Facility Name: **Georgia Biomass, LLC**
City: Waycross
County: Ware
AIRS #: 04-13-29900053

Application #: TV-45813
Date Application Received: June 18, 2018
Permit No: 2499-299-0053-V-03-0

Program	Review Engineers	Review Managers
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Toxics	n/a	n/a
Permitting Program Manager		Eric Cornwell

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: Georgia Biomass, LLC

2. Parent/Holding Company Name

Georgia Biomass, LLC

3. Previous and/or Other Name(s)

None

4. Facility Location

3390 Industrial Boulevard, Waycross (Ware County)

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

The facility is located in an attainment area (not classifiable) for all pollutants.

B. Site Determination

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

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
2499-299-0053-V-02-0	12/19/2013	Initial Title V Permit
2499-299-0053- V-02-1	2/17/2014	Replace media in RTO units 502(b)(10) change
2499-299-0053- V-02-2	11/12/2014	Firewater pump classification change Minor Modification without construction
2499-299-0053- V-02-3	5/22/2017	Install baghouse on an existing dry chip storage silo 502(b)(10) change

D. Process Description

1. SIC Codes(s)

2499 - Wood Products Not Elsewhere Classified (NEC)

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

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

2. Description of Product(s)

The facility makes wood pellets from yellow southern pine logs, wood chips and saw dust from other lumber mills.

3. Overall Facility Process Description

Georgia Biomass operates a wood pellet manufacturing facility (aka pellet plant) located in Waycross, Georgia. The facility includes a wood fiber receiving and storage area, two direct-fired wood chip dryers, two hammermill lines with five hammermills in each line, five pelletmills and five pellet coolers and wood pellet loadout area. The Waycross facility processes southern yellow pine logs into fuel pellets. Tree length pulpwood logs are received via trucks. The logs are stored to promote air drying. A log loader transfers the logs into a debarker drum. The bark is separated and used as fuel in the heat energy systems providing heat for drying the wood chips in the dryers.

The debarked logs are chipped into small chips. Oversized chips are removed using a jet screen located downstream from the chipper and the chips stream is pneumatically conveyed to a cyclone to drop out the chips and control PM emissions from the chipping operation. The chips are fed into two direct-fired rotary dryers where in the moisture level in the chips is reduced from around 50% to 10%. Heat for the chip dryers is obtained from the two 193 MMBtu/hr bark fueled heat energy systems. The dried wood chips pass through 10 hammermills in two hammermill lines, which further grind the wood chips into wood flakes before they are compressed into pellets on a rotating press roll (pellatizer/pelletmill). The pellets are cooled in five counter-flow pellet coolers before they are loaded into rail cars where they are transported to Savannah for storage prior to shipment via vessels to be used in utility power boilers in Europe. The Waycross facility can produce up to 826,733 tpy of wood pellets.[1] The Waycross facility can operate continuously (8,760 hr/yr).

Wood Fiber Receiving and Storage Area

Wood fiber is trucked to the Waycross facility as tree-length pulpwood logs (southern yellow pine) or short wood. The trucks travel on unpaved roadways to the wood fiber receiving area. The trucks are weighed upon arrival at the facility. Log trucks are unloaded via mobile equipment to the on-site log storage area, with a storage capacity of 150,000 tons.

[1] Production capacity design of 750,000 metric tons per year of wood pellets.

The logs are stacked and remain in the gravel storage area for a minimum of 20 days to promote air-drying before entering the pelletizing process. Incoming logs have a moisture content of approximately 50-55%, and Georgia Biomass estimates that 5-10% moisture reduction is achieved in the storage area.

A log loader transfers wood from the log storage area according to the first-in first-out principle. The log loader transfers the load onto the in-feed table of the debarking drum, which removes the tree bark from the logs processed in the drum. The debarking drum has a log capacity of 320 tons per hour (tph). Released bark passes through slots in the drum shell and falls onto a conveyor underneath. Separated bark is transported to the conditioning unit where it is screened and sized in a hog to particles suitable for burning in the hot gas generators (aka Heat Energy System) of the green wood chip drying process.

Debarked logs are transported on conveyors to the chipping process via a stone trap and metal detector. These devices are necessary for removing rocks and metals that can potentially enter the system with the logs.

Bark from the process is transported on a closed conveyor to the scalping screen for separation of larger and smaller particles. The larger particles are transferred to the bark hog for resizing into smaller particles that are combined with the bark particles transported to the bark storage area via a closed conveyor.

The A-frame type bark storage building includes a 1.5 day retention time (2,500 tons capacity) and is fully enclosed.

The distribution of bark inside the storage area is completed by an overhead shuttle conveyor. Reclaiming of the bark is completed by one screw conveyor at the bottom that feeds the bark to a conveyor along the side of the storage area. The conveyor transfers the bark to the sand screening area and the sand-screened bark are transferred on a closed conveyor to the combustor feed bins.

A truck dumper is used to provide make-up bark to the furnaces, as bark from the logs is not sufficient for the fuel supply if the bark moisture content exceeds 40%. The truck dumper capacity is 100 tph with a hopper capacity of approximately 1.5 truck loads. The bark received is transported on closed conveyor to the main bark stream at the inlet of the scalping screen. The truck dump system is also able to receive sawmill residuals (chips, sawdust, and shavings) as a future fuel option.

Green Wood Chip Grinding System

A green wood chip grinding system chips the logs to produce Micro Chips. Debarked logs are transferred to the variable speed in-feed conveyor that controls the flow to the chipper chute. The multi-knife disc chipper is set to produce Micro Chips, which requires clean cuts by sharp knives. The knives turn dull rather quickly lowering the percentage of acceptable chips within a few hours. The knives are changed for regrinding approximately every 4 to 6 hours, and complete knife change duration is 45 minutes. The Micro Chips are transferred to a cyclone by the speed of the chipper disc, and the chips are collected in a surge tank underneath the cyclone.

The cyclone rejects are sent back to the chipper. The green wood chip grinding system capacity is 330 tph. The cyclone is treated as a pollution control device for PM control for the jet screen system.

Chips from the surge tank are transported on closed conveyor to the inclined shaker type chip screen where the chips are screened for oversized chips and fines. The oversized fraction are resized in a re-cutter or reslicer and returned back to the accepted chip stream. Fines are discharged to the bark conveyor if there is sand or grit present.

