess of 100 tpy and PM emissions from Dryer is limited by Georgia Rule (e). The CAM indicator 1 is the multiclone (Air Pollution Control Source Code CO5), which is evaluated at least once for each week of operation per PM program. The CAM indicator 2 is the pressure drop across the multiclone, which is required to be monitored and recorded at least once each day.

Per the narrative associated with Permit Number 2421-025-0001-V-03-2, approximately 50% of the drum dryer exhaust air will be recycled to WB1 both for heat recovery and to reduce VOC and HAP emissions from the dryer. Per the Division's determination for similar sources, because WB1 is acting as a control device for the recycled air from the Dryer, CAM requirements have been added as part of this renewal.

The following table summarizes applicable monitoring requirements included in this permit.

Summary of Permit Conditions in Section 5.0 of Permit Number 2421-025-0001-V-04-0

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
5.2.1	5.2.1	Modified	Modified per Permit Number 2421-025-0001-V-04-0	This condition requires monitoring of cyclones C01 through C07, the planer mill

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
				P01, the hammer mill H01 and the Wood Hog H02. This condition was modified to extend the cyclone checks to all cyclones at the facility, correcting the source ID numbers for the planer mill, hammermill and the wood hog and removing the Overs chipper OC1 from the condition.
-	-	5.2.2	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit Number 2421-025-0001-V-03-4	This condition required visual inspection of the exterior of the multiclones at least once each week, and corrective actions if needed and recordkeeping of the results of each inspection in a logbook. This condition was deleted since it pertained to cyclone checks for the pellet mill cyclones C05 and C06 which are included in modified Condition 5.2.1
5.2.2	-	5.2.3	Added per Permit Number 2421-025-0001-V-03-1	This condition requires installation, calibration, maintenance and operation of a pressure drop recorder to measure the pressure drop across the multiclones and the Hammermill (HM2) baghouse. The pressure drop must be recorded at least once each operating day in a logbook and have it available for inspection or submittal to Division.
5.2.3	-	5.2.4	Added per Permit Number 2421-025-0001-V-03-1 Modified per Permit Number 2421-025-0001-V-04-0	The condition requires development and implementation of a preventive maintenance (PM) program for the Hammermill baghouse (BH1). This condition was modified to remove passed schedule requirements.
5.2.4	-	5.2.5	Added per Permit Number 2421-025-0001-V-03-1	This condition requires continuous measurement and recordkeeping of the temperature at the exit of the wood burner (WB1) and determination of the three-hour average of the burner temperature.
5.2.5	-	5.2.6	Added per Permit Number 2421-025-0001-V-03-1	This condition requires continuous measurement and recordkeeping of the temperature of the wood dryer

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
				and determination of the three-hour average of the burner temperature.
5.2.6	-	-	Added per Permit Number 2421-025-0001-V-04-0	This condition requires the facility to install the flowmeters in the dryer exhaust stack and the recycle duct and determine the three hour average recycle ratio.
5.2.7	-	-	Added per Permit Number 2421-025-0001-V-04-0	This requires a daily VE check of the hammermill baghouse
5.2.8	-	-	Added per Permit Number 2421-025-0001-V-04-0	This requires the facility to check for fugitive emissions daily and take corrective actions if VE exceed 10 percent.
5.2.9	-	5.2.8	Added per Permit Number 2421-025-0001-V-03-1	This condition lists the CAM indicator parameters for the Drum Dryer and wood burner.
5.2.10	-	5.2.7	Added per Permit Number 2421-025-0001-V-03-1 Modified per Permit Number 2421-025-0001-V-04-0	This is the CAM condition for PM emissions from the Drum Dryer (DD1). This condition was modified to add CAM applicability to the Wood Burner (WB1) for VOC emissions.
5.2.11	-	-	Added per Permit Number 2421-025-0001-V-03-1 Modified per Permit Number 2421-025-0001-V-04-0	This condition lists the CAM indicator parameters for the Wood Burner.

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.

Permit Condition 6.1.7 has been modified since the issuance of Permit Number 2421-025-0001-V-03-0 to update it with applicable reporting of excess emissions, exceedances, and excursions. Permit Condition 6.1.7.b was updated to include requirements of Permit Condition 6.1.8.b in Permit Number 2421-025-0001-V-03-2 which defines an exceedance for the total amount of wood products processed by the drying kiln K01. Permit Condition 6.1.7.c was updated to include the requirements of 6.1.7.c from Number 2421-025-0001-V-03-1 which added excursions of the cyclone and baghouse pressure drop readings, burner exit temperature reading and dryer drum visible emissions.

B. Specific Record Keeping and Reporting Requirements

The facility must maintain monthly records of the quantity of wood products processed in the drying kilns with Source Codes K01 and K02. The facility must then use these reports to determine and report the 12 consecutive month totals of wood products processed in the drying kilns K01 and K02 to determine compliance with applicable limits.

The following table summarizes applicable record keeping and reporting requirements included in this permit.

Summary of Permit Conditions in Section 6.0 of Permit Number 2421-025-0001-V-04-0

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
6.2.1	6.2.1	No	NA	This condition requires recordkeeping of wood products processed in the drying kilns K01 and K02.
-	6.2.2	No	Deleted in Permit Number 2421-025-0001-V-04-0	This condition requires submittal of a semiannual report of the monthly and 12 consecutive month totals of wood products processed in the drying kilns K01 and K02.
-	-	6.2.3	Added per Permit Number 2421-025-0001-V-03-1 Deleted per Permit	This condition required submittal of startup notification upon startup of the pellet plant within 15 days of the startup. This condition

Permit Condition in Permit Number 2421-025-0001-V-04-0	Permit Condition Number in Permit Number 2421-025-0001-V-03-0	Permit Condition Deleted, Modified or Added since issuance of Permit Number 2421-025-0001-V-03-0	Deleted Modified or Added	Explanation of Permit Condition
			Number 2421-025-0001-V-04-0	has been removed as part of this renewal as this schedule has passed.
-	-	6.2.4	Added per Permit Number 2421-025-0001-V-03-2 Combined in Condition 6.2.1	This condition requires recordkeeping of the monthly production from Kiln K01.
-	-	6.2.5	Added per Permit Number 2421-025-0001-V-03-2 Combined in Condition 6.2.1	This condition requires recordkeeping and reporting of the monthly production from Kiln K01 and a running total of 12 consecutive month production from Kiln K01 to demonstrate compliance with Condition 3.2.2.
6.2.2		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires recordkeeping of wood chips and wood pellet processed in the dryer, hammermills pellet cooler and pellet silos.
6.2.3		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires the calculation of monthly VOC emissions from dryer, hammermills, pellet cooler and pellet silos.
6.2.4		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires notification when the VOC emission exceeds 20.75 tons during any calendar month.
6.2.5		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires notification when the VOC emission exceeds 249 tons during any twelve consecutive month.
6.2.6		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires the calculation of monthly HAP emissions from dryer, hammermills, pellet cooler and pellet silos.
6.2.7		New	Added per Permit Number 2421-025-0001-V-04-0	This condition requires notification when the HAP emission exceeds 10 tons for individual HAP or 25 tons for total HAP during any twelve consecutive month.

VII. Specific Requirements

A. Operational Flexibility

Not Applicable. No requests for operational flexibility are associated with this application.

B. Alternative Requirements

Not Applicable. No requests for alternative requirements are associated with this application.

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

Not Applicable. No temporary sources are added as part of this application.

E. Short-Term Activities

Not Applicable. No short-term activities are added as part of this application.

F. Compliance Schedule/Progress Reports

Not Applicable. No compliance schedule/progress reports are added as part of this application.

G. Emissions Trading

Not Applicable. No emissions trading associated with this application.

H. Acid Rain Requirements

The facility is not subject to acid rain requirements.

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F is included in Permit No, 2421-025-0001-V-04-0. These Title VI requirements apply to all air conditioning and refrigeration units containing ozone-depleting substances regardless of the size of the unit or of the source. According to Application Number 40703, the facility does not have air conditioners or refrigeration equipment that contain such substances.

J. Pollution Prevention

Not Applicable. There are no pollution prevention provisions incorporated into this Title V permit.

K. Specific Conditions

Not Applicable. There are no pollution specific conditions incorporated into this Title V permit.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to 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

The 30-day public review started on May 31, 2017 and ended on June 30, 2017. Comments were received by the Division.

The Division received the following comments from Resolve Environmental Engineering, Inc. (Resolve) on behalf of Varn Wood Products, LLC (Varn) and from Environmental Integrity Project on behalf of Dogwood Alliance, Environmental Integrity Project, Partnership for Policy Integrity, Natural Resources Defense Council, and Our Children's Earth.

As a result of these comments Division has made extensive change to the draft permit and have decided to reissue the a new draft permit and allow the public to comment on the revised draft.

Varn Comment 1:

On behalf of Varn Wood Products, LLC (Varn), Resolve Environmental Engineering, Inc. (Resolve) is pleased to provide the following comment concerning draft Permit Condition 5.2.8 of Part 70 Operating Permit, No. 2421-025-0001-V-04-0, for the Varn facility at 107 N. Brantley Street in Hoboken, Georgia. We appreciate your consideration of this comment.

