PERMIT AMENDMENT NO. 2499-161-0023-V-02-4
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name: **Hazlehurst Wood Pellets, LLC**

Facility Address: **430 Hulett Wooten Farms Road**
Hazlehurst, Georgia 31539 (Jeff Davis County)

Mailing Address: **P. O. Box 1810**
Hazlehurst, Georgia 31539

Parent/Holding Company: **Hazlehurst Wood Pellets**

Facility AIRS Number: **04-13-161-00023**

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

Construction and operation of a new furnace and a dryer controlled by a WESP and RTO, 2 Green Hammermills, 7 Dry Hammermills controlled by cyclofilters and an RTO, 15 presses and 3 coolers controlled by baghouses and an RCO, and a chipper. All permit conditions in Sections 2 through Section 6 of the current permit are replaced. Section 1 of the current permit is updated.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Amendment and Permit No. 2499-161-0023-V-02-0. Unless modified or revoked, this Amendment expires upon issuance of the next Part 70 Permit for this source. This Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in App No. **TV-352816** dated **May 6, 2019**; any other applications upon which this Amendment or Permit No. 2499-161-0023-V-02-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **22** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

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Richard E. Dunn, Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

The Permittee proposes to construct and operate one new furnace, one new dryer, one new chipper, 2 green hammermills, 7 dry hammermills, and 3 pellet lines with a total of 15 presses and 3 coolers. Some of the equipment will be new, some existing. The new wood-fired furnace will be rated at a nominal, approximate 200 MMBTU/hour. Particulate (PM) emissions from the furnace and dryer will be controlled with a wet electrostatic precipitator (WESP). PM emissions from the dry hammermills will be controlled by cyclofilters. PM emissions from the presses and coolers will be controlled by baghouses. Volatile organic compound (VOC) and organic hazardous air pollutant (HAP) emissions from the furnace and dryer will be controlled with a Regenerative Thermal Oxidizer (RTO). VOC and HAP emissions from the dry hammermills, presses, and coolers will be controlled with a Regenerative Catalytic Oxidizer (RCO). The RTO and RCO will each have a gas-fired burner rated at 6 MMBTU/hour. The new dryer has a capacity of 78 oven dried tons per hour, and an annual throughput capacity of 675,000 oven dried tons (ODT). ODT = weight of wood in short tons at 11% moisture, calculated.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide Emission Caps and Operating Limits

2.1.1 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain carbon monoxide (CO) in excess of 249 tons during any twelve consecutive months.
[Avoidance of 40 CFR 52.21]

2.1.2 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain nitrogen oxides (NOx) in excess of 249 tons during any twelve consecutive months.
[Avoidance of 40 CFR 52.21]

2.1.3 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 months.
[Avoidance of 40 CFR 52.21]

2.1.4 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain particulate matter (PM) in excess of 249 tons during any twelve consecutive months.
[Avoidance of 40 CFR 52.21]

2.1.5 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility any single hazardous air pollutant which is listed in Section 112 of the Clean Air Act, in an amount equal to or exceeding 10 tons during any twelve consecutive months, or any combination of such listed pollutants in an amount equal to or exceeding 25 tons during any twelve consecutive months.
[Avoidance of Major Source MACT per 40 CFR 63]

2.1.6 The Permittee shall not process through the dryer (DRY) greater than 675,000 ODT of wood during any twelve consecutive months. ODT = weight of wood in short tons at 11% moisture, calculated.
[Avoidance of 40 CFR 52.21]