Screened chips are transferred on closed conveyor to the three day enclosed chip storage. The A-frame type building is utilized for the chip storage area with distribution conveyor on top and screw conveyors at the bottom. The chip storage area has a three day retention time for wood chips (25,000 tons capacity). The chips have a moisture content of 45-50% in the pile area. Reclaimed chips are conveyed to the chip dryer system receiving bins.

Dryer Lines

Two direct-fired rotary drum dryers (DRY1 and DRY2) process the wood chips to approximately 10% moisture content in preparation for further grinding and pelletizing. Micro Chips are transferred from the chip storage area to the in-feed hoppers of the two single pass drum dryers. The in-feed hoppers are equipped with metering valves to feed a constant flow of microchips into the feed chamber of each dryer drum, where the chips are mixed with hot gases from the combustors (Heat Energy System). The hot gas enters the feed chamber at approximately 950-1,000º F.

The dryers are specially designed to ensure good mixing of chips with hot gases and sufficient retention time (15 to 20 minutes). The reduction in moisture content from 50% to 10% in the drum dryers result in the hot gas temperature decreasing to approximately 250-280º F at the drum outlet. The moisture rich gases mixed with dried chips are transferred to the dryer cyclones to separate chips from the gas. The hot chips are fed to conveyors for transport to a storage silo before the pelletizing process. The gases continue to the gas cleaning system to remove particulates, oxidize carbon monoxide and destroy organic volatiles. Also, a part of the gases are recycled to the in-feed control temperature.

Heat for the chip dryers are provided by two 193 MMBtu/hr bark fuel heat energy systems (HES1 and HES2). The heat energy systems are supplied with bark transferred via covered conveyor from the enclosed bark storage. The refractory type systems are equipped with reciprocating sloping grates for fuel spreading and controlled combustion. Bark is fed from the metering bin to the grate where the bed is formed and combustion occurs. Ash from the grate is removed in hoppers (2 tons capacity) and taken to a container for landfill disposal. The upper part of the heat energy systems is sized to provide sufficient residence time for the gases to ensure complete combustion and low carryover of fly ash. Fly ash escaping with the hot gases is separated in an outer chamber and combined with the heat energy systems bottom ash.

For bark combustion start-up in each heat energy system, a natural gas burner with a maximum heat input capacity of 10 MMBtu/hr is used. Each heat energy system (HES1 and HES2) has a separate natural gas burner.

A slip stream of hot gases generated from the heat energy systems is then transferred to the steam generating units.[2] Each hot gas slip stream has a maximum heat input capacity of 14 MMBtu/hr based on process design. The steam generation capacity for each unit is 12,125 lb/hr. The low pressure steam (150 psi) is used in the pelletizing process to soften the wood fiber/flakes prior to compression into pellets. The feed water for the boiler is produced in water softener units and cleaned to the degree necessary for the boiler and steam systems.

Exhaust gases from the dryers contain VOC, HCl and HAPs formed during the drying process due to increased temperature. Additionally, remaining particulate matter (PM) is also included in the exhaust gas. The gas control is completed in two stages and begins with wet electrostatic precipitators (WE01 and WE02) that remove primarily PM and HCl but also absorb some exhaust gases (including NO_X). The concentrated particulates substance collected and passed through centrifuge is mixed with bark for burning in the combustors or discharged for landfill disposal. Regenerative thermal oxidizers (RTO1 and RTO2) are used as the second control stage subsequent to the WESP for controlling VOC, HAPs and CO emissions in the exhaust gas stream.

Each dryer line includes a dedicated WESP and RTO, sharing a common water sump and handling system (filtration and controls minimize water discharges). Each RTO unit includes four burners (maximum heat input capacity of 6.0 MMBtu/hr, each) that combust natural gas to oxidize volatile organics, HAPs and CO in the exhaust gas to form carbon dioxide and water above 1,500º F.[3] The RTO system also reduces not only filterable but also condensable particulate matter (CPM). Controlled exhaust is released to the atmosphere through separate exhaust stacks.

Emergency abort stacks are present for each of the heat energy systems. If the heat energy system emergency stacks open, uncontrolled potential emissions will result for a short time period. The bark fuel feeders will shut down as will the combustion air fans in the system. For each heat energy system, an abort to the emergency stack means an emergency shutdown is required. Georgia Biomass assumes that the uncontrolled potential emissions will occur for up to 15 minutes during the emergency shutdown. The steam generating units will receive the heat energy system gases after 15 minutes and the emergency abort stacks will be closed. Therefore, remaining gases transferred into the steam generating units will be vented to the WESP and RTO for controls.

Emergency abort stacks are also installed for the dryers. If the dryer's emergency stacks open, uncontrolled potential emissions will result for a short time period. Georgia Biomass assumes the emissions will occur for a shorter period (up to 10 minutes) than the emergency shutdown period for the heat energy systems due to the dryer abort process causing the wood chips feed to the dyer to stop and the heat energy systems to shutdown. The potential uncontrolled emissions will also decrease rapidly since the wood chips feed will stop, and gases from the heat energy systems into the dryers will be discontinued during abort periods.

[2] Two total steam generating units are used, one associated with each dryer line.

[3] Initial compliance testing completed in October 2011 established the minimum combustion temperature of RTO1 at 1535.22º F and RTO2 at 1533.75º F.

Pelletizing Lines

Dried microchips are conveyed by an enclosed belt conveyor to a 1,600 m^3 (56,503 ft^3) dry chip storage silo. The storage capacity varies depending on the bulk density of the chips. The dry storage silo allows for moisture content equalization (10%). A silo vent allows for heat condensation from the dried microchips to evaporate. Exhaust from the dry chip storage silo (SS2) is controlled by a baghouse (CBH2) for PM control and by a regenerative catalytic oxidizer (RCO2) for VOC and HAPs control.

Dry chips are metered into two grinding lines. Sealed chain conveyors transport dry chips from the dry chip storage silo into the hammermill building. The chain conveyors are sealed with continuous air aspiration for dust and fire control. Material handling of the wood chips and pellets is accomplished mechanically with sealed chain conveyors and augers. Wood dust collected from the conveyance system is controlled by the aspiration system baghouse (CBH2) and by a regenerative catalytic oxidize (RCO2) for VOC and HAPs control.