Draft Permit Condition 5.2.8 includes performance criteria for volatile organic compound (VOC) emissions from the Wood Burner WB1. WB1, a 40 million Btu per hour burner firing wood waste, serves two purposes. First, it provides hot air for drying of wood fiber in the triple-pass drum dryer (DD1). Second, it provides destruction of a portion of VOCs evaporated from the wood fiber in DD1. Approximately 50% of the drum dryer exhaust air is recycled as combustion air to WB1 both for heat recovery and to reduce VOC emissions from the dryer. Therefore, WB1 serves as a control device for DD1 VOC emissions.

The WB1 primary combustion chamber has a retention time of over two seconds for destruction of VOCs in the recycle flow. VOC destruction has been demonstrated at various operating temperatures, including 1800 °F (testing 6/14-16/2013) and 1,665 °F (testing7/24/2014). These tests and EPD guidance[1] establish VOC emission factors for WB1/DD1/C05 at various WB1 combustion chamber temperatures.

The Compliance Assurance Monitoring (CAM) requirements of 40 CFR 64.6(c)(1)(iii) are cited as the regulatory basis for the draft condition. As part of the Title V renewal application, the facility submitted a CAM Plan for particulate matter emissions from DD1. The CAM Plan did not address DD1 VOC emissions. Therefore, the basis for the performance criteria cited in draft Permit Condition 5.2.8 is unknown.

A CAM Plan for VOC emissions from DD1 has been prepared and is attached to these comments. Based upon the process description and VOC emission testing, the only relevant monitoring parameter for determining VOC destruction efficiency of WB1 is combustion chamber temperature. Oxygen is not a relevant indicator for VOC destruction efficiency in a wood burner. Since WB1 is functioning as oxidizer, Resolve suggests CAM requirements typically used for oxidizers be applied here. In accordance with the CAM Plan, Resolve suggests Condition 5.2.8 be revised as follows:

Performance Criteria	**Indicator No. 1** **WB1 Combustion Chamber Temperature**
A. Data Representativeness	Thermocouple in combustion chamber
B. Verification of Operational Status	Hourly by process operator
C. QA/QC Practices and Criteria	Replace thermocouple annually and maintain calibration documentation
D. Monitoring Frequency	Continuous
E. Data Collection Procedures	Logged by computer
F. Averaging Period	3 hour

Division Response to Varn Comment 1:

The Division will modify Permit Condition 5.2.8 as follows and have added airflow measurements as another parameter to assure VOC emissions are recycled and destructed in the wood burner.

5.2.8 The Permittee shall comply with the performance criteria listed in the table below for the VOC emissions from the Wood Burner (Source Code WB1).
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	**Indicator No. 1** **Temperature**	**Indicator No. 2** **Air Flow**
A. Data Representativeness [64.3(b)(1)]	Thermocouple in wood burner exhaust	Flowmeter in the recycle duct to the burner and in the exhaust stack of the dryer cyclone.
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	Hourly by process operator	Hourly by process operator
C. QA/QC Practices and Criteria [64.3(b)(3)]	Replace thermocouple annually and maintain calibration documentation	Calibrate the flowmeter at frequency recommended by the manufacturer.
D. Monitoring Frequency [64.3(b)(4)]	Continuously	Continuous
E. Data Collection Procedures [64.3(b)(4)]	Data collected daily from computer and logged into check sheets	Data collected daily from computer and logged into check sheets
F. Averaging Period [64.3(b)(4)]	Rolling three hour averages	Rolling three hour averages

The Division received the following comments from Environmental Integrity Project on behalf of Dogwood Alliance, Environmental Integrity Project, Partnership for Policy Integrity, Natural Resources Defense Council, and Our Children's Earth.

Environmental Integrity Project Comment I.

I. The Draft Permit Fails to Assure the Facility's Compliance with Prevention of Significant Deterioration (PSD) Requirements.

A. Contrary to the Statement of Basis, the Draft Permit Lacks an Enforceable Limit on the Facility's Potential to Emit Volatile Organic Compounds (VOC) Sufficient to Avoid PSD Applicability.

The statement of basis accompanying this draft permit explains that Varn Wood Products avoided PSD control requirements when it constructed the pellet plant in 2012 by accepting an enforceable limit on the pellet plant's VOC emissions. However, we are unable to identify an enforceable limit in the draft permit that restricts the pellet plant's VOC potential to emit (PTE) to below the PSD applicability threshold of 250 tons per year (tpy). While Draft Permit Condition 3.2 contains two limits on the drying kilns designed for PSD avoidance, neither of these two limits apply to the pellet plant. In the absence of an enforceable limit restricting the pellet plant's VOC emissions to less than 250 tpy, the pellet plant must comply with PSD control requirements. Accordingly, to assure compliance with applicable Clean Air Act requirements, Georgia EPD must amend this draft permit either to include an enforceable VOC PTE limit or to require that the facility apply PSD control requirements to the pellet plant.

The only draft permit conditions that appear to be relevant to restricting the pellet plant's VOC PTE below 250 tpy are conditions pertaining to the combustion temperature of the wood burner. Specifically, Draft Permit Condition 5.2.4 requires that the facility continuously measure and record the temperature at the exit of the wood burner and determine the three-hour average. Another draft permit condition explains that any three-hour average that is "outside of the range" established pursuant to that permit condition constitutes an "[e]xcursion," which means "any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard." Draft Permit Condition 6.1.7. Neither the draft permit nor the draft permit's statement of basis indicate that monitoring the burner temperature is relevant to PSD avoidance. However, the statement of basis accompanying the 2012 Title V permit revision authorizing construction and operation of the pellet plant explained:

Approximately 50% of the drum dryer exhaust air will be recycled to [the burner] both for heat recovery and to reduce VOC and HAP emissions from the dryer. The [burner] primary combustion chamber will have a retention time of over two seconds at over 1,800 °F for efficient destruction of VOCs and HAPs in the recycle flow.

To the extent that Georgia EPD intends for these permit conditions to serve as an enforceable limit on the pellet plant's potential to emit VOC, they do not accomplish that goal. Most significantly, the draft permit does not actually require that Varn Wood Products operate the burner at the minimum temperature needed to attain adequate VOC destruction. Rather, Draft Permit Condition 6.1.7 explains that failure to achieve the minimum burner temperature is considered merely an "excursion," which is not itself a violation but instead "indicates" that emissions do not meet the "applicable emission limitation and standard." However, given the lack of a

VOC emission limit in the Draft Permit, there appears to be no enforceable emission limitation or standard for which a burner temperature "excursion" would indicate noncompliance. Indeed, Varn Wood Products disclosed in its February 27, 2017 semiannual Title V compliance report that "there were numerous excursions (46 events; 227 hours, 6.5% of operating time) for the Wood Burner (WB1) combustion chamber temperature." Likewise, Varn Wood Product's February 26, 2014 semiannual Title V compliance report disclosed that the burner had not achieved the minimum temperature 34.4% of operating time (equal to 1,393 hours). Nonetheless, the company asserted (apparently successfully) that the facility is not required to operate the wood burner at the minimum temperature needed to achieve the assumed VOC destruction efficiency and therefore, that the temperature "excursions" did not violate the facility's title V permit.

An operating restriction that is not enforceable cannot serve to limit a facility's PTE for purposes of determining PSD applicability. Rather, both federal and state regulations are clear that any operational limitation on the capacity of a facility to emit a pollutant can be treated as part of the source's design (and therefore used in calculating the facility's PTE) only if "the limitation or the effect it would have on emissions" is enforceable. In this case, neither the temperature limitation nor the effect that proper operation of the burner would have on pellet plant emissions is enforceable. Thus, Varn Wood Products cannot consider the emissions impact of partially recycling dryer exhaust back through the wood burner in calculating the pellet plant's PTE.

In addition to the fatal flaw of the minimum burner combustion chamber temperature not being enforceable, the draft permit's (apparent) approach to limiting VOC PTE also is flawed for the following reasons:

1) The draft permit does not specify the minimum burner combustion chamber temperature needed to attain VOC destruction. The initial 2012 permit authorizing construction of the pellet plant indicated that the minimum burner exit temperature shall be 1800 ˚F or greater.8 It appears that based on subsequent testing, Varn Wood Products concluded that the minimum temperature is instead 1,665 °F. However, the draft permit fails to identify a specific minimum temperature. For the facility to rely on the combustion efficiency of the burner in calculating its PTE, the minimum temperature at which the burner needs to operate must be included in the final Title V permit.

2) The draft permit and statement of basis fail to account for VOC emissions from units other than the dryer. When Varn Wood Products initially applied for a permit to construct and operate the pellet plant in 2011, it assumed that VOC would not be emitted from pellet plant units other than the dryer. After issuing the initial permit in 2012, Georgia EPD notified Varn Wood Products that testing at other similar plants revealed significant VOC emissions from the hammermill, pellet coolers, and storage and handling, and that consideration of emissions could cause the Varn Wood Products pellet plant to exceed the PSD major source applicability threshold. These additional VOC emissions must be accounted for in the facility's VOC PTE calculation. The draft permit fails to place a VOC emissions limit on the pellet plant, and likewise does not specify a methodology by which the Permittee must account for plant-wide VOC emissions.

3) The draft permit and statement of basis fail to account for higher VOC emissions that occur during startup, shutdown, maintenance, or malfunction, all of which must be considered in determining whether the facility's emissions exceed the 250 tpy PSD threshold.