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Updated Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
WOOD	Log storage/handling Debarking/screening Chipper Chip piles	391-3-1-.02(2)(n)	3.4.3, 3.4.4, 5.2.7, 5.2.8		
GHM	Green Hammermills (2)	391-3-1-.02(2)(n)	3.4.3, 3.4.4, 5.2.7, 5.2.8		
FUR	Wood fired furnace 200 MMBTU/hr	391-3-1-.02(2)(g) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	3.2.1, 3.2.3, 3.4.1, 3.4.2, 3.4.5, 4.2.1, 4.2.4, 4.2.5, 5.2.1, 5.2.2, 5.2.5, 5.2.6, 5.2.14, 5.2.15, 6.2.1-6.2.7	WESP	Wet Electrostatic Precipitator
DRY	Pellet Dryer 78 ODT/hr	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	2.1.6, 3.2.1, 3.2.3, 3.4.1, 3.4.2, 3.4.3, 3.4.4, 4.2.1, 4.2.4, 5.2.1, 5.2.2, 5.2.5, 5.2.6, 5.2.9, 5.2.14, 5.2.15, 6.2.1-6.2.7	RTO	Regenerative Thermal Oxidizer
HAM1-7	Dry Hammermills (7)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.2.2, 3.2.4, 3.4.1, 3.4.2, 4.2.2, 4.2.4, 5.2.1, 5.2.3, 5.2.4, 5.2.6, 5.2.7, 5.2.8, 5.2.10-5.2.17, 6.2.3-6.2.7	CYFL1-7 RCO	Cyclofilters 1-7 Regenerative Catalytic Oxidizer
PEL1-5	Line 1 Presses (5)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.2.2, 3.2.4, 3.4.1, 3.4.2, 4.2.2, 4.2.4, 5.2.1, 5.2.3, 5.2.4, 5.2.6, 5.2.7, 5.2.8, 5.2.9-5.2.17, 6.2.1-6.2.7	BH1 RCO	Baghouse 1 Regenerative Catalytic Oxidizer
COOL1	Line 1 Cooler				
PEL6-10	Line 2 Presses (5)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.2.2, 3.2.4, 3.4.1, 3.4.2, 4.2.2, 4.2.4, 5.2.1, 5.2.3, 5.2.4, 5.2.6, 5.2.7, 5.2.8, 5.2.9-5.2.17, 6.2.1-6.2.7	BH2 RCO	Baghouse 2 Regenerative Catalytic Oxidizer
COOL2	Line 2 Cooler				
PEL11-15	Line 3 Presses (5)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.2.2, 3.2.4, 3.4.1, 3.4.2, 4.2.2, 4.2.4, 5.2.1, 5.2.3, 5.2.4, 5.2.6, 5.2.7, 5.2.8, 5.2.9-5.2.17, 6.2.1-6.2.7	BH3 RCO	Baghouse 3 Regenerative Catalytic Oxidizer
COOL3	Line 3 Cooler				
HAND	Pellet Handling/storage/ Loadout/silos 1-4	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	3.4.1-3.4.5, 4.2.3, 6.2.4, 6.2.5		

* 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.

3.2 Equipment Emission Caps and Operating Limits

3.2.1 The Permittee shall operate and maintain the WESP and the RTO during all periods in which the furnace (FUR) and the Dryer (DRY) are in operation.
[391-3-1-.03(2)(c)]

3.2.2 The Permittee shall operate and maintain the cyclofilters (CYFL1-7), baghouses (BH1, 2, and 3), and Regenerative Catalytic Oxidizer (RCO) during all periods in which the Dry Hammermills (HAM1-7), Presses (PEL1-15), and Coolers (COOL1-3) are in operation.
[391-3-1-.03(2)(c)]

3.2.3 The 3-hour rolling combustion temperature of the RTO shall be at least 1500°F or the temperature approved by the Division based upon the most recent destruction efficiency test (whichever is higher).
[391-3-1-.03(2)(c)]

3.2.4 The 3-hour rolling combustion temperature of the RCO shall be at least 800°F or the temperature approved by the Division based upon the most recent destruction efficiency test (whichever is higher).
[391-3-1-.03(2)(c)]

3.3 Equipment Federal Rule Standards

Not applicable.

3.4 Equipment SIP Rule Standards

3.4.1 The Permittee shall not cause, let, suffer, permit or allow emissions from any stack, including the Furnace/Dryer RTO stack (S1) or the Dry Hammermill/Press/Cooler RCO stack (S2) the opacity of which is equal to or greater than forty percent.
[391-3-1-.02(2)(b)1.]

3.4.2 The Permittee shall not cause, let, permit, suffer or allow the rate of emissions from the Furnace/Dryer RTO stack (S1) or the Dry Hammermill/Press/Cooler RCO stack (S2) Particulate Matter (PM) in total quantities equal to or exceeding the allowable rate, calculated as follows:
[391-3-1-.02(2)(e)]

$E = 4.1P^{0.67}$; for process input weight rate up to and including 30 tons per hour, or
$E = 55P^{0.11} - 40$; for process input weight above 30 tons per hour

Where:

E = emission rate in pounds per hour
P = process input weight rate in tons per hour

3.4.3 The Permittee shall take all reasonable precautions to prevent dust from any operation, process, handling, transportation or storage facility from becoming airborne. Reasonable precautions that could be taken to prevent dust from becoming airborne include, but are not limited to, the following:
[391-3-1-.02(2)(n)]

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;

d. Covering, at all times when in motion, open bodied trucks that are 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.