The ground wood fiber is conveyed to a single 1,600 m^3 (56,503 ft^3) storage silo (SS1). The storage capacity may vary depending on the bulk density of the ground wood fiber and the fill factor. A ventilation system in the grinding and pellet storage silo helps minimize condensation. The silo provides equalization time and surge capacity for machinery downtime. Similar to the dry chip storage silo, a bin vent for the silo allows for heat condensation from the ground wood fiber to evaporate. Fugitive emissions from the silo are assumed to be negligible due to minimal air displacement from the transfer of ground wood fiber into the silo. A PM emission from this silo is controlled by the baghouse CBH1 and by the regenerative catalytic oxidize (RCO1) for VOC and HAPs control.

Steam is applied to soften the wood fiber as it is drawn into the pelletizer lines. Five separate pelletizer lines receive the wood fibers. Three of the pelletizer lines include four separate pelletizing machines, and two of the pelletizer lines include five separate pelletizing machines.

The wood fiber is compressed by pelletizer rotating press rolls, exiting through the 30 inch diameter sizing dies that are perforated with 3,500 round holes. The pressing is completed by two rollers on the inside of the die that feeds the ground material into the holes of the die creating a high pressure. The resultant heat of friction activates the wood lignin as the wood is compressed, effectively bonding the wood fiber into a durable pellet. The set of pellet presses compress the ground chips into 6-12 mm diameter pellets with a length of 15 to 32 mm. Each press produces about 5 metric tons of pellets per hour. The added steam and heat of friction release during pressing maintain the pellet temperature at approximately 200 to 250º F and eliminate any need for adhesives or bonding agents.

Pellets exiting the pelletizer mills are conveyed to a counter-flow pellet cooler with each line including one pellet cooler (PCL1-5). Pellet cooling is necessary to ensure good pellet structural stability.

Each pellet cooler uses counter-flow outside air, drawn into the pellet discharge bottom of the cooler, to rapidly cool the pellets. The retention time of the cooler is approximately 30 minutes, and the pellet temperature decreases to 100º F.

Hot exhaust air from each pellet cooler is ducted to a control system including a combined high efficiency cyclone and baghouse. Collected wood dust is discharged via a bottom airlock directly to the sealed chain conveyor delivering wood fiber to the pelletizer mills.

Entrained dust consists of coarser wood dust with moderate loadings due to the slow mechanical handling and transport of the finished pellets. The pellets are not subjected to aggressive tumbling or pneumatic transport that could result in dust generation. Five separate pellet cooler baghouses (PBH1-5) control PM emissions from each of the pellet coolers. The pellet cooler exhaust and the conveying equipment aspiration system for the pelletmills and pellet coolers are directed to a regenerative catalytic oxidize (RCO2) for VOC and HAPs control.

Pellet Loadout Area

Cooled pellets exit the counter-flow pellet cooler via conveyors and be transported to three out-loading hoppers that transfer the pellets into railcars. Each pellet storage bin has a capacity of 110 tons and is located above one of the three parallel rail spurs. Each railcar transports approximately 90-100 tons of wood pellets. The maximum potential loadout rate for the railcars is 400 tph. The three out-loading hoppers are sealed with the dust aspiration air exhausted to a single compact filter (RCF1).

Miscellaneous Equipment

Two diesel-fired emergency generators (EG01 and EG02) are utilized for the pellet production operations to provide emergency power to the heat energy system and the dryers during loss of electricity from the local grid.

The dryer emergency generator (EG01) and pelletizing emergency generator (EG02) rated at 500 kW and 250 kW are installed at the Waycross facility. Each unit is assumed to operate no more than 500 hr/yr for the purpose of estimating potential emissions. NSPS Subpart IIII also limits operations for routine maintenance and testing to 100 hours per year for each emergency generator.

A fire water pump engine (175 hp) is also installed for fire protection of the facility and for non-emergency use. The unit (FP01) is also diesel-fired and is assumed to operate no more than 500 hr/yr for the purpose of estimating potential emissions. NSPS Subpart IIII requires the use of ultra low sulfur diesel fuel in the emergency generators and the firewater pump with a sulfur content not exceeding 15 ppm.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

The facility has potential to be a major source under PSD/NSR regulation for NOx, CO and VOC. The facility has accepted emission limits of 249 tons per year for these pollutants in order to be minor source under the PSD rules. The permit does not have a NOx or VOC RACT avoidance limits since the facility is located in an attainment area for all pollutants.

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

The facility is has potential to be a major source of HAPs. The facility has accepted limits of 9.9 tpy for any single HAP and 24.9 tpy for total HAP emissions to be considered a synthetic minor source for HAPs.

The MACT standards that apply to sources at the Pellet Mill are the RICE MACT (to the emergency generators and the fire pump engine) and the area source Boiler MACT to the Heat Energy Systems at the facility. The plywood and composite wood product MACT (40 CFR 63 Subpart DDDD) does not apply to the dryers since the facility is not a major source of HAPs.

4. Program Applicability (AIRS Program Codes)

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

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

NOx, CO and VOC emission from the facility is limited to 249 tons per year each for PSD avoidance. HAP emissions are limited to less than 10 tons per year for individual HAPs and less than 25 tons per year for total HAPs for avoiding major source MACTs.

B. Applicable Rules and Regulations

Not applicable

C. Compliance Status

The facility appears to be in compliance with the PSD and major source MACT avoidance limits.

D. Permit Conditions

Condition 2.1.1 limits NOx, CO and VOC emissions from the facility is limited to 249 tons per year each for PSD avoidance.