4) The draft permit fails to specify the percentage of dryer gas exhaust that must be recycled through the dryer and to include monitoring to confirm that the assumed percentage is actually captured and

recycled. Significant variation in capture efficiencies (e.g., due to leaks) could result in substantially higher-than-assumed VOC emissions.

5) The draft permit fails to include monitoring to confirm that gases are held in the burner combustion chamber for the assumed retention time of greater than two seconds. (If this retention time is fundamental to the design of the unit and will never vary, monitoring would not be necessary, but if retention time can vary, some method of documenting that the unit is being operated in a manner that assures adequate VOC destruction must be included in the permit).

Though neither the current draft renewal Title V permit nor the initial 2012 Title V permit modification authorizing construction of the pellet plant establishes an enforceable plant-wide VOC emission limit, it appears that Varn Wood Products assumes that the 250 tpy PSD applicability threshold is the enforceable limit. Specifically, when Varn Wood Products reported "excursions" from the minimum burner combustion temperature, it explained that "[t]o assess the effect of these excursions, it was conservatively assumed that there is zero VOC destruction during all temperature excursion periods" and that it used Georgia's recommended uncontrolled emission factors for wood pellet dryers to calculate VOC emissions. Of course, if the operative enforceable limit is a plant-wide VOC emission limit, that limit must be included in the facility's title V permit, along with an appropriate methodology for calculating plant-wide VOC emissions. No such limit or emission calculation methodology appears in this draft permit.

B. To Legitimately Limit the Wood Pellet Plant's VOC PTE Below the PSD Applicability Threshold, the Permit Must Include Both an Emissions Limitation and an Enforceable Operational or Production Limitation.

Assuming that Varn Wood Products is correct that its wood pellet operation will not result in VOC emissions at or above the 250 tpy PSD applicability threshold, it should be possible to craft a legitimate PTE limit. As discussed below, however, a blanket emission limitation unaccompanied by any enforceable operational or production limitation (such as what Varn Wood Products appears to envision) would be insufficient to enable the plant to avoid PSD applicability. Rather, to legitimately restrict the wood pellet plant's VOC PTE, Varn Wood Products must accept both a plant-wide VOC emission limitation and an enforceable operational or production limitation.

In evaluating what is required to restrict a facility's PTE, it is important to consider that in deciding which sources to regulate under the PSD program, Congress chose to regulate not just those sources with actual emissions at or above the major source threshold, but also to regulate those sources with a "potential to emit" above the applicability threshold. Thus, the term "potential to emit" must mean something more than ensuring that a source's actual emissions do not exceed the applicability threshold. The seminal court case addressing what is needed to restrict a facility's PTE is *United States v. Louisiana-Pacific Corporation,* 682 F. Supp. 1122 (D.Colo. 1987) and 682 F. Supp. 1141 (D.Colo. 1988). In that case, Louisiana-Pacific argued that its PTE was limited by a blanket ton-per-year emission restriction set forth in its operating permit. The court rejected that claim, concluding: "Restrictions contained in state permits which limit specific types and amounts of actual emissions ('blanket' restrictions on emissions) are not properly considered in the determination of a source's potential to emit." *U.S. v. Louisiana-Pacific Corp.*, 682 F.Supp. 1141 (D.Colo. 1988).

Subsequently, U.S. EPA issued June 13, 1989 "Guidance on Limiting Potential to Emit in New Source Permitting" (1989 PTE Guidance). In that guidance, U.S. EPA details the type of limitations that can restrict a facility's potential to emit. Most significant to the Varn Wood Products permit is U.S. EPA's declaration that to

limit a facility's PTE, a permit "must contain a production or operational limitation in addition to the emission limitation in cases where the emission limitation does not reflect the maximum emissions of the source operating at full design capacity without pollution control equipment." EPA went on to explain that a qualifying operational restriction could be "conditions which specify that the source must install and maintain controls that reduce emissions to a specified emission rate or to a specified efficiency level." EPA went on to explain that where a restriction depends on both a production and an operational limit, these limits "must be stated as conditions that can be enforced independently of one another" because "if one of the conditions is found to be difficult to monitor for any reason, the other may still be enforced."

In the 1989 PTE Guidance, EPA specifically addressed whether "[a]n emission limitation alone" could ever serve to restrict PTE. EPA explained that with only two exceptions, an emission limitation can be the sole restriction on PTE only if "it reflects the absolute maximum that the source could emit without controls or other operational restrictions." The first exception is where particular circumstances make it difficult to state operating parameters for control equipment limits in a manner that is easily enforceable. In that case, EPA concluded that it would be acceptable to utilize short-term emission limits (e.g., lbs per hour), "provided that such limits reflect the operation of the control equipment, and the permit includes requirements to install, maintain, and operate a continuous emission monitoring (CEM) system and to retain CEM data, and specifies that CEM data may be used to determine compliance with the emission limit."

The second exception applies to surface coating operations "where no add-on control is employed but emissions are restricted through limiting VOC contents and quantities of coatings used." EPA instructed that if operating and production parameters are not readily limited due to the wide variety of coatings and products and unpredictable nature of the operation, PTE could be limited using "emission limits coupled with a requirement to calculate daily emissions."

Neither of the exceptions detailed in EPA's 1989 PTE guidance apply to the Varn Wood Products pellet plant. Therefore, in accordance with federal regulation, caselaw, and EPA guidance, to legitimately restrict the VOC PTE of the Varn Wood Products wood pellet plant, Georgia EPD must include in the facility's Title V permit both a VOC emission limitation and enforceable operational or production limits sufficient to ensure that based on the plant's fundamental design, maximum VOC emissions will not exceed the PSD applicability threshold.

To the extent that Georgia EPD and Varn Wood Products elect to utilize the wood burner combustion temperature as the enforceable operating limit, the relevant permit conditions will need to address the deficiencies identified in section I.A. above. In addition, Georgia EPD needs to amend the draft permit to expressly limit the pellet plant's VOC emissions to a level that is below the PSD applicability threshold, and include an equation specifying exactly how the facility must calculate its plant-wide emissions to demonstrate compliance with that limit. Such equation must account for all VOC emissions from the pellet plant, including from the dryer, hammermill, and pellet cooler, from any units designated as "insignificant activities," and from startup, shutdown, maintenance, and malfunction events. To the extent that the Permittee will utilize emission factors to calculate emissions, those emission factors must be identified in the permit and supported by a reasoned explanation for their reliability in the permit's statement of basis. Any assumption made in stack testing that is not inherent to the facility's design (and therefore can vary), such as wood moisture content, must be included in the final permit as an enforceable requirement if deviation from that assumption could result in higher emissions.

Division's Response to Environmental Integrity Project Comment I.

The Division will modify the permit to include the limitation of VOC emissions from the facility below the PSD applicability threshold through the addition of Condition 2.1.1 as follows:

2.1.1 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain volatile organic compounds (VOC) in excess of 249 tons during any twelve consecutive month period.
[Avoidance of 40 CFR 52.21]

The Division has added a new permit condition 2.4.1 that limits the wood pellet production to below 130,000 tpy which was the basis of PSD avoidance in the application for the pellet mill.

2.4.1 The Permittee shall not produce more than 130,000 tons of wood pellets during any twelve consecutive month period.
[Avoidance of 40 CFR 52.21]

The Division has added new permit condition 3.2.3 which prohibits the facility from operating the dryer (which is the principal source of VOC) if the wood burner is not at the temperature established during the most recent test demonstrating compliance with condition 2.1.1 or operating the dryer if at least 45 percent of the dryer exhaust are not being recycled to the wood burner.

3.2.3 The Permittee shall not process any wood chips into the dryer DD1 unless:

a. The three hour rolling average of the wood burner exhaust gas temperature is above 1665°F or above the temperature established during most recent performance test and;

b. The three hour rolling average of recycle airflow from the dryer to the wood burner equals 90% or greater of the simultaneous airflow from the dryer exhaust stack assuring at least 45 percent of total dryer exhaust is recycled to the burner for destruction of VOC.
[Avoidance of 40 CFR 52.21]

The Division has added permit condition 4.2.1 requiring the facility to retest for VOC and HAPS from the Hammermill, pellet cooler and the dryer exhaust by June 1, 2018 and this test will be followed by periodic testing at 24 month intervals to validate emission factors that will be used to demonstrate compliance with VOC and HAP limits in the permit.

4.2.1 The Permittee shall conduct performance test for VOC, methanol, formaldehyde and acetaldehyde emissions on following equipment at 24-month intervals. The next test shall be conducted on or before June 1, 2018.

a. Hammermill HM2 at the baghouse (Control Source ID: BH1) exhaust stack.

b. Pellet Cooler PC1 including the pellet press aspiration system emissions at the cyclone (Control Source ID: C06) exhaust stack.

c. Dryer DD1 Cyclone (Control Source ID: C05) exhaust stack.

Testing shall be conducted while the Dryer, Hammermill, Pellet presses and Pellet cooler are operating at maximum capacity. The Permittee shall continuously monitor and record the wood chip drying rates; the Hammermill, Pellet press and Pellet cooler process rates separately; the burner exhaust gas temperature, dryer operating temperature and the airflow rates in the recycle duct and dryer cyclone exhaust stack.