3.4.4 The opacity from any fugitive dust source shall not equal or exceed 20 percent.
[391-3-1-.02(2)(n)]

3.4.5 The Permittee shall not burn fuel containing more than 3 percent sulfur by weight in the Furnace (FUR), the Furnace/Dryer RTO, or the Dry Hammermill/Press/Cooler RCO. The Permittee shall comply with this rule by only burning wood or natural gas.
[391-3-1-.02(2)(g)]

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

3.5.1 Routine maintenance shall be performed on all air pollution control equipment. Maintenance records shall be in a form suitable for inspection or submittal to the Division and shall be maintained for a period of five (5) years from date of entry.
[391-3-1-.02(6)(b)1(i)]

3.5.2 The Permittee shall maintain an inventory of baghouse filter bags such that an adequate supply of bags is on hand to replace any defective ones.
[391-3-1-.02(6)(b)1(i)]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

4.1.1 The Permittee shall cause to be conducted a performance test at any specified emission unit when so directed by the Environmental Protection Division ("Division"). The test results shall be submitted to the Division within 60 days of the completion of the testing. Any tests shall be performed and conducted using methods and procedures that have been previously specified or approved by the Division.
[391-3-1-.02(6)(b)1(i)]

4.1.2 The Permittee shall provide the Division thirty (30) days (or sixty (60) days for tests required by 40 CFR Part 63) prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.
[391-3-1-.02(3)(a) and 40 CFR 63.7(b)(1)]

4.1.3 Performance and compliance tests shall be conducted, and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 are as follows:

a. Method 1 shall be used for the determination of sample point locations.

b. Method 2 shall be used for the determination of stack gas flow rate.

c. Method 3 or 3A shall be used for the determination of stack gas molecular weight. Method 3B shall be used for the determination of emission rate correction factor or excess air. Method 3A may be used as an alternative.

d. Method 4 shall be used for the determination of stack gas moisture.

e. Method 5/Method 202 shall be used for determination of total PM emissions, to include condensable particulates + filterable particulates for Rule (e).

f. Method 7 or 7E shall be used for determination of NOx emissions.

g. Method 9 and the procedures of the above referenced document shall be used to determine the opacity.

h. Method 10 shall be used for the determination of CO concentrations.

i. Method 19 shall be used when applicable; to convert particulate matter, carbon monoxide, and nitrogen oxides concentrations (i.e., grains/dscf for PM, ppm for gaseous pollutants), as determined using other methods specified in this section, to mass emission rates (i.e., lb/MM Btu, lb/hr).

j. Method 26 or 26A shall be used to determine Hydrogen Chloride emission concentrations.

k. Method 25A shall be used for the determination of VOC concentrations in the dryer exhaust stacks.

l. NCASI 105.1 shall be used for the determination of methanol, formaldehyde and acetaldehyde concentrations.

m. Modified EPA OTM-26 Interim VOC Measurement Protocol for the Wood Products Industry (July 2007) or (WPP1) shall be used for the calculation and summation of VOC emissions.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

4.1.4 The Permittee shall submit performance test results to the US EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with any applicable NSPS or NESHAP standards (40 CFR 60 or 40 CFR 63) that contain electronic data reporting requirements. This Condition is only applicable if required by an applicable standard and for the pollutant(s) subject to said standard.
[391-3-1-.02)(8)(a) and 391-3-1-.02(9)(a)]

4.2 Specific Testing Requirements

4.2.1 Within 120 days after initial startup, the Permittee shall conduct performance tests for the following pollutants on the Furnace/Dryer RTO stack (S1):

a. Total particulate matter (PM) emissions including condensable and filterable PM

b. NOx

c. CO

d. VOC

e. Formaldehyde

f. Methanol

g. Acetaldehyde

Subsequent testing shall be conducted at least once every 36 months. The performance tests for NOx and CO, and the tests for VOC and organic HAP must be conducted simultaneously each time a test is required for one of these pollutants.

During the performance tests the Permittee shall continuously measure and record the combustion zone temperature for the RTO and the total power in the WESP. These measurements shall be submitted along with the test reports. During the performance testing, the Permittee shall record and submit the amount of product dried (in both actual and bone-dry tonnages per hour) in the dryer. The tests shall be conducted at the maximum anticipated drying rate.
[391-3-1-.02(3)(a)]

4.2.2 Within 120 days after initial startup, the Permittee shall conduct performance tests for the following pollutants on the Dry Hammermill/Press/Cooler RCO stack (S2):

a. Total particulate matter (PM) emissions including condensable and filterable PM

b. NOx

c. CO

d. VOC

e. Formaldehyde

f. Methanol

g. Acetaldehyde

Subsequent testing shall be conducted at least once every 36 months. The performance tests for NOx and CO, and the tests for VOC and organic HAP must be conducted simultaneously each time a test is required for one of these pollutants. During the performance tests the Permittee shall continuously measure and record the combustion zone temperature for RCO. These measurements shall be submitted along with the test reports. During the performance testing, the Permittee shall record the amount of pellets produced (in both actual and bone-dry tonnages per hour). The tests shall be conducted at the maximum anticipated operating rate.
[391-3-1-.02(3)(a)]