Condition 2.1.2 limits individual HAP emissions to less than 10 tpy and total HAP emissions to less than 25 tpy for major source MACT avoidance.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
LC01	Wood chip Screen	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.1, 3.4.2, 3.4.4	CYC1	Cyclone
HES1	193 MMBtu/hr Heat Energy System 1	391-3-1-.02(2)(d) 40 CFR 60 Subparts A & Db 40 CFR 63 Subparts A and 6J PSD avoidance	2.1.1, 2.1.2, 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.4, 3.3.5, 3.3.10, 3.3.11, 3.3.12, 3.4.1, 3.4.5, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 5.2.1, 5.2.2, 5.2.3, 5.2.8 , 5.2.7, 5.2.13, 5.2.14, 5.2.16, 5.2.17, 6.1.7b, 6.1.7c, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7	WE01 RTO1	Wet ESP Regenerative Thermal Oxidizer
HES2	193 MMBtu/hr Heat Energy System 2			WE02 RTO2	Wet ESP Regenerative Thermal Oxidizer
DRY1	Rotary Drum Dryer 1	391-3-1-.02(2)(e) PSD avoidance	2.1.1, 2.1.2, 3.2.1, 3.2.2, 3.2.3, 3.3.10, 3.4.2, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 5.2.1, 5.2.2, 5.2.3, 5.2.7, 5.2.8, 5.2.14, 5.2.16, 5.2.17, 6.1.7b, 6.1.7c, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.11, 6.2.12.	WE01 RTO1	Wet ESP Regenerative Thermal Oxidizer
DRY2	Rotary Drum Dryer 2			WE02 RTO2	Wet ESP Regenerative Thermal Oxidizer
DCS	Dry Chip Storage Silo	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.2.5, 3.4.1, 3.4.2, 5.2.4, 5.2.6, 5.2.8, 5.2.9, 5.2.13, 5.2.14 and 5.2.15	DCS1 RC01	Baghouse Regenerative Catalytic Oxidizer (West)
CE01	Conveying Equipment Aspiration System for Hammermill Lines	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	2.1.1, 2.1.2, 3.2.4, 3.2.5, 3.4.1, 3.4.2, 4.2.3, 5.2.2, 5.2.4, 5.2.6, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 5.2.12, 5.2.13. 5.2.14, 5.2.19 and 6.1.7c.	CBH1 RCO1	Baghouse Regenerative Catalytic Oxidizer (West)
HML	Hammermill Lines 1 and 2 (10 Hammermills)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	2.1.1, 2.1.2, 3.2.4, 3.2.5, 3.4.1, 3.4.2, 4.2.3, 4.2.4, 5.2.2, 5.2.4, 5.2.6, 5.1.3, 5.2.2a, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 5.2.12, 5.2.14, 5.2.17, 5.2.18, 6.1.7c, 6.2.2, 6.2.3, 6.2.4, 6.2.5	HBH1 to HBH 10 RCO1	Baghouses Regenerative Catalytic Oxidizer (West)
FS	Fiber Storage Silo	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.2.5, 3.4.1, 3.4.2, 5.2.4, 5.2.6, 5.2.8, 5.2.9, 5.2.10. 5.2.11 and 5.2.12	CBH1 RCO1	Baghouse Regenerative Catalytic Oxidizer (West)
CE02	Conveying Equipment Aspiration System for Pelletmill/Pellet Cooler Lines	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	2.1.1, 2.1.2, 3.2.4, 3.2.5, 3.4.1, 3.4.2, 4.2.3, 5.2.2, 5.2.4, 5.2.6, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 5.2.12, 5.2.14, 5.2.19 and 6.1.7c.	CBH2 RCO2	Baghouse Regenerative Catalytic Oxidizer (East)
PML PCL	Pelletmill (5 Lines) Pellet Cooler (5 lines)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	2.1.1, 2.1.2, 3.2.4, 3.2.5, 3.4.1, 3.4.2, 4.2.3, 4.2.4, 5.1.3, 5.2.2a, 5.2.4, 5.2.6, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 5.2.12, 5.2.14, 5.2.18, 5.2.19 6.1.7c, 6.2.2, 6.2.3, 6.2.4, 6.2.5	PBH1 to PBH5 RCO2	Baghouses Regenerative Catalytic Oxidizer (East)
PA01	Pelletizing Area Vacuum System	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.1, 3.4.4, 5.2.4, 5.2.5, 5.2.6, 6.1.7c, 5.1.3	PAB1	Baghouse

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
RL	Railcar Loadouts (3)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.1, 3.4.2, 3.4.4	RCF1 to RCF3	Compact Filters
FP01	175 hp Fire Water Pump Engine – diesel fired	391-3-1-.02(2)(b) 40 CFR 60 Subparts A and IIII 40 CFR 63 Subparts A and ZZZZ	3.3.2, 3.3.3, 3.3.6, 3.3.7, 3.3.8, 3.3.9, 3.4.1	N/A	N/A
EG01	500 kW Diesel fired Emergency Generator - Dryers	391-3-1-.02(2)(b) 40 CFR 60 Subparts A and IIII 40 CFR 63 Subparts A and ZZZZ	3.3.2, 3.3.3, 3.4.1, 6.1.7b, 6.2.9, 6.2.10 , 8.27.1, 8.27.3	N/A	N/A
EG02	250 kW Diesel fired Emergency Generator - Pelletizing	391-3-1-.02(2)(b) 40 CFR 60 Subparts A and IIII 40 CFR 63 Subparts A and ZZZZ	3.3.2, 3.3.3, 3.4.1, 6.1.7b, 6.2.9, 6.2.10, 8.27.1, 8.27.3	N/A	N/A

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

B. Equipment & Rule Applicability

There is no change to currently applicable rules to the equipment and process at this pellet mill. The equipment listing above lists the rules applicable to various sources at the facility.

Emission and Operating Caps:
PM emissions from the Heat Energy Systems are limited to 0.03 lb/MMBtu of heat input per NSPS Subpart Db. The annual capacity factor for natural gas usage in the Heat Energy Systems is also limited to 10% or less by NSPS Subpart Db. To avoid having to calculate the annual capacity factor, the heat energy system burners are limited to firing biomass only. NOx, CO and VOC emissions from the entire facility are limited to 249 tons/year each for PSD avoidance purposes. VOC and HAPs emissions from the HES/Dryer systems are controlled by the RTO units (RTO1 and RTO2). Emissions of Formaldehyde, HCl or any other single HAP are limited to less than 10 tons/year or emission of total HAPs is limited to less than 25 tons/year to avoid being a major HAPs source for major source MACT avoidance. HAPs, VOC and CO emissions from the hammermills, pelletmills, pellet coolers and conveying equipment aspiration systems are controlled by two RCO (regenerative catalytic oxidizers) so that the facility is not a PSD major source for VOC or HAPs emissions.