From the data collected during the performance test, the Permittee shall establish the range for temperature levels in the dryer and wood burner exhaust gas temperature to demonstrate compliance with the VOC and HAPs emission limit of Conditions 2.1.1 and 2.1.2. The data, the range determined, and the method used to determine the range shall be included in the performance test results submitted to the Division. The permittee shall establish emission factors in lbs per ODT to be used in calculations in Condition 6.2.6 and 6.2.7.
[391-3-1-.02(6)(b)1(i)]

The Division has added three new monitoring conditions:

- Conditions 5.2.4 that requires the facility to continuously monitor and record the wood burner temperature.
- Condition 5.2.5 requires the facility to continuously monitor and record the dryer operating temperature.
- Condition 5.2.6 that requires the installation of flowmeters in the recycle duct and the dryer exhaust duct to continuously monitor and record the flow rate in the recycle and exhaust duct of the dryer.

5.2.4 The Permittee shall install, calibrate, maintain, and operate monitoring devices to continuously measure and record the temperature at the exit of the Wood Burner (Source Code WB1) and determine each three-hour average of this temperature. If the three-hour average falls below the minimum operating temperature of 1,665 degrees Fahrenheit (^{o}F) or the minimum operating temperature determined by the most recent performance testing established per Conditions 4.2.1 and 4.2.2, the Permittee shall record this in a log, as an exceedance , and take action to bring the temperature up to the minimum temperature. This action and the results shall be recorded in the log. This log shall be available for submission or inspection by Division personnel upon request.

The permittee shall multiply the wood dryer exhaust VOC and HAP emission factors by 2.0 in calculations in Condition 6.2.6 and 6.2.7 when operating the Wood Burner WB1 at a temperature below the minimum operating temperature.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

5.2.5 The Permittee shall install, calibrate, maintain, and operate monitoring devices to continuously measure and record the dryer operating temperature and determine each three-hour average of this temperature. This action and the results shall be recorded in the log. This log shall be available for submission or inspection by Division personnel upon request.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

5.2.6 The Permittee shall install, calibrate, maintain, and operate monitoring devices to continuously measure and record the airflow in the recycle duct and in the dryer DD1 cyclone exhaust stack. The permittee shall calculate and record the air flow ratio of cyclone exhaust to air flow in the recycle duct on a continuous basis and determine each three-hour average recycle ratio by dividing the volume of dryer cyclone exhaust to volume of recycle airflow

The permittee shall multiply the wood dryer exhaust VOC and HAP emission factors by 2.0 in calculations in Condition 6.2.6 and 6.2.7 when the three hour average recycle ratio falls below 0.9.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

Division has modified the CAM condition 5.2.11 to include recycle air flow in the duct as a monitoring parameter in addition to the wood burner temperature to assure destruction of VOC in the wood burner.

5.2.11 The Permittee shall comply with the performance criteria listed in the table below for the VOC emissions from the Wood Burner (Source Code WB1).
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	**Indicator No. 1 Temperature**	**Indicator No. 2 Air Flow**
A. Data Representativeness [64.3(b)(1)]	Thermocouple in wood burner exhaust	Flowmeter in the recycle duct to the burner and in the exhaust stack of the dryer cyclone.
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	Hourly by process operator	Hourly by process operator
C. QA/QC Practices and Criteria [64.3(b)(3)]	Replace thermocouple annually and maintain calibration documentation	Calibrate the flowmeter at frequency recommended by the manufacturer.
D. Monitoring Frequency [64.3(b)(4)]	Continuously	Continuous
E. Data Collection Procedures [64.3(b)(4)]	Data collected daily from computer and logged into check sheets	Data collected daily from computer and logged into check sheets
F. Averaging Period [64.3(b)(4)]	Rolling three hour averages	Rolling three hour averages

Divison has modified Condition 6.1.7 b to indicate VOC emissions above the limitation in Condition 2.1.1, three hour average of the established wood burner temperature and three hour average recycle ratio below 0.9 are considered an exceedance.

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any rolling twelve consecutive month total of VOC emissions equal to or exceeding 249 tons as specified in Permit Condition 2.1.1.

v. Any twelve consecutive month period for which the total amount of wood pellet produced by the Pellet Mill, recorded in accordance with Conditions 6.2.2, exceeds 130,000 tons.

vi. Any three-hour average temperature at the exit of the Wood Burner (Source Code WB1), measured and recorded as required by Condition 5.2.4,below 1,665 ^{o}F or the minimum operating temperature established during the most recent performance testing per Conditions 4.2.1 and 4.2.2.

vii. Any three-hour average recycle ratio measured and calculated as required by Condition 5.2.6 that is less than 0.90.

The Division will also add the following permit conditions to require determination, record keeping, and reporting requirements needed to demonstrate compliance with the VOC emissions limit in Condition 2.1.1.

6.2.2 The Permittee shall keep operating records to determine the total amount of wood chips and wood pellet processed in oven dried tons (ODT) (short tons) in the Drum Dryer/Wood Burner (Source Code DD1/WB1), the Hammermills (Source Codes PH1 and HM2), the Pellet Mills (Source Codes PM1, PM2 and PM3), the Pellet Cooler (Source Code PC1), the Pellet Silo (Source Code PS), the Vibrating Screen (Source Code VS), and the Truck Loadout (Source Code TLO), on a monthly basis. These records shall be suitable for inspection and/or submittal to the Division.
[Avoidance of 40 CFR 52.21]

6.2.3 The Permittee shall calculate the monthly VOC emissions from the pellet manufacturing operation (Hammer mill H01, wood hog H02, Drum Dryer/Wood Burner DD1/WB1, Hammermills HM2, the Pellet Mills (PM1, PM2 and PM3), Pellet Cooler PC1, Pellet Silo PS, Vibrating Screen VS, and Truck Loadout TLO, using the records from

Condition 6.2.2 and the following equation(s). All emission factors and calculations shall be kept as part of the monthly records, available for inspection or submittal.

The Permittee shall calculate VOC emissions including formaldehyde, acetaldehyde, and methanol emissions using EPA OTM-26.

VOC = [Method 25A VOC as propane + Methanol expressed as Methanol + Formaldehyde expressed as Formaldehyde + Acetaldehyde expressed as Acetaldehyde] – [(0.65)*Methanol expressed as propane]

Determine the tons of pollutant per month using the following equation.

$$E = \left[(EH)(HM) + (ED)(DR) + (EP)(PC) + (EPsh)(SH)\right] / 2000$$

Where:

E = Monthly VOC emission in tons
EH = Emission Factor lb of VOC/ODT ton at the Hammermill baghouse outlet
HM = Monthly Production from Hammermill in oven dried tons
ED = Emission Factor lb VOC/ODT at dryer cyclone outlet stack
DR_1 = Monthly Product from Dryer in oven dried tons
EP = Emission Factor lb of VOC/ODT at pellet Cooler cyclone outlet stack
PC = Monthly Production from Pellet Cooler in oven dried tons
EP_{sh} = Emission Factor lb of VOC/ODT for storage and handling
SH = Monthly Product handled by Pellet Silo in oven dried tons

The emission factor (ED) for dryer shall be multiplied by two (2) when the 3 hour average temperature measured and recorded at the wood burner exhaust falls below 1665 degrees Fahrenheit or the temperature established during the most recent performance test.

The emission factor (ED) for dryer shall be multiplied by two (2) when the 3 hour average recycle ratio measured and recorded per condition 5.2.6 falls below 0.9

Until the performance test required in Condition 4.2.1 is complete the permittee shall calculate VOC emissions by using the following emission factors and the equation provided in this condition. After the performance test required in Condition 4.2.1 is complete and any subsequent performance test as required by Condition 4.2.1 are performed the facility will use **the highest emission factors (i.e. between the test or the ones provided below)**

Emission Point	VOC Emission Factor lb/ODT
Hammermill Baghouse outlet (EH)	0.23
Wood Burner Dryer Cyclone Exhaust(ED)	2.96
Pellet Cooler Cyclone Exhaust (EP)	0.10
Pellet Silo Storage (EP_{sh})	0.40

6.2.4 The Permittee shall notify the Division in writing if the monthly emissions of VOC exceed 20.75 tons during any calendar month as calculated per Condition 6.2.3. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Conditions 2.1.1 and 2.1.2.
[391-3-1-.03(2)(c)]

6.2.5 The Permittee shall notify the Division in writing if the rolling total VOC emissions equals or exceeds 249 tons during any consecutive twelve-months. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain compliance with the emission limit(s) in Condition 2.1.1.
[391-3-1-.03(2)(c)]

The Division believes that the above new and modified permit conditions that:

- Limit VOC emissions from Pellet mill to 249 tpy
- Limit Production of wood pellet to 130,000 ODT per year
- Require new testing and periodic testing of VOC emissions from the dryer, Hammermill and pellet cooler to establish emission factors and operating conditions.
- Require continuous monitoring of wood burner temperature, dryer temperature and recycle exhaust flow
- Production records of wood chips and wood pellet.
- Calculate monthly and twelve month rolling total of VOC emissions

Will assure the Facility's Compliance with Prevention of Significant Deterioration (PSD) Requirements

Environmental Integrity Project Comment II.

II. The Draft Permit Does Not Assure the Facility's Compliance with Maximum Achievable Control Technology Requirements for Hazardous Air Pollutants.