4.2.3 Within 120 days after initial startup, the Permittee shall conduct performance tests for VOC on a silo in the equipment group HAND. During the performance testing, the Permittee shall record the amount of pellets produced. The emission factor shall be based on the results of the test from one silo and the facility production divided by 4 (four silos). The tests shall be conducted on a silo that is loaded at a minimum of 25% of the total HAND throughput.
[391-3-1-.02(3)(a)]

4.2.4 If the results of a PM, VOC, HAP, CO or NOx performance test required in this Section 4 exceed the factor currently being used in Section 6, then the Permittee must calculate emissions using the new, higher factor starting on the test date. The Permittee shall also submit a permit application within 180 days after testing, either requesting the higher emission factor or demonstrating that the emission factor derived is not representative of normal emissions.
[391-3-1-.02(6)(b)1(i)]

4.2.5 The Permittee shall not use monitors or test equipment during performance tests that are not used in normal day to day operations of the facility, to adjust/fine tune the burners prior to performance testing. The Permittee shall submit all test data for pre-tests and post-tests conducted before and following the test along with the source test data to the Division upon request.
[391-3-1-.02(3) and 391-3-1-.03(2)(c)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.1 General Monitoring Requirements

5.1.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1]

5.2 Specific Monitoring Requirements

5.2.1 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1]

a. The combustion temperature of RTO and RCO. The temperature monitoring device shall have an accuracy of ±2% (°F).

b. The secondary voltage for each field of the WESP. Such devices shall have a required accuracy of ±2%.

c. The secondary current for each field of the WESP. Such devices shall have a required accuracy of ±2%.

5.2.2 The Permittee shall, using the data required to be recorded by Condition 5.2.1, determine the total power for each hour of operation. Total WESP power shall be calculated using the following equation:
[391-3-1-.02(6)(b)1]

$$P_t = \sum_{i=1}^{n} V_i I_i$$

Where:
P_t = Total Wet ESP power (watts)
V_i = secondary voltage (kV) in wet ESP field i
I_i = secondary current (ma) in ESP field i
n = Total number of fields in ESP
i = ith field in ESP (i =1 to n)

5.2.3 The Permittee shall install, calibrate, maintain, and operate pressure drop indicators on the Dry Hammermill cyclofilters (CYFL1-7) and the Press/Cooler baghouses (BH1, BH2, and BH3). Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements. The Permittee shall read and record the pressure drop at least once per day of operation. A logbook containing these records shall be available for inspection and/or submittal to the Division, upon request. [391-3-1-.02(6)(b)1]

5.2.4 The Permittee shall implement a Preventive Maintenance Program (PMP) for the Dry Hammermill cyclofilters (CYFL1-7) and the Press/Cooler baghouses (BH1, 2, and 3). 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]

a. For baghouses equipped with compressed air cleaning systems, check the system for proper operation. This may include checking for low pressure, leaks, proper lubrication and proper operation of timer and valves.

b. For baghouses equipped with reverse air cleaning systems, check the system for proper operation. This may include checking damper, bypass and isolation valves for proper operation.

c. For baghouses equipped with shaker cleaning systems, check the system for proper operation. This may include checking shaker mechanism for loose or worn bearings, drive components, mounting; proper operation of outlet/isolation valves; proper lubrication.

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

e. Check the cyclone filters for clogging and air leaks

5.2.5 The Permittee shall calculate three-hour average WESP secondary power using data measured per Condition 5.2.2.
[391-3-1-.02(6)(b)1]

5.2.6 The Permittee shall ensure that temperatures in the RTO and RCO combustion zones are maintained at or above the levels required by Conditions 3.2.3 and 3.2.4 on a 3-hour rolling average using a temperature sensor. The Permittee shall calculate the rolling three-hour average combustion temperature using data measured per Condition 5.2.1.
[391-3-1-.02(6)(b)1]

5.2.7 The Permittee shall conduct daily inspections of all sources of fugitive dust emissions, including but not limited to the units listed in Table 3.1 of this permit as subject to Georgia Rule 391-3-1-.02(2)(n). Records of each daily inspection shall be maintained and available for inspection or submittal to the Division upon request. The inspection shall include, at a minimum:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Check of the working condition of dust control measures such as loadout boots.

b. Verify that baghouses, filters and cyclones used to minimize fugitive dust are operating

c. Documentation of any visible emissions present from any fugitive dust source, including but not limited to the green hammermills (GHM1&2), and the wood piles. 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.