HCl emissions from the combustion of wood residue in the heat energy systems (HES1 and HES2) can be estimated using AP-42 emission factor Table 1.6-3 for wood residue combustion. Potential HCl emissions (pre-control emissions) are calculated to be 32 ton per year which is above the major source threshold for HAPs. HCl emission from the HES/Dryer system is controlled by Wet ESP which also controls PM emissions. The efficiency of the WetESP for HCl was shown to be 95% (manufacturer guarantee) in the initial permit application. Using this emission factor the post-control HCl emission from the HES/Dryer stack is estimated at 1.6 tons per year which is well below the 9.9 tons per year synthetic minor HAPs permit limit.

Emission of PM and NOx from each emergency generator and the fire water pump diesel engine is limited to 0.15 g/bhp-hr and 3.0 g/bhp per NSPS Subpart IIII.

In addition CO emission from each emergency generator is limited to 2.6 g/bhp-hr per NSPS Subpart IIII. Per NSPS Subpart IIII diesel fuel fired in each emergency generator and the fire water pump engine shall have sulfur content of 15 ppm or less (Ultra low sulfur diesel fuel), a minimum cetane index of 40 and a maximum aromatic content of 35 volume percent per NSPS Subpart IIII. Per NSPS Subpart IIII each emergency generator is limited to 100 hours of operation per any rolling twelve month for the purpose of maintenance and readiness testing. This limit does not apply to the fire water pump engine since it is used for non-emergency purpose also. Other than maintenance and readiness testing non-emergency operations are not allowed by NSPS Subpart IIII for the two emergency generators.

Rules and Regulations Assessment:

40 CFR 60 Subpart Db

40 CFR 60 Subpart Db – "National Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units," applies to industrial, commercial, and institutional steam generating units with a heat input greater than 100 MMBtu/hr that began construction, modification, or reconstruction after June 19, 1984. The two 193 MMBtu/hr heat energy systems supply heat to the two dryers for chip drying and hot gas to two steam generating units to generate steam for use in the pelletizing process, subjects the heat energy systems to NSPS Subpart Db.

This rule limits SO_2 emissions from an affected facility. Facilities must not discharge any gases that contain SO_2 in excess of 0.20 lb/MMBtu heat input or 8 percent (0.08) of the potential SO_2 emission rate (92 percent reduction) and 1.2 lb/MMBtu heat input per 40 CFR 60.42b(k)(1). Per 40 CFR 60.42b(k)(2), units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2 emission rate of 0.32 lb/MMBtu heat input or less are exempt from the SO_2 emissions limit in 40 CFR 60.42b(k)(1). According to the application, natural gas and wood are the only fuels combusted both of which have very low sulfur content, so SO_2 emissions are less than 0.32 lb/MMBtu heat input, thereby qualifying for the exemption.

This rule also limits the opacity from the heat energy systems (including the dryers) to no greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. This limit is the same as the Georgia Rule (d) opacity limit.

The heat energy systems (including the dryers) are subject to the Particulate Matter emissions limit stated in 40 CFR 60.43b(h)(1) and PM emission limit in Georgia Rule (d).

The heat energy systems (including the dryers) must not discharge any gases that contain PM in excess of 0.030 lb/MMBtu heat input. The PM and opacity standards apply at all times, except during periods of startup, shutdown or malfunction per 40 CFR 60.43b(g).

According to 40 CFR 60.44b(d), the heat energy systems (including the dryers) must not discharge any gases that contain NOx in excess of 0.30 lb/MMBtu heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas. The facility proposes to limit its natural gas usage to an annual capacity factor of 10 percent (0.10) or less, and is therefore not subject to the NOx emissions limit.

Natural gas is used only during startup operations in the Heat Energy System. The heat energy system is restricted to firing biomass fuel except during startup when natural gas can be used.

The facility must install and operate a continuous opacity monitoring system (COMS), for measuring the opacity of emissions discharged to the atmosphere from each of the two main heat energy system/dryer stacks, and record the output of the system per 40 CFR 60.48b(a). Data is to be recorded during calibration checks and zero and span adjustments per 40 CFR 60.48b(k).

The facility must follow the procedures under 40 CFR 60.13 for the installation, evaluation and operation of the COMS. The facility must maintain records of opacity per 40 CFR 60.49b(f). The facility must submit to the Division the performance test data from the initial performance test and the performance evaluation of the COMS using the applicable performance specifications in 40 CFR 60 Appendix B per 40 CFR 60.49b(b).

The facility must record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas and wood for the reporting period. The annual capacity factor is to be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month per 40 CFR 60.49b(d)(1). The facility is also required to submit excess emission reports for any excess emissions that occurred during the reporting period per 40 CFR 60.49b(h)(1).

<u>40 CFR 60 Subpart IIII</u>

40 CFR 60 Subpart IIII – "National Standards of Performance for Stationary Compressions Ignition Internal Combustion Engines," regulates owners and operators of stationary compression ignition internal combustion engines that commence construction after July 11, 2005 where the engine is manufactured after April 1, 2006 for non-fire pumps or is manufactured after July 1, 2006 for fire pumps. Since the 500 kW dryer emergency generator and 250 kW pelletizing emergency generator, and 175 hp fire water pump will use recently manufactured engines, this rule is applicable.

<u>40 CFR 63 Subpart ZZZZ</u>

40 CFR 63 Subpart ZZZZ – "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, regulates owners and operators of various size internal combustion engines, including small engines, at major and area sources. This rule is applicable to the facility emergency generators and fire pump engine.

Since the emergency generators and fire water pump will use recently manufactured engines constructed on or after June 12, 2006, these engines are regulated as new sources under NESHAP Subpart ZZZZ per 40 CFR 63.6590(a)(2)(iii).

To demonstrate compliance with NESHAP Subpart ZZZZ, the compression ignition emergency generator engines and fire pump engine must meet the requirements of NSPS Subpart IIII per 40 CFR 63.6590(c); no other requirements under NESHAP Subpart ZZZZ will apply.