In addition to failing to establish an enforceable VOC PTE limit sufficient to enable Varn Wood Products to avoid PSD applicability for the wood pellet plant, the draft permit also is deficient due to the lack of PTE limits on individual and total hazardous air pollutant (HAP) emissions. Without such limits, the wood pellet plant's HAP PTE appears to exceed the major source applicability threshold for HAP control requirements under Clean Air Act section 112(a), which is 10 tons per year of any individual HAP or 25 tons per year of any combination of HAP. Specifically, when Varn Wood Products applied for a permit to construct and operate its wood pellet plant in 2011, Georgia EPD reported that the pellet plant would cause the facility's PTE for "individual HAP" to increase by 9.0 tpy (for the highest-emitted HAP, presumably, formaldehyde), and would increase the facility's PTE for "total HAP" by 21.6 tpy. The company based these calculations in part on an assumption that HAP emissions would be reduced by 45% due to recycling 50% of the dryer exhaust back through the burner, which Varn Wood Products assumed would achieve at least 90% destruction efficiency. As discussed above, however, the burner achieves this destruction efficiency only if operated at the requisite temperature, which frequently does not occur. Because operating the burner at the minimum temperature needed to destroy HAP is not an enforceable requirement and clearly is not inherent to the facility's design, Varn Wood Products cannot consider the effect recycling dryer exhaust through the burner in calculating its HAP PTE. Accordingly, the

HAP PTE for the dryer is significantly higher than reported. Given that the initial HAP PTE calculation already was very close to the CAA § 112 major source applicability threshold, recalculating the PTE without consideration of the burner's HAP destruction efficiency undoubtedly raises the pellet plant's HAP PTE above that threshold. Furthermore, after issuing the final permit, Georgia EPD informed Varn Wood Products that HAP testing at similar facilities indicated that the pellet plant's potential HAP emissions were even higher because the initial estimate had incorrectly assumed no HAP would be emitted from the hammermill, pellet cooler, and storage and handling. Thus, the HAP PTE for the Varn Wood Products pellet plant certainly exceeds the applicability threshold for Clean Air Act section 112 HAP control requirements.

Under Clean Air Act section 112(g)(2)(B), after the effective date of a state's Title V operating permit program, "no person may construct or reconstruct any major source of hazardous air pollutants, unless the Administrator (or the State) determines that the maximum achievable control technology [MACT] emission limitation under this section for existing sources will be met." The provision goes on to state that if new stationary source is not a regulated "source category" for which a MACT regulation has been established, the MACT determination shall be made by the permitting authority on a case-by-case basis." Wood pellet manufacturing is not currently regulated by a federal MACT regulation. Accordingly, the Varn Wood Products pellet plant falls under the category of major HAP sources for which "no applicable emission limitations have been established by the Administrator." *See* CAA 112(g)(2)(B). Thus, Georgia EPD is obligated to determine the appropriate MACT emission limitations applicable to the pellet plant on a case-by-case basis.

Because the HAP PTE for the wood pellet plant has exceeded the CAA section 112 applicability threshold since initial construction of the plant in 2012, the plant is already subject to the case-by-case MACT requirement of CAA § 112(g). Under long-standing U.S. EPA guidance, the plant cannot now avoid the applicability of case-by-case MACT limitations by taking an enforceable limit on its HAP emissions. Specifically, EPA interprets CAA section 112 as allowing a facility to "switch to area source status at any time until the 'first compliance date' of the [MACT] standard." EPA considers the "first compliance date" to be "the first date a source must comply with an emission limitation or other substantive regulatory requirement." The EPA explains that "[b]y that date, to avoid being in violation, a major source must either comply with the standard, or obtain and comply with federally enforceable limits ensuring that actual and potential emissions are below major source thresholds." After the compliance date, "sources should not be allowed to avoid compliance with a standard…even through a reduction in potential to emit." Accordingly, Varn Wood Products cannot now avoid case-by-case MACT compliance by obtaining an after-the-fact potential-to-emit limit.

Georgia EPD's case-by-case determination of what constitutes MACT for the Varn Wood Products pellet plant must comply with the standards set forth in Clean Air Act section 112. Clean Air Act section 112(d)(3) explains: "The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator." Our research indicates that there are at least three wood pellet manufacturing facilities in operation in the U.S. that utilize a regenerative thermal oxidizer (RTO) on wood drying operations to reduce HAP emissions. Specifically, an RTO is utilized at Georgia Biomass (Waycross, GA), Florida Green Circle (Jackson County, FL), and German Pellets Texas (Woodville, TX). It appears that this same technology would constitute MACT for the Varn Wood Products Pellet Plant and should be required under the facility's final Title V permit.

The Division's Response to Environmental Integrity Project Comment II.

The Division has recalculated the HAP PTE from the pellet mill using the data from most recent dryer performance test at Varn wood products and using Division approved conservative emission factors for the downstream process i.e. hammermill, pellet cooler and pellet storage and has come to conclusion that the HAP PTE is below the major source threshold and hence case by case MACT is not applicable to pellet mill expansion.

HAP and VOC emissions are generated concurrently from the same process equipment and are comingled in the process exhaust of wood dryer, hammermills, pellet cooler and pellet storage. The control technology (recycle dryer exhaust to the wood burner) to control VOC emissions will also control and reduce HAP emissions. Hence all the monitoring conducted for VOC i.e. wood burner temperature, wood dryer temperature and recycle exhaust airflow is applicable to HAP as well.

The Division will add the following Condition to limit HAPs emissions below the major source thresholds:

2.2.2 The Permittee shall not discharge, or cause the discharge into the atmosphere from the pellet plant, any single hazardous air pollutant (HAP) in an amount equal to or exceeding 10 tons during any twelve consecutive month period, or any combination of such listed pollutants in an amount equal to or exceeding 25 tons during any twelve consecutive month period.
[Avoidance of Major Source Classification under 40 CFR 63 and Avoidance of 40 CFR 70]

The Division has added new permit condition 3.2.3 which prohibits the facility from operating the dryer (which is the principal source of HAP) if the wood burner is not at the temperature established during the most recent test demonstrating compliance with condition 2.1.1 or operating the dryer if the at least 45 percent of the dryer exhaust are not being recycled to the wood burner.

3.2.3 The Permittee shall not process any wood chips into the dryer DD1 unless:

c. The three hour rolling average of the wood burner exhaust gas temperature is above 1665°F or above the temperature established during most recent performance test and;

d. The three hour rolling average of recycle airflow from the dryer to the wood burner equals 90% or greater of the simultaneous airflow from the dryer exhaust stack assuring at least 45 percent of total dryer exhaust is recycled to the burner for destruction of VOC.
[Avoidance of 40 CFR 52.21]

The Division has added permit condition 4.2.1 requiring the facility to test for VOC and HAPS from the Hammermill, pellet cooler and the dryer exhaust by June 1, 2018 and this test will be followed by periodic testing at 24 month intervals to validate emission factors that will be used to demonstrate compliance with VOC and HAP limits in the permit.

4.2.1 The Permittee shall conduct performance test for VOC, **methanol, formaldehyde and acetaldehyde** emissions on following equipment at 24-month intervals. The next test shall be conducted on or before June 1, 2018.

a. Hammermill HM2 at the baghouse (Control Source ID: BH1) exhaust stack.

b. Pellet Cooler PC1 including the pellet press aspiration system emissions at the cyclone (Control Source ID: C06) exhaust stack.

c. Dryer DD1 Cyclone (Control Source ID: C05) exhaust stack.

Testing shall be conducted while the Dryer, Hammermill, Pellet presses and Pellet cooler are operating at maximum capacity. The Permittee shall continuously monitor and record the wood chip drying rates; the Hammermill, Pellet press and Pellet cooler process rates separately; the burner exhaust gas temperature, dryer operating temperature and the airflow rates in the recycle duct and dryer cyclone exhaust stack.

From the data collected during the performance test, the Permittee shall establish the range for temperature levels in the dryer and wood burner exhaust gas temperature to demonstrate compliance with the VOC and HAPs emission limit of Conditions 2.1.1 and 2.1.2. The data, the range determined, and the method used to determine the range shall be included in the performance test results submitted to the Division. The permittee shall establish emission factors in lbs per ODT to be used in calculations in Condition 6.2.6 and 6.2.7.
[391-3-1-.02(6)(b)1(i)]

Condition 6.1.7 b will be modified to indicate HAPs emissions above the limitation in Condition 2.1.2 are considered an exceedance.

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any rolling twelve consecutive month totals for a single HAP or total HAPs in excess of 10 tons or 25 tons respectively, per Condition 2.1.2.

vi. Any three-hour average temperature at the exit of the Wood Burner (Source Code WB1), measured and recorded as required by Condition 5.2.4,below 1,665 ^{o}F or the minimum operating temperature established during the most recent performance testing per Conditions 4.2.1 and 4.2.2.

vii. Any three-hour average recyle ratio measured and calculated as required by Condition 5.2.6 that is less than 0.90.

The Division will also add the following permit conditions to require determination, record keeping, and reporting requirements needed to demonstrate compliance with the HAPs emissions limit in Condition 2.1.2.

6.2.6 The Permittee shall calculate the monthly HAP emissions from the pellet manufacturing operation (hammer mill H01, wood hog H02, Drum Dryer/Wood Burner DD1/WB1, hammermills HM2, the Pellet Mills (PM1, PM2 and PM3), Pellet Cooler PC1, Pellet Silo PS, Vibrating Screen VS, and Truck Loadout TLO, using the records from Condition 6.2.2 and the following equation(s). All emission factors and calculations shall be kept as part of the monthly records, available for inspection or submittal.