5.2.8 The Permittee shall perform daily checks of visible emissions from Log Storage/Handling, Debarking/Screening, Chipper, and Chip Piles (WOOD); Green Hammermills (GHM1&2); Furnace/Dryer RTO stack (S1), and the Dry Hammermill/Press/Cooler RCO stack (S2) while the underlying process equipment is operating at the normal, expected operating rate using the procedures below, except when atmospheric conditions or sun positioning prevent any opportunity to perform a VE check. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal.
[391-3-1-.02(6)(b)1]

a. Determine, in accordance with the procedures specified in paragraph d of this condition, if visible emissions are present at the discharge point to the atmosphere and record the results in the daily VE log. For sources that exhibit visible emissions, the Permittee shall comply with paragraph b of this condition.

b. For each check where a stack is determined to be emitting visible emissions, a qualified observer shall determine whether the emissions equal or exceed a 20% opacity action level, using the procedure specified in paragraph d of this condition. For the purposes of this condition a qualified observer is one that has met the certification requirements of EPA Method 9 – *Visual Determination of the Opacity of Emissions from Stationary Sources*. Also, this determination shall cover a period of six minutes. The results shall be recorded in the daily VE log. For sources that exhibit visible emissions of greater than or equal to the opacity action level of 20%, the Permittee shall comply with paragraph c of this condition.

c. For each occurrence that requires action in accordance with paragraph b of this condition, 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, raw material feed rate, and any other pertinent operating parameters as well as the corrective action taken, in the maintenance log.

d. The person performing the determination shall stand at a distance of at least three stack heights, which is sufficient to provide a clear view of the plume against a contrasting background with the sun in the 140 degree sector at his/her back.

Consistent with this requirement, the determination shall be made from a position such that the line of vision is approximately perpendicular to the plume direction. Only one plume shall be in the line of sight at any time when multiple stacks are in proximity to each other.

5.2.9 The Permittee shall install, calibrate, maintain, and operate systems to monitor the dried wood rate (ODT/hr) exiting the dryer (DRY), and the pellet production rate (ton/hr) through the Coolers (COOLl-3). The data shall be recorded hourly. Performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1]

5.2.10 The Permittee shall develop and implement a Preventive Maintenance Program for the catalytic oxidizer (RCO) to assure that the provisions of Condition 1.1 are met. The program shall be subject to review and, if necessary to assure compliance, modification by the Division. At a minimum, the following operation and maintenance checks shall be made on at least an annual 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]

a. Clean burner

b. Tighten burner valve linkage

c. Visually inspect catalyst bed for plugging. Catalyst bed should be free of particulate matter.

d. Visually inspect the inlet and outlet thermocouples, have thermocouples calibrated for proper operation

e. Visually inspect the inlet and outlet pressure sensors, have sensors calibrated for proper operation

f. Visually inspect crossflow for plugging on burner side. If crossflow is dirty remove and clean with hose and water

g. Visually inspect chamber for cracks

h. Visually inspect process fan rotor for warpage, cracking, abnormal noise, and free spin

i. Rotate the catalyst media annually according to the manufacturer’s recommendations

5.2.11 The Permittee shall prepare a core sampling plan for the catalytic oxidizer (RCO) per manufacturer’s recommendation and submit to the Division thirty (30) days in advance of conducting any core sampling activity required by Condition 5.2.12.

The following information shall be included in the required core sampling plan:
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

a. Location of samples taken.

b. Size of samples taken.

c. Number of samples taken.

5.2.12 The Permittee shall take a core sample of the catalyst bed at approximately one year intervals not to exceed fourteen months between tests per the plan submitted in Condition 5.2.11 and test core sample for catalyst activity. The first such sampling shall occur at 12 months from the from the last performance test.
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

5.2.13 The Permittee shall replace or clean the catalyst per manufacturer's recommendation if the core sample tested per Condition 5.2.12 shows a catalyst removal efficiency of less than 90 percent. This cleaning and/or replacement shall be done no later than thirty (30) days of the facility receiving the test results.
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

5.2.14 The following pollutant specific emission unit(s) (PSEU) are subject to the Compliance Assurance Monitoring (CAM) Rule in 40 CFR 64.