40 CFR 63 Subpart JJJJJJ

EPA determined that the two heat energy systems are subject to the area source boiler MACT (40 CFR 63 Subparts A and JJJJJJ) since a small fraction of heat generated by the heat energy systems is used for steam generation to generate steam used in the pelletizing process. The two HES are classified as existing units based on their construction date and are not subject to a PM limit under this regulation. These systems are subject to work practice requirements consisting of a tune up once every two years and performance of a one-time energy audit/assessment.

Georgia Rule 391-3-1-.02(2)(b) - Visible Emissions

Georgia Rule (b) limits the opacity from all sources to 40 percent, provided that the source is not subject to some other emission limitation under section 391-3-1-.02(2). This rule is applicable to the fire pump engine, the emergency generator engines and the biomass handling and processing operations. The proposed heat energy systems, however, are subject to another opacity limit under Georgia Rule 391-3-1-.02(2)(d) and NSPS Subpart Db.

Georgia Rule 391-3-1-.02(2)(d) – Fuel Burning Equipment

Georgia Rule 391-3-1-.02(d) limits emissions from fuel burning equipment based on heat input capacity.

Although NOx limits only apply to units with heat input capacities greater than 250 MMBtu/hr, PM limits apply to all fuel-burning equipment. In addition, opacity is limited to 20 percent except for one six-minute period per hour of up to 27 percent.

The heat energy systems and dryers are subject to this rule and are subject to the opacity limit and the PM limit specified by the equation in Georgia Rule 391-3-1-.02(2)(d)2(ii). The PM emission limit is based on the following equation:

$P = 0.5 \times (10/R)^{0.5}$

Where: R = heat input of fuel-burning equipment in MMBtu/hr
P = allowable PM emissions in lb/MMBtu

It should be noted that the heat energy systems and dryers are subject to more stringent PM emissions limitation under NSPS Subpart Db.

Georgia Rule 391-3-1-.02(2)(e) – PM Emissions from Manufacturing Processes

Georgia Rule (e) establishes PM limits for all sources if not specified elsewhere. The PM emissions are limited based on the following equations (for equipment constructed or modified after July 2, 1968), where equation (a) applies to sources with a process input rate of less than or equal to 30 ton/hr, while equation (b) applies to sources with a process input rate of more than 30 ton/hr:

(a) $E = 4.10 \times P^{0.67}$ (b) $E = 55.0 \times P^{0.11} - 40$

where: E = allowable PM emission rate (lb/hr)
P = process input weight rate (tons/hr)

This rule is applicable to the biomass and pellets processing and handling systems. Since the heat energy systems and dryers are subject to a PM limit under Rule (d) and NSPS Subpart Db, this rule will not apply to them. This rule will apply to the hammermills, pelletmills and the pellet coolers.

Georgia Rule 391-3-1-.02(2)(g) – Sulfur Dioxide

Georgia Rule (g) specifies the maximum sulfur content in fuels used for combustion. The heat energy systems each will have a heat input capacity greater than 100 MMBtu/hr, and are subject to a fuel sulfur content limit of 3.0 percent for any fuel fired. The natural gas burners, fire water pump engine and emergency generator engines each have a heat input capacity below 100 MMBtu/hr and so are subject to a fuel sulfur content limit of 2.5 percent for any fuel fired.

The fire water pump engine and emergency generator engines are subject to a more stringent fuel sulfur content limitation under NSPS Subpart IIII. Natural gas and wood biomass fired in the heat energy system have a low sulfur content and will comply with the 3% sulfur limit requirement.

Georgia Rule 391-3-1-.02(2)(n) – Fugitive Dust

Georgia Rule (n) requires the facility to take reasonable precautions to prevent fugitive dust from becoming airborne. Operations at the proposed facility, including the biomass handling and storage systems, are covered by this generally applicable rule. The appropriate precautions will be taken to prevent fugitive dust from becoming airborne and ensure that opacity from fugitive dust sources is less than 20 percent as required by this rule.

C. Permit Conditions

Condition 2.1.1 limits the VOC, NOx and CO emissions from the entire facility to 249 tons in any consecutive twelve months. This is a facility wide PSD avoidance limit. A facility wide PSD avoidance emission limit was incorporated in the Title V permit since uncontrolled VOC emissions from the hammermills and pellet cooler have been found to be substantial in other pellet mills where the VOC levels were tested. VOC emissions from the hammermills and pelletmills are controlled by a RCO.

Condition 2.1.2 is the HAPs major avoidance limit and limits emission of any single HAP to less than 10 tons per year and Total HAPs to less than 25 tons per year. This is a major source MACT avoidance limit.

Condition 3.2.1 limits PM emissions from the Heat Energy Systems and Dryer systems to a PSD avoidance limit of 0.047 lbs/MMBtu. The PSD avoidance limit was increased from the limit in the facilities permit in the past to provide operational flexibility with respect to the annual compliance demonstration required by the facilities air quality permit. At this limit the facility continues to be a minor source with respect to PSD rules. This PM limit is less stringent than the NSPS Subpart Db limit of 0.3 lb/MMBTU that applies to PM emissions from the Heat Energy Systems.

Condition 3.2.2 requires the Permittee to operate the Wet ESPs and the Regenerative Thermal Oxidizers (RTOs) at all times the heat energy systems and dryers are operated in order to control VOC and HAPs emission.

Condition 3.2.3 requires the combustion temperature in the RTOs to be at least 1500 ^{o}F or the temperature approved by the Division based on the most recent VOC performance test.

Condition 3.2.4 requires the Permittee to operate and maintain the regenerative catalytic oxidizers (RCOs) whenever the hammermills, pelletmills/pellet coolers and their conveying equipment aspiration system are in operation for PSD avoidance purpose.

Condition 3.2.5 requires the RCOs to operate above 800 °F or above the minimum temperature established during the latest VOC performance test that demonstrated compliance with the VOC emission limit in the permit.

Condition 3.3.1 states that the heat energy systems are subject to all applicable requirements of NSPS Subparts A and Db.

Condition 3.3.2 requires the fire pump engine and the two emergency generator engines to comply with all applicable requirements of NSPS Subparts A and IIII.

Condition 3.3.3 requires the fire pump engine and the two emergency generator engines to comply with all applicable requirements of the RICE MACT (40 CFR 63 Subparts A and ZZZZ).