The Permittee shall calculate tons of pollutant per month using the following equation.

$$E = \left[(EH)(HM) + (ED)(DR) + (EP)(PC) + (EPsh)(SH)\right] / 2000$$

Where:

E = Monthly HAP emission in tons

EH = Emission Factor lb of pollutant /ODT ton at the Hammermill baghouse outlet for methanol, formaldehyde and acetaldehyde

HM = Monthly Production from Hammermill in oven dried tons

ED = Emission Factor lb of Pollutant/ton at dryer cyclone outlet stack for methanol, formaldehyde, acetaldehyde and other HAPs.

DR_1 = Monthly Product from Dryer in oven dried tons

EP = Emission Factor lb of Pollutant/ton at dryer cyclone outlet stack for methanol, formaldehyde and acetaldehyde

PC = Monthly Production from Pellet Cooler in oven dried tons

EP_{sh} = Emission Factor lb of Pollutant/ton at dryer cyclone outlet stack for methanol, formaldehyde and acetaldehyde for storage and handling

SH = Monthly Product handled by the Storage and handling system in oven dried tons

The emission factor (ED) for dryer shall be multiplied by two (2) for all HAPs when the 3 hour average temperature measured at the wood burner exhaust falls below 1665 degrees Fahrenheit or the temperature established during the most recent performance test.

The emission factor (ED) for dryer shall be multiplied by two (2) when the 3 hour average recycle ratio measured and recorded per condition 5.2.6 falls below 0.9

Until the performance test required in Condition 4.2.1 is complete the permittee shall calculate HAP emissions by using the following emission factors and the equation provided in this condition. After the performance test required in Condition 4.2.1 is complete and any subsequent performance test as required by Condition 4.2.1 are performed the facility will use the **highest emission factors (i.e. between the test or the ones provided below)**

Emission Point	Methanol Emission factor lb/ODT	Formaldehyde Emission Factor lb/ODT	Acetaldehyde emission factor lb/ODT	Other HAPs* Emission factor lb/ODT
Hammermill Baghouse outlet (EH)	0.004	0.008	0.004	
Wood Burner Dryer Cyclone Exhaust(ED)	0.06	0.08	0.06	0.1
Pellet Cooler Cyclone Exhaust (EP)	0.001	0.002	0.001	-
Pellet Silo Storage (EP_{sh})	0.001	0.002	0.001	-

*Other HAPs include Acrolein, Cumene, Xylene, Phenol and Toluene

6.2.7 The Permittee shall notify the Division in writing if the emissions of any single HAP equals or exceeds 10 tons, or if the emissions total HAPs equals or exceeds 25 during any consecutive twelve-month period as calculated per Condition 6.2.6. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain compliance with the emission limit(s) in Condition 2.1.2.
[391-3-1-.03(2)(c)]

The Division believes that the above permit conditions that:

- Limit HAP emissions from Pellet mill to 25 tpy for combined HAP and 10 tpy for individual HAP
- Limit Production of wood pellet to 130,000 ODT per year
- Require new testing and periodic testing of VOC emissions from the dryer, Hammermill and pellet cooler to establish emission factors and operating conditions.
- Require continuous monitoring of wood burner temperature, dryer temperature and recycle exhaust flow
- Production records of wood chips and wood pellet.
- Calculate monthly and twelve month rolling total of HAP emissions

Will assure the Facility's Compliance with the HAP limitations in Condition 2.2.2 which will assure the facility remains a minor source for HAP.

Environmental Integrity Project Comment III.

III. The Draft Permit Limits Do Not Address Storage Pile Emissions

Wood pellet storage at pellet manufacturing plants generates a significant amount of air pollution. Stored pellets not only release substantial amounts of fugitive particulate emissions, but they also emit VOCs, CO and methane. Yet the permit does not require the facility to consider these emissions in determining compliance with emission limits. Nor does the permit specify any steps that the facility must take to minimize emissions from wood pellet storage. Georgia EPD should consider these emissions in determining which requirements apply to the facility, and require the facility to measure and control them.

The Division's Response to Environmental Integrity Project Comment III.

As discussed in the narrative for the 2012 permit modification, after the proposed addition of the pellet mill the facility became a PSD major source for VOC. However, before the modification (proposed pellet plant) the permit application did not have to go through a New Source Review since the facility was a PSD minor source prior to the modification and projected emissions increase from the pellet mill were below the PSD major source limits of 250 tpy.

The fugitive emissions were excluded at the time of the 2012 permit modification because the wood pellet production operation is not on the list of 28 categories with a lower major source threshold for criteria pollutants (100 tpy), which requires subject source categories to include fugitive emissions for permitting applicability determinations. Since the facility is now considered at PSD major source it will have to determine fugitive emissions for future permit modification. However at the time of the 2012 modification, such a review was not required.

For further discussion of fugitive emissions, see the Division's Response to Environmental Integrity Project Comment V.

Environmental Integrity Project Comment IV.

IV. The Draft Permit's Particulate Matter Limits Are Inadequate.

Unlike with respect to VOC and HAP, the draft permit does include limits governing particulate matter (PM) emissions. Oddly, none of these limits are characterized in either the draft permit or the statement of basis as PM PTE limits. The PM emission levels reported by Varn Wood Products in its initial 2011 application to construct the wood pellet plant are achievable only by controlling the dryer and cooler with a high efficiency multi-cyclone system and the hammermill with a baghouse. Absent these controls, the facility's PM emissions would far exceed the PSD applicability threshold. Accordingly, Georgia EPD must amend the draft permit to clearly establish enforceable PM PTE limits and explain in the statement of basis why these limits are adequate to avoid PSD. Among other things, the final permit needs to include enforceable requirements designed to ensure that the cyclones and baghouses achieve their assumed control efficiencies. To the extent that Georgia EPD intends for any of the PM-related monitoring in the current draft permit to serve this purpose, it is inadequate. In particular, the PM-related monitoring conditions suffer from the following deficiencies:

Draft Permit Condition 5.2.1: This draft permit condition requires inspection of units for holds or evidence of malfunction in the interior of the cyclones and multiclones. Georgia EPD must revise the draft permit to identify the applicable requirement to which this monitoring pertains, and Georgia EPD must demonstrate in the statement of basis why this monitoring is adequate to assure the facility's compliance with that requirement.

Draft Permit Condition 5.2.2: This draft permit condition requires pressure drop monitoring on the multiclones and the hammer mill bag house, but fails to establish the acceptable pressure drop range. Georgia EPD must add the acceptable pressure drop range to the permit. In addition, the permit must identify the applicable requirement to which this monitoring pertains, and Georgia EPD must demonstrate in the statement of basis why this monitoring is adequate to assure the facility's compliance.

Draft Permit Condition 5.2.3: This draft permit condition requires the permittee to develop and implement a Preventative Maintenance Program for the baghouse, but the requirements are to vague to assure the facility's compliance with any applicable requirement. If Georgia EPD intends this program to assure compliance with the applicable PM limits, Georgia EPD needs to correct the following deficiencies in the Condition:

- Consistent with the comment above on draft permit Condition 5.2.2, it is insufficient for the permit to rely on pressure drop ranges to assure that the baghouse is operating correctly without these ranges being approved by EPD (not just "subject to review"), made available for public comment, and included in the final permit.
- The permit must identify the applicable requirement to which this monitoring pertains.
- The permit needs must identify which type of baghouse the facility is utilizing and which requirements apply to that baghouse. Under the draft permit's present language, it is not possible to determine which of the three baghouse requirements specified in Condition 5.2.3 (b), (c), and (d) apply to this facility.
- This condition simply identifies what the operation and maintenance check "may include." Georgia EPD must revise this condition to identify the minimum requirements that the operation and check *must* include. Likewise, the recordkeeping requirements must require that the facility expressly confirm that the weekly inspection addresses each of the requirements (e.g., it is not enough for the inspector to just check off that an inspection has been done and summarize findings; the inspector must be required to confirm that each item has actually been checked during the inspection).
- Condition 5.2.3.d needs to include more specific detail regarding what constitutes "proper operation." As currently written, this permit condition is too vague to be enforceable.
- Condition 5.2.5.b requires the source to correct the cause of any visible emissions "in the most expedient manner possible." This language is too vague to be enforceable. Georgia EPD needs to revise the permit to include a specific limit on the amount of time that facility operators can take to address the problem.

Finally, Draft Permit Condition 3.4.2, which specifies the SIP PM limit under Ga. R. & Reg. 391-3-1-.02(2)(e)1.(i) is the most opaque condition in the entire permit. Rather than simply providing the equations to be used to calculate the applicable PM limits, the permit needs to provide the resulting limits. Furthermore, Georgia EPD needs to explain in the statement of basis how the permit assures the facility's compliance with this limit.

The Division's Response to Environmental Integrity Project Comment IV.

Cyclones have a relatively simple construction and generally no moving parts. Therefore the Division believes that monitoring schedule as proposed in Condition 5.2.1 is adequate. To add clarity, the Division will modify Condition 5.2.1 as follows.