Emission Unit	**Pollutant**
Furnace/Dryer (WESP/RTO)	PM and VOC
Dry Hammermills (CYFL1-7/RCO)	PM and VOC
Presses and Coolers (BH1-3/RCO)	PM and VOC

Permit conditions in this permit for the PSEU(s) listed above with regulatory citation 40 CFR 70.6(a)(3)(i) are included for the purpose of complying with 40 CFR 64. In addition, the Permittee shall meet the requirements, as applicable, of 40 CFR 64.7, 64.8, and 64.9.
[40 CFR 64]

5.2.15 The Permittee shall comply with the performance criteria listed in the table below for the PM emissions from Furnace/Dryer.
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	**Indicator No. 1** **WESP Secondary Power**	**Indicator No. 2** **Water Flow to WESP**
A. Representativeness [64.3(b)(1)]	Total power greater than or equal to 80% of the power during the most recent filterable PM performance test for three consecutive readings	Per test
B. Verification [64.3(b)(2)]	N/A	N/A
C. QA/QC Criteria [64.3(b)(3)]	Routine maintenance and annual calibration checks	N/A

D. Frequency [64.3(b)(4)]	Continuous	Continuous
E. Data Collection [64.3(b)(4)]	Data Logger	Data Logger
F. Averaging Period [64.3(b)(4)]	3 hours	3 hours

5.2.16 The Permittee shall comply with the performance criteria listed in the table below for the PM emissions from the Dry Hammermills, Presses, and Coolers.
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	**Indicator No. 1 Visible Emission**	**Indicator No. 2 Pressure Drop**
A. Representativeness [64.3(b)(1)]	Daily VE check - Action Level 20% or more opacity of Visible	1" to 10" W.C.(for BH1,2,3)
B. Verification [64.3(b)(2)]	N/A	N/A
C. QA/QC Criteria [64.3(b)(3)]	N/A	Pressure gauges are calibrated and maintained per manufacturer specs.
D. Frequency [64.3(b)(4)]	Daily	Daily
E. Data Collection [64.3(b)(4)]	VE log	Pressure drops are recorded electronically by a Data logger
F. Averaging Period [64.3(b)(4)]	6 minutes	N/A

5.2.17 The Permittee shall comply with the performance criteria listed in the table below for the VOC emissions from Furnace/Dryer, Dry Hammermills, Presses, and Coolers.
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	**Indicator No. 1 RTO and RCO Combustion temperatures**
A. Representativeness [64.3(b)(1)]	Thermocouples measure combustion zone temperature; not less than 1500 and 800F.
B. Verification [64.3(b)(2)]	n/a
C. QA/QC Criteria [64.3(b)(3)]	Temperature ranges and minimum temperature are established during performance testing. Thermocouples replaced per manufacturer suggested intervals
D. Frequency [64.3(b)(4)]	Continuous
E. Data Collection [64.3(b)(4)]	Temperature are recorded electronically using a data logger
F. Averaging Period [64.3(b)(4)]	3 hour average

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.1 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and to the EPA. The records shall be retained for at least five (5) years following the date of entry. [391-3-1-.02(6)(b)1(i) and 40 CFR 70.6(a)(3)]

6.1.2 In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emissions control equipment for a period of four hours or more which results in excessive emissions. The Permittee shall submit a written report that shall contain the probable cause of the deviation(s), duration of the deviation(s), and any corrective actions or preventive measures taken.
[391-3-1-.02(6)(b)1(iv), 391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(3)(iii)(B)]

6.1.3 The Permittee shall submit written reports of any failure to meet an applicable emission limitation or standard contained in this permit and/or any failure to comply with or complete a work practice standard or requirement contained in this permit which are not otherwise reported in accordance with Conditions 6.1.4 or 6.1.2. Such failures shall be determined through observation, data from any monitoring protocol, or by any other monitoring which is required by this permit. The reports shall cover each semiannual period ending June 30 and December 31 of each year, shall be postmarked by August 29 and February 28, respectively following each reporting period, and shall contain the probable cause of the failure(s), duration of the failure(s), and any corrective actions or preventive measures taken.
[391-3-1-.03(10)(d)1.(i) and 40 CFR 70.6(a)(3)(iii)(B)]

6.1.4 The Permittee shall submit a written report containing any excess emissions, exceedances, and/or excursions as described in this permit and any monitor malfunctions for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by August 29 and February 28, respectively following each reporting period. In the event that there have not been any excess emissions, exceedances, excursions or malfunctions during a reporting period, the report should so state. Otherwise, the contents of each report shall be as specified by the Division's Procedures for Testing and Monitoring Sources of Air Pollutants and shall contain the following:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)(A)]

a. A summary report of excess emissions, exceedances and excursions, and monitor downtime, in accordance with Section 1.5(c) and (d) of the above referenced document, including any failure to follow required work practice procedures.

b. Total process operating time during each reporting period.

c. The magnitude of all excess emissions, exceedances and excursions computed in accordance with the applicable definitions as determined by the Director, and any

conversion factors used, and the date and time of the commencement and completion of each time period of occurrence.

d. Specific identification of each period of such excess emissions, exceedances, and excursions that occur during startups, shutdowns, or malfunctions of the affected facility. Include the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted.

e. The date and time identifying each period during which any required monitoring system or device was inoperative (including periods of malfunction) except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

f. Certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

6.1.5 Where applicable, the Permittee shall keep the following records:
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(3)(ii)(A)]

a. The date, place, and time of sampling or measurement;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

f. The operating conditions as existing at the time of sampling or measurement.