Condition 3.3.4 requires the Heat Energy Systems HES1 and HES2 to comply with all applicable provisions of the area source boiler MACT (40 CFR 63 Subparts A and JJJJJJ). This determination was made by EPA since heat from the HES is used to generate steam for use in the pelleting process and the HES are classified as boilers.

Condition 3.3.5 requires the Permittee to operate and maintain the HES at all times in a way to minimize emissions per the area source boiler MACT 40 CFR 63.11205(a).

Condition 3.3.6 limits PM emission from the Heat Energy System/Dryers to 0.03 lb/MMBtu, the NSPS Subpart Db PM limit. This is Condition 3.3.11 in the current permit.

Condition 3.3.7 allows only biomass to be fired in the heat energy systems in order to avoid having to calculate the annual capacity factor when natural gas is fired. This condition allows firing of natural gas during startup of the heat energy systems.

Condition 3.3.8 limits the opacity of visible emissions from the Heat Energy Systems to 20% except for a six minute period of more than 27% each hour per NSPS Subpart Db and Georgia Rule (d)3 except during startup, shutdown and malfunction. This is Condition 3.3.13 in the current permit.

NSPS Subpart IIII 40 CFR 63 Subpart ZZZZ requirements for the emergency generator and the fire water pump condition are not specifically listed in this section since these conditions are addressed in Conditions 8.27.1 and 8.27.3.

Condition 3.4.1 limits visible emission from any source in the emission unit table in Section 3.1 of the permit that is subject to Georgia Rule (b) to 40%.

Condition 3.4.2 limits PM emissions from any source in the emission unit table in Section 3.1 that are subject to Georgia Rule (e).

Condition 3.4.3 and 3.4.4 are fugitive dust conditions that are subject to the 20% opacity limit per Georgia Rule (n).

Condition 3.4.5 is the fuel sulfur content in the fuel fired in the heat energy systems per Georgia Rule (g). Biomass fired in the HES has very low sulfur content.

Current Condition 3.5.1 is a one-timer requirement that has been satisfied and is not included in the renewal permit.

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

A. General Testing Requirements

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

B. Specific Testing Requirements

Condition 4.2.1 requires the permittee to conduct PM tests annually for demonstrating compliance with the PSD avoidance PM emission limit for the Heat Energy Systems/Dryer emissions in Condition 3.2.1. If the tested PM emission rate is less than 50% of the PM emission limit in Condition 3.2.1, the emission tests can be repeated every three years. Should the tested rates exceed 50% of the PM emission limit, the testing frequency reverts to annual until such a time the tested rates are less than 50% of the limit. It also requires the Permittee to immediately reestablish the factors using the method described in Condition 6.2.1 if the results of PM tests exceed the currently used factor. The Permittee is required to monitor and record the amount of product dried in the dryer during testing.

Condition 4.2.2 requires the Permittee to conduct NOx and CO performance tests on the heat energy systems and the dryers every three years. It also requires the Permittee to immediately reestablish the factors using the method described in Condition 6.2.1 if the results of NOx or CO test exceed the currently used factor. This condition also requires the Permittee to perform the tests for NOx and CO simultaneously each time a test is required for either pollutant.

Condition 4.2.3 requires the Permittee to conduct source tests for VOC, Formaldehyde, acetaldehyde and methanol at the dryer RTO stack exits and VOC tests on the RCO exit stacks once every three years.

This condition also requires tests for VOC, formaldehyde, acetaldehyde and methanol simultaneously each time a test is required for one of these pollutants. The Permittee is required to continuously measure and record the RTO and RCO temperatures during the test and establish a minimum temperature above which the RTO and RCO must be operated to ensure compliance with the VOC emission limit in Condition 2.1.1

New Condition 4.2.4 requires the Permittee to verify that the control device is operating within the specified operating limits for the Wet ESPs, RTOs and RCOs during the performance tests.

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.

Condition 5.1.2 requires routine maintenance performed on all sources and pollution control equipment at the facility. The maintenance records are required to be kept in a readily accessible fashion and shall be maintained for five years from the date of entry.

Condition 5.1.3 requires the Permittee to maintain an inventory of baghouse filter bags so that an adequate supply of bags is on hand at all times.

B. Specific Monitoring Requirements

Condition 5.2.1 requires opacities from each stack of the heat energy systems and dryers to be continuously monitored using COMS (continuous opacity monitoring system). It also requires the span value for each COMS between 60 and 80 percent per NSPS Subpart Db (40 CFR 60.48b(e)(1)).

Condition 5.2.2 requires continuous monitoring of the combustion temperatures of the RTOs and RCOs, the secondary voltages and secondary current of the wet ESPs.

Condition 5.2.3 describes the equation to be used to calculate the wet ESP total power for each hour of operation.

Condition 5.2.4 requires the Permittee to install, calibrate, maintain and operate pressure drop indicators on most of the baghouses at the facility. It also requires weekly recording of the baghouse pressure drops. This is Condition 5.2.5 in the current permit.

Condition 5.2.5 requires the Permittee to perform daily visible emission (VE) checks on the baghouses listed in Condition 5.2.4.

Condition 5.2.6 requires the Permittee to implement a preventive maintenance program (PMP) for the baghouses at the facility. This Condition 5.2.7 in the current permit.

New Condition 5.2.7 requires the Permittee to calculate three-hour average WetESP secondary power form the monitored secondary voltages and current.

New Condition 5.2.8 requires the Permittee to maintain the RTO temperatures above those established during the most recent compliance test and requires calculation of three-hour rolling averages of the combustion temperatures measured per Condition 5.2.2.

Condition 5.2.9 requires the Permittee to check annually the activity level of catalyst beds in the RCOs to ensure that the removal efficiencies for VOC and HAPs complies with the facilitywide VOC emissions limit of 249 tons per year. This is Condition 5.2.11 in the current permit.

Condition 5.2.10 states the requirements for the core sample test plan required for confirming the destruction efficiency of the catalytic oxidizers and requires submission of the core test sampling plan to EPD before 30 days of the actual testing for review and approval.

Condition 5.2.11 requires the Permittee to take a core sample annually.

Condition 5.2.12 requires the Permittee to replace or clean the catalyst if the core sample test indicates a VOC destruction efficiency of less than 90%as needed. This cleaning or catalyst bed replacement needs to be done within 30 days of receiving the core test sample report that indicates subpar performance (destruction efficiency) of the catalyst beds.