5.2.1 The Permittee shall perform the following applicable operation and maintenance checks as specified in this condition on ~~check the exterior of the units for holes in the body or evidence of malfunction in the interior of~~ the cyclones and multiclones (Source Codes C01 through C07) and retain a record suitable for inspection or submittal for each week or portion of each week of operation of the planer mill with Source Code P01, the hammer mill with Source Code H01, the wood hog with Source Code H02, the wood burner with Source Code WB1, the triple-pass rotary drum dryer with Source Code DD1, and the pellet cooler with Source Code PC1.

a. Check exterior of the units for holes in the body or evidence of malfunction in interior of the cyclones.

b. Check hopper for bridging and plugging.

c. Check particulate transfer device for proper operation to ensure dust removal.

A checklist or other similar log may be used for this purpose. Any adverse condition discovered by this inspection shall be corrected in the most expedient manner possible. The Permittee shall record the incident as an excursion and note the corrective action taken.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

The facility monitors control equipment specified in Condition 5.2.2 to meet manufactures standards. Condition 5.2.2 will be revised as follows for clarity:

5.2.2 The Permittee shall install, calibrate, maintain, and operate pressure drop indicators on the hammer mill baghouse (BH1). The Permittee shall read and record the pressure drop at least once per operating day. A logbook containing these records shall be available for inspection and/or submittal to the Division.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

The facility has a preventative maintenance program specifically for baghouse BH1 and those methods have been included for clarity.

The Division will modify Condition 5.2.3 as follows:

5.2.3 The Permittee shall develop and implement a Preventive Maintenance Program (PMP) for the baghouse (Control Source ID: BH1) to assure that the provisions of Condition 8.17.1 are met. All QA/QC practices and criteria shall be stated in the Preventive Maintenance Program. The program shall be subject to review and, if necessary to assure compliance, modification by the Division and shall include the pressure drop ranges that indicate proper operation for each baghouse. At a minimum, the following operation and maintenance checks shall be made on at least a weekly basis, and a record of the findings and corrective actions taken shall be kept in a maintenance log:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Record the pressure drop across each baghouse and ensure that it is within the appropriate range.

b. Check the system for proper operation of the pulse jet cleaning system. This may include checking for low pressure, leaks, proper lubrication, and proper operation of timer and valves.

c. Check dust collector hoppers and conveying systems for proper operation.

Monitoring requirements under draft permit Condition 5.2.5 (new Condition 5.2.7) are not an indicator of an emissions violation. However, EPD experience has shown that a daily visible emissions check in conjunction with pressure drop monitoring and preventive maintenance plan for baghouses will assure that PM emission limits can be met.

The permit also has excursion requirement in Condition 6.1.7 that are pertaining to the baghouse and cyclones

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. Any adverse condition discovered by a weekly inspection, as required by Condition 5.2.1.

ii. Any instance in which daily pressure drop readings, required by Condition 5.2.2, are outside of the established range for two consecutive days.

iii. Any two consecutive required daily determinations of visible emissions requiring action by Condition 5.2.7 from the same source.

Division believes that the above monitoring and recordkeeping conditions will provide a reasonable assurance that PM emission limits in the permit will be achieved.

Permit Condition 3.4.2 is standard permitting language included in permits addressing particulate emissions under *Georgia Rule 391-3-1-.02(2)(e)*. Condition 4.1.3 specifies methods for demonstration of compliance with emissions limits not otherwise specified in the Permit. Therefore, the Division will not modify this permit condition as requested.

Environmental Integrity Project Comment V.

V. The Draft Permit Does Not Assure Compliance with Fugitive Dust Control Requirements Designed to Protect Public Health and the Environment.

Wood pellet plants generate a lot of fugitive dust, i.e., airborne particulate matter. In fact, one of the most common air pollution complaints raised by residents of communities where wood pellet plants are located is the large amount of fugitive dust that escapes into surrounding neighborhoods. Major sources of fugitive dust at wood pellet plants include wood handling, wood storage piles, conveyor transfer points, yard dust, haul road dust and engine exhaust. Health problems associated with exposure to particulate matter pollution primarily involve damage to the lungs and respiratory system due to inhalation. Specifically, the inhalation of dust particles can irritate the eyes, nose and throat; cause respiratory distress, including coughing, difficulty in breathing and chest tightness; increase the severity of bronchitis, asthma and emphysema; cause heart attacks and aggravate heart disease; and lead to premature death in individuals with serious lung or heart disease. When exposed repeatedly over a longer time period, fugitive dust exposure can lead to severe illness such as cancer. In addition to affecting human health, fugitive dust reduces visibility, affects surface water, reduces plant growth, and can be a nuisance. The draft permit for Varn Wood Products does not contain sufficient specificity regarding required fugitive dust control measures to assure that the facility operates in compliance with Clean Air Act requirements.

A. The Draft Permit Does Not Assure Compliance with the Georgia State Implementation Plan Requirement that the Facility Take All Reasonable Precautions to Control Fugitive Dust.

Draft permit Condition 3.4.5 addresses the fugitive dust requirements in Georgia's federally approved Clean Air Act State Implementation Plant at SIP Rule 391-3-1-.02(2)(n), which requires that the facility take "all reasonable precautions to prevent dust from any operation, process, handling, transportation or storage facility from becoming airborne." However, this permit condition fails to identify with reasonable specificity the precautions that the facility must take to control fugitive dust. Rather, the permit condition simply lists a vague set of precautions that the facility "should" take. These provisions are too vague to be enforceable and are inadequate to assure that the facility takes all reasonable precautions to control fugitive dust. For example, Condition 3.4.5 (a.) instructs the source to use "where possible" water or chemicals for control of dust. The term "where possible" is too vague; the permit must provide more specific guidance to the source regarding what is expected. Likewise, (c.) broadly instructs the source to install and use "hoods, fans, and fabric filters to enclose and vent the handling of dusty materials" and states that "adequate" containment methods "can be employed" during sandblasting "or other similar operations." As discussed below, wood pellet production is an extremely dusty operation and fugitive dust presents one of the facility's most significant risks to public health. To assure compliance with the SIP's fugitive dust requirements, make these requirements enforceable as a practical matter, and, ultimately, ensure that the public receives the health protections promised by the state's regulations, Georgia EPD must add more specificity to the Varn Wood Products permit regarding what exactly the facility must do to control fugitive dust. In addition, Georgia EPD must include a rationale in the permit record explaining why any new permit conditions are sufficient to assure compliance with Georgia SIP Rule 391-3-1-.02(2)(n)1, including necessary monitoring, recordkeeping and reporting.

B. The Draft Permit Does Not Assure Compliance with the Georgia State Implementation Plan Requirement that the Facility Limit Opacity to 20 Percent.

The draft permit also fails to assure compliance with the 20% opacity limit at Georgia SIP Rule 391-3-1-.02(2)(n)2. This requirement appears in draft permit condition 3.4.6. However, neither the permit nor the permit record indicate how the permit assures compliance with this limit, as required by 40 CFR §§ 70.6(a)(3)(i)(B) and 70.6(c)(1). The permit should include specific monitoring methods and reporting requirements that are sufficient to assure ongoing compliance with the 20 percent opacity limit consistent with 40 CFR §§ 70.6(a)(3)(i)(B) and 70.6(c)(1) and provide an adequate rationale for the chosen methods in the permit record.

The Division's Response to Environmental Integrity Project Comment V.

Please see The Division's Response to Environmental Integrity Project Comment III.

Specifically to Comment V.A., Condition 3.4.5 is standard permitting language included in permits addressing precautions that should be taken to limit fugitive emissions under *Georgia Rule 391-3-1-.02(2)(n).* The precautions taken to minimize fugitive emissions under this condition are not meant to be a completely detailed or provide a comprehensive list of a facility's fugitive dust prevention methods.

The Division will modify Condition 3.4.5 as follows:

3.4.5 The Permittee shall take all reasonable precautions to prevent fugitive dust from becoming airborne. Fugitive dust sources include, but are not limited to, sources identified by the following Source Codes: PH1, PM1 to PM3, VS, PS, and TLO. Reasonable precautions that should be taken to prevent dust from becoming airborne include, but are not limited to, the following:
[391-3-1-.02(2)(n)1]

a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;

d. Covering, at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dusts; and

e. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

f. Daily blow down of all interior equipment

g. Daily Cleaning of the floor to minimize dust accumulation on the floor.

h. Periodic inspection and maintenance of sawdust and biomass pellet loadout boots as recommended by the manufacturer

Division is adding a new permit condition 5.2.8 which will require the facility to perform a daily visible emission inspection from all fugitive sources and take necessary action if the emission exceeds 10% opacity levels.

5.2.8 The Permittee shall perform a check of visible emissions from all fugitive emission sources including the sources listed in Condition 3.4.5. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each day or portion of each day of operation using procedures a. through c. below except when atmospheric conditions or sun positioning prevent any opportunity to perform the daily VE check. Any operational day when atmospheric conditions or sun position prevent a daily reading shall be reported as monitor downtime in the report required by Condition 6.1.4.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Determine if visible emissions are present at the discharge point to the atmosphere from each of the fugitive sources and record the results in the daily (VE) log.

b. For each check where a source is determined to be emitting visible emissions, the Permittee shall determine whether the emissions exceed a 10% opacity action level. The person performing the determination shall have received additional training acceptable to the Division to recognize the appropriate opacity level and the determination shall cover a period of three minutes. The results shall be recorded in the daily VE log. For sources that exhibit visible emissions of greater than the opacity action level, the Permittee shall comply with paragraph c of this condition.

c. For each source that emits visible emissions greater than the opacity action level, the Permittee shall determine the cause of the visible emissions and correct the problem in the most expedient manner possible. The Permittee shall note the cause of the visible emissions greater than the opacity action level any other pertinent operating parameters, and the corrective action taken in the maintenance log.