6.1.6 The Permittee shall maintain files of all required measurements, including continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems or devices. These files shall be kept in a permanent form suitable for inspection and shall be maintained for a period of at least five (5) years following the date of such measurements, reports, maintenance and records.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6 (a)(3)(ii)(B)]

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)(i)]

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)

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 consecutive twelve month total PM, CO, NOx or VOC emissions from the entire facility equal to or exceeding of 249 tons.

ii. Any consecutive twelve month total of any single hazardous air pollutant (HAP) or two or more HAPs emissions from the facility equal to or exceeding 10 tons or 25 tons respectively.

iii. Any consecutive twelve month total dryer production that exceeds 675,000 ODT. ODT = weight of wood in tons at 11% moisture, calculated.

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 instance in which VE exceed the 20% action level (monitored in accordance with Condition 5.2.4) for two or more consecutive days.

ii. Any three-hour average combustion temperature of the RTO or RCO measured and recorded per Condition 5.2.1 below 1,500°F (for RTO) or 800°F (for RCO) or the combustion temperature established during the most recent Division-approved performance test if used to establish Destruction efficiency.

iii. Any three-hour period during which the average total power for the WESP is less than 80 percent of the value determined during the most recent performance test for PM.

iv. Any adverse condition regarding fugitive dust emissions as required per Condition 3.4.3.

v. Any failure to perform the daily inspections of all sources of fugitive dust emissions (monitored in accordance with Condition 5.2.6).

vi. Any instance in which a Dry Hammermill cyclofilter (CYFL1-7) or a Press/Cooler baghouse (BH1, BH2, and BH3) pressure drop reading (monitored in accordance with Condition 5.2.3) is outside of normal ranges for two or more consecutive days.

vii. Any time period that the annual catalyst bed core sampling was not performed as required by Condition 5.2.11.

viii. Any time period that the catalyst was not cleaned or replaced as required by Condition 5.2.12.

6.2 Specific Record Keeping and Reporting Requirements

6.2.1 The Permittee shall keep operating records to determine the total amount of wood dried in the Dryer (DRY), in ODT on a monthly basis. ODT = weight of wood in tons at 11% moisture, calculated. The Permittee shall also keep operating records to determine the total amount of pellets processed through the Coolers (COOL1-3) in actual tons.
[Avoidance of 40 CFR 52.21]

6.2.2 The Permittee shall submit, with the report required by Condition 6.1.4, a semiannual report that contains the following records. The records shall be available for inspection or submittal to the Division upon request and contain:
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

a. The total quantity of wood dried (in ODT) in the dryer (DRY) during each calendar month in the semiannual reporting period.

b. The total quantity of pellets produced (in actual tons) through the Coolers (COOL1-3) for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.

6.2.3 The Permittee shall calculate the monthly NOx and CO emissions from the facility (consisting of the RTO and RCO exhaust) using the records from Condition 6.2.1 and the following equations. All emission factors and calculations shall be kept as part of the monthly records, available for inspection or submittal.
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

$$E_{NOX} = [(EF1_{NOX} \times DRY) + (EF2_{NOX} \times COOL)]/2000$$

$$E_{CO} = [(EF1_{CO} \times DRY) + (EF2_{CO} \times COOL)]/2000$$

Where:

E_{NOX} = Monthly NOx emission in tons
E_{CO} = Monthly CO emission in tons
$EF1_{NOX}$ = Emission Factor (lb NOx/ODT) from the RTO (S1)
$EF1_{CO}$ = Emission Factor (lb CO/ODT) from the RTO (S1)
DRY = Monthly wood production through DRY (ODT)
$EF2_{NOX}$ = Emission Factor (lb NOx/ton) from the RCO (S2)
$EF2_{CO}$ = Emission Factor (lb CO/ton) from the RCO (S2)
COOL = Monthly pellet production through COOL1-3 (tons)

The Permittee shall calculate NOx and CO emissions by using the following emission factors and the equation provided in this condition. If the emissions testing required in Section 4 reveals emission factors higher than these listed below, the Permittee shall comply with Condition 4.2.4

Emission Point	NOx	CO
RTO (S1)	$EF1_{NOX}$ = 0.66 lb/ODT	$EF1_{CO}$ = 0.66 lb/ODT
RCO (S2)	$EF2_{NOX}$ = 0.06 lb/ton	$EF2_{CO}$ = 0.06 lb/ton

ODT = weight of wood in tons at 11% moisture, calculated. The Permittee shall notify the Division in writing if facility-wide NOx or CO emissions exceed 20.7 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month.