Condition 5.2.13 requires the Permittee to conduct a performance tune up of the heat energy systems once every two years per the requirements of the area source boiler MACT (40 CFR 63 Subpart JJJJJJ). This is Condition 5.2.16 in the current permit.

Condition 5.2.18 in the current permit requires the Permittee to install, calibrate, maintain and operate a non-resettable hour meter to measure and record the hours of operation of the two emergency generators in order to comply with requirements of the engine NSPS (40 CFR 60 Subpart IIII). After the classification change for the fire water pumps they are not subject to this requirement. Conditions 8.27.1 address the requirements of Condition 5.2.18.

C. Compliance Assurance Monitoring (CAM)

Condition 5.2.14 states that the Heat energy systems/Dryers are subject to Compliance Assurance Monitoring (CAM) for PM, VOC and CO since no CEMS are used for monitoring for these pollutants and the HES/Dryers use a control device to control these emissions and post control emission of these pollutants are greater than their respective Title V major source threshold. The Wood Chip Screen (LC01) and the Conveying equipment aspiration systems (CE01 and CE02) are subject to CAM for PM and the Hammermill and Pelletmill lines are subject to CAM for PM and VOC. This replaces current permit Condition 5.2.9 that is CAM for the Heat Energy System and Dryers for PM, HCl, VOC, HAPs and CO.

New Condition 5.2.15 sets VE checks and Operation & Maintenance checks (O&M) as the CAM indicators for PM emissions from the Wood Chip Screen.

New Condition 5.2.16 sets the Wet ESP total power and COMS on the RTO stack as the CAM indicator parameters for PM emissions from the Heat Energy Systems and the Dryers.

New Condition 5.2.17 sets the RTO combustion zone temperature and the RTO O&M checks as the CAM indicator parameters for VOC and CO emissions from the Heat Energy Systems and the Dryers.

New Condition 5.2.18 sets the RCO combustion zone temperature and the RCO O&M checks as the CAM indicator parameters for VOC emissions from the Hammermill and Pelletmill lines.

New Condition 5.2.19 sets the baghouse pressure drops and the O&M baghouse checks as the CAM indicator parameters for PM emissions from the Hammermill and Pelletmill lines.

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 quarterly basis.

Condition 6.1.7b. requires the reporting of the exceedance of the NOx, CO and VOC emission limit in Condition 2.1.1. This section also now requires reporting of the exceedance of the HAPs emission limit in the permit. Opacity exceedance from the Heat energy system exhaust and the emergency generator 12 month total operation hours for maintenance and testing in excess of 100 hours also need reporting.

Standard Condition 6.1.7 requiring specification of excess emission, exceedance and excursion. The excursions requiring reporting include excursions of the minimum operating temperature requirement for the two RTOs (Regenerative thermal oxidizers) and RCOs (Regenerative catalytic oxidizers), Any three-hours average of Total power of wet ESPs that are less than 80% of total power (three hour average values) determined during the most recent performance test and any two consecutive occurrence of visible emissions from the pelletizing area vacuum system baghouse.

B. Specific Record Keeping and Reporting Requirements

Condition 6.2.1 requires the Permittee to calculate monthly NOx, PM and CO emissions from the Heat Energy Systems and Dryers. PM is added to this condition in this permit. This is Condition 6.2.2 in the current permit except for PM.

Condition 6.2.2 requires the Permittee to calculate the monthly VOC, Formaldehyde, Acetaldehyde, and Methanol emissions from the entire facility. This is Condition 6.2.3 in the current permit.

Condition 6.2.3 requires the Permittee to use the data from Conditions 6.2.1 and 6.2.2 to calculate a rolling twelve month total of NOx, PM, CO, VOC, Formaldehyde, Acetaldehyde and Methanol emissions each month in the reporting period for the facility.
Condition 6.2.4 requires the Permittee to notify the Division of an exceedance of the HAP emission limits for a single HAP or Total HAPs specified in Condition 2.1.2.

Condition 6.2.5 requires reporting of the rolling twelve-month total of NOx, VOC and CO emissions from the facility exceeding 249 tons in any month.

Condition 6.2.6 is a recordkeeping requirement for the Heat Energy Systems per the area source boiler MACT.

Condition 6.2.7 requires the Permittee to submit a report every two years per the boiler source MACT requirements regarding tune up of the heat energy system burners. This is Condition 6.2.8 in the current permit.

Condition 6.2.8 requires the Permittee to maintain a record of all actions taken to suppress fugitive dust from sources at the facility. This is Condition 6.2.10 in the current permit.

Condition 6.2.9 is the recordkeeping requirements for the emergency generator engines per the engine NSPS pertaining to the hours of operation for maintenance and testing. This is Condition 6.2.11 in the current permit except for the firewater pump since its use is not restricted to emergency operations only.

Condition 6.2.10 is the recordkeeping requirements for the emergency generator engines per the engine NSPS pertaining to the fuel fired in these engines. This is Condition 6.2.12 in the current permit except for the firewater pump since its use is not restricted to emergency operations only.

Condition 6.2.7 in the current permit pertaining to the initial compliance notification for the Heat Energy Systems is not included in the renewal permit since it has been satisfied.

Condition 6.2.9 in the current permit for submission of the certification of compliance status report of the energy assessment of the heat energy system is not included in the renewal permit since it has been satisfied and is a one-time requirement.

Condition 6.2.11 requires the Permittee to maintain records of the amount (in oven dry tons) of product dried in each dryer on a monthly basis. This Condition 5.2.8 in the current permit.

Condition 6.2.12 requires the Permittee to maintain records of the rolling total (in oven dry tons) of the amount of product dried in each dryer for the last twelve consecutive months each month.

VII. Specific Requirements

A. Operational Flexibility

Not applicable.

B. Alternative Requirements

Not applicable.

B. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

Not applicable.

E. Short-Term Activities

None indicated in the Title V Permit Application.

F. Compliance Schedule/Progress Reports

Not applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

This regulation is not applicable to the facility.

J. Pollution Prevention

Not applicable.

K. Specific Conditions

Not applicable.

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 month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//