The permit also has new excursion requirement in Condition 6.1.7 that pertains to fugitive emissions.

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

iv Any instance in which daily determination of visible emission determination, required by Condition 5.2.8 exceed 20 percent opacity..

v. Specific identification of each period of excursion described in paragraphs i. through iv. of this condition. Include the magnitude, nature and cause of any malfunction (if known), as well as the corrective action taken or preventive measures adopted (if any).

Varn Wood products has incorporated following design and construction elements to reduce fugitive emissions from the process:

- Covers on all conveyors from the dry hammermill to the pellet machines, including elevators and screws feeding the pelletizers
- Design of roofs of the offices in the Pellet Mill building to allow wash down to prevent dust build up
- Double-wall design of the pellet Mill building so that purlins are not exposed and cannot accumulate dust
- Capture and transfer of the fines from the cooler and the discharge from the cooler cyclone in to the burner

In addition to the above design elements it should be noted that Varn maintains " Green Good Label" certification for tracking and tracing of sustainable biomass, which includes independent, accredited third party certification and audit of " green practices". One such required practice is daily blown down of all interior equipment , followed by cleaning of the floor to minimize dust accumulation and the potential for tracking the dust outdoors.

In reference to Comment V.B., the Division believes that design elements incorporated by Varn along with daily housekeeping, along with precautions specified in Condition 3.4.5 in addition to new monitoring Condition 5.2.8 that is included in this draft permit will provide adequate assurance that opacity emissions from fugitive sources are below the specified limit of 20 percent.

VI. The Draft Permit Does Not Assure Compliance with the Requirement to Design and Maintain a Safe Facility Under the Clean Air Act Section 112(r)(1) General Duty Clause.

The draft Title V operating permit for Varn Wood Products also is deficient in that it does not even mention, let alone assure compliance with, Varn Wood Product's general duty under Clean Air Act section 112(r)(1) to design and maintain their facility in a way that prevents the accidental release of any extremely hazardous substance and minimizes the consequences of accidental releases that do occur. This statutory provision, commonly referred to as the "General Duty Clause," qualifies as an "applicable requirement" that must be addressed in Varn Wood Product's Title V permit. The extremely hazardous substance at issue for Varn Wood Products is wood dust, which is flammable and presents an explosion hazard under certain conditions. Dust is present along with other elements that could lead to an explosion at every stage of the pellet-making process. Indeed, the risk of explosions and fires caused by combustible dust at wood pellet plants is well-documented in the wood pellet industry. Due to the significant risk posed by combustible dust at the Varn Wood Products Plant, it is critical that the draft Title V permit be amended to state that the General Duty Clause applies to the facility's handling of explosive dust, and to require the facility to perform specific steps that are sufficient to ensure that workers and others who live, work, recreate, or simply commute in the facility's vicinity are

protected from the dangers posed by combustible dust. The permit also must include monitoring, recordkeeping, and reporting to assure the facility's compliance with these requirements.

Wood dust at Varn Wood Products easily qualifies as an "extremely hazardous substance" that is subject to the General Duty Clause. According to Clean Air Action section 112(r)(1), the General Duty Clause applies to "owners and operators of stationary sources producing, processing, handling or storing any extremely hazardous substances." The legislative history of this provision indicates that an accidental release is one which causes or may cause immediate (or near term) death, serious injury or substantial property damage as the result of exposure to an extremely hazardous substance over limited periods of time. Although the Clean Air Act does not define "extremely hazardous substances," the legislative history provides criteria which EPA may use to determine if a substance is extremely hazardous. Specifically, the Senate Report states that "extremely hazardous substance" would include any agent "which may or may not be listed or otherwise identified by any Government agency which may as the result of short-term exposures associated with releases to the air cause death, injury or property damage due to its toxicity, reactivity, flammability, volatility, or corrosivity." Further, the Senate Report states, "the release of any substance which causes death or serious injury because of its acute toxic effect or as a result of an explosion or fire or which causes substantial property damage by blast, fire, corrosion or other reaction would create a presumption that such substance is extremely hazardous." There is ample evidence that wood dust generated by pellet plants is flammable and can be explosive, leading to death, injury, or substantial property damage.

The only mention of Clean Air Act § 112(r) requirements in the draft Varn Wood Products permit is in draft permit Condition 7.10, but that condition does not address the General Duty Clause in Clean Air Act section 112(r)(1). Rather, that draft permit condition addresses only the requirements of 40 CFR Part 68, which implements the Risk Management Plan (RMP) requirements of Clean Act Act section 112(r)(7). It does not appear that Varn Wood Products is currently subject to RMP requirements; indeed, the draft permit states that the requirements set forth in draft permit condition 7.10 apply only "[w]hen and if the requirements of 40 CFR Part 68 becomes applicable." In any event, draft permit Condition 7.10 does not even mention the facility's General Duty Clause obligations and certainly is not sufficient to assure compliance with Clean Air Act section 112(r)(1).

The only EPA Title V order that addresses what must be included in a Title V permit to assure compliance with the General Duty Clause requirements of Clean Air Act section 112(r)(1) appears to be *In re Shintech, Inc*, Order on Petition (1997). In *Shintech*, the EPA concluded that while the General Duty Clause is an "applicable requirement" for Title V purposes, the Shintech permit did not need to include detailed information regarding how the facility must comply with the General Duty Clause. *Shintech* at 12. Rather, the EPA concluded that it was enough for the Shintech permit to include a generic permit condition consistent with 40 CFR § 68.215. *Id.* Neither 40 CFR Part 68 nor *Shintech* apply in this case, however, because Varn Wood Products is not currently subject to 40 CFR Part 68.60 Thus, it would not make sense to incorporate the language from 40 CFR § 68.215 into the Varn Wood Products permit, and the reasoning provided in the *Shintech* Order does not apply here.

Even if Varn Wood Products were subject to Part 68, simply incorporating the language of 40 CFR § 68.215 would not be enough to assure compliance with the facility's General Duty Clause obligations under Clean Air Act section 112(r)(1). First, there is no indication in either the Part 68 regulations or in the preamble to those regulations that the EPA promulgated those regulations to address how Title V permits are to assure compliance with a facility's General Duty Clause obligations under Clean Air Act section 112(r)(1).61 Indeed, 40 CFR § 68.215 does not even mention the General Duty Clause. A permit that does not identify the source's obligations under section 112(r)(1) obviously cannot assure the source's compliance with those obligations. Furthermore,

many years after *Shintech*, the D.C. Circuit confirmed in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), that a permitting authority is obligated to add monitoring, recordkeeping, and reporting requirements to a source's Title V permit where needed to assure the source's compliance with an applicable requirement. Clarifying a source's obligations under the Clean Air Act's General Duty Clause and developing monitoring, recordkeeping, and reporting sufficient to assure a source's compliance with those obligations falls squarely within what Congress intended by enacting the Title V operating permit program in 1990. The fact that a source's specific obligations under this requirement may be unique from those of other sources strongly supports the argument that a Title V permit must clarify what the source's obligations are and incorporate any conditions needed to assure the source's compliance with those obligations.

To assure Varn Wood Product's compliance with the General Duty Clause, the permit must be revised to, at a minimum:

(1) Identify Clean Air Act section 112(r)(1) as an applicable requirement with respect to the facility's handling of combustible dust.
(2) Specifically require the facility to prepare a hazard analysis identifying the hazards associated with explosive dust and the facility's processes, potential fire and explosion scenarios, and the consequences of a fire or explosion.
(3) Establish specific design and operation standards that the facility must meet to prevent a dust-related fire or explosion.
(4) Establish recordkeeping and reporting requirements sufficient to demonstrate that the facility is meeting its General Duty Clause obligations.

It is important to recognize that regardless of what detail is ultimately included in the final permit, the facility must comply with the General Duty Clause and may be subject to an enforcement action for non-compliance. In recent years, the EPA has been enforcing the General Duty Clause against non-compliant facilities and has levied substantial penalties against significant violators. Unfortunately, these enforcement actions typically take place after an accident occurs. When enforcement actions are brought, some facility operators contend that they were unaware of the General Duty Clause or of its applicability to their facility. By adding sufficiently detailed requirements to the Varn Wood Products permit to put facility operators on notice of the facility's General Duty Clause obligations, Georgia EPD would decrease the likelihood of a violation, thereby decreasing the likelihood of a serious accident causing death, serious injury, or significant property damage. Thus, regardless of whether Georgia EPD agrees that the Clean Air Act *requires* that the permit include additional detail regarding the facility's General Duty Clause obligations (which we believe it does), we urge the Georgia EPD to add these details to the Varn Wood Products permit.

The Division's Response to Environmental Integrity Project Comment VI.

The General Duty Clause is not considered as an Applicable Regulation for Part 70 purposes. In their order regarding Shintech (Louisiana), EPA confirmed general conditions regarding Part 68 and 112(r) are sufficient and detailed conditions are not needed.