6.2.4 The Permittee shall calculate the monthly total PM emissions from the facility (consisting of RTO, RCO, and HAND) using the records from Condition 6.2.1 and the following equations. All emission factors and calculations shall be kept as part of the monthly records, available for inspection or submittal.
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

$$EPM = [(EF1_{PM} \times DRY) + (EF2_{PM} \times COOL) + SILO]/2000$$

Where:

E_{PM} = Monthly total PM emission in tons
$EF1_{PM}$ = Emission Factor (lb PM/ODT) from the RTO (S1)
$EF2_{PM}$ = Emission Factor (lb PM/ton) from the RCO (S2)
DRY = Monthly wood production through DRY (ODT)
COOL = Monthly pellet production through COOL1-3 (tons)
SILO = Monthly potential PM emissions from silos = 3,000 pounds

The Permittee shall calculate PM emissions by using the following emission factors and the equation provided in this condition. If the emissions testing required in Section 4 reveals emission factors higher than these listed below, the Permittee shall comply with Condition 4.2.4

Emission Point	PM
RTO (S1)	$EF1_{PM}$ = 0.30 lb/ODT

RCO (S2)	$EF2_{PM}$ = 0.31 lb/ton

ODT = weight of wood in tons at 11% moisture, calculated. The Permittee shall notify the Division in writing if facility-wide total PM emissions exceed 20.7 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month.

6.2.5 The Permittee shall calculate the monthly VOC, Formaldehyde, Acetaldehyde, Methanol, and other HAP emissions using the records from Condition 4.2.3 and the following equation(s). All emission factors and calculations shall be kept as part of the monthly records, readily available for inspection or submittal. VOC emissions shall be calculated using EPA OTM-26: VOC = [Method 25A VOC as propane + Methanol as methanol + Formaldehyde as formaldehyde + Acetaldehyde as acetaldehyde] – [(0.65) Methanol expressed as propane]
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]

For each pollutant per month using the following equation.

$E_i = [(EF1_i \times DRY) + (EF2_i \times COOL) + (EF3_i \times SILO)]/2000$

Where:

E_i	=	Monthly emission in tons of pollutant
i	=	VOC, Formaldehyde, Acetaldehyde, Methanol, and other HAP
$EF1_i$	=	RTO emission factor (lb/ODT) for each pollutant
DRY	=	Monthly wood production through DRY (ODT)
$EF2_i$	=	RCO Emission Factor (lb/ton) for each pollutant
COOL	=	Monthly pellet production through COOL1-3 (tons)
$EF3_i$	=	Silo emission factor (lb/ton) for each pollutant
SILO	=	Monthly pellet production through SILOS (tons)

Emission Point	VOC	Methanol	Formaldehyde	Acetaldehyde	Other HAP
$EF1_i$ (RTO) (S1)	0.30 lb/ODT	0.006 lb/ODT	0.007 lb/ODT	0.006 lb/ODT	0.01 lb/ODT
$EF2_i$ (RCO) (S2)	0.19 lb/ton	0.0005 lb/ton	0.001 lb/ton	0.0005 lb/ton	-
$EF3_i$ (SILOS)	0.20 lb/ton	0.001 lb/ton	0.002 lb/ton	0.001 lb/ton	-

VOC and HAP emission factors are EPD emission factors reduced by an estimated 95% reduction from the RTOs.

ODT = weight of wood in tons at 11% moisture, calculated.

The Dryer (DRY) VOC and HAP emission factors ($EF1_i$) shall be multiplied by 20 any time the three (3) hour average RTO combustion temperature falls below 1500 ^oF or the target set in the most recent performance test. The hammermill/press/cooler VOC and HAP emission factors shall be multiplied by 20 any time the three (3) hour average RCO combustion temperature falls below 800 ^oF or the target set in the most recent performance test.

The Permittee shall notify the Division in writing if facility-wide total VOC emissions exceed 20.7 tons during any calendar month, if any facility-wide individual HAP emissions exceed 0.83 tons during any calendar month, or if any facility-wide combined HAP emissions exceed 2.08 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month.

6.2.6 The Permittee shall use the monthly NOx, CO, total VOC, formaldehyde, methanol, and acetaldehyde emission data to calculate the 12-month rolling total of each pollutant emissions for each calendar month in the reporting period. These records shall be kept available for inspection or submittal.
[391-3-1-.03(2)(c)]

6.2.7 The Permittee shall notify the Division in writing within 15 days after startup of the new Dryer (DRY).
[391-3-1-.03(2)(c)]