

PERMIT NO. 2499-075-0027-E-01-0

ISSUANCE DATE: 01/28/2021



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: Renewable Biomass Group – Adel Facility

Facility Address: 4409 US Hwy. 41 South
Adel, Georgia 31620 (Cook County)

Mailing Address: 160 Airport Road, Adel Industrial Park
Adel, Georgia 31620

Facility AIRS Number: 04-13-075-00027

is issued a Permit for the following:

Construction and operation of a Wood Pellet Manufacturing Facility

This Permit 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 Permit.

This Permit 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 Application No. 27595 dated July 21, 2020; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **29** pages.



Richard E. Dunn, Director
Environmental Protection Division

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1. General Requirements

- 1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.
- 1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.
- 1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.
- 1.4 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 shall be retained for at least five (5) years following the date of entry.
- 1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

2. Allowable Emissions

- 2.1 The Permittee shall not cause, let, suffer, permit or allow emissions from the entire facility, which contain particulate matter (PM/PM₁₀/PM_{2.5}), volatile organic compounds (VOC), carbon monoxide (CO) or nitrogen oxide (NO_x), each, in an amount exceeding 249 tons during any twelve consecutive months.
[Avoidance of 40 CFR 52.21]
- 2.2 The Permittee shall not cause, let, suffer, permit or allow emissions from the entire facility, which contain any single hazardous air pollutant (HAP) in an amount equal to or exceeding 10 tons during any twelve consecutive months, or any combination of such listed HAP in an amount equal to or exceeding 25 tons during any twelve consecutive months.
[Title V Avoidance for Single and Combined HAP]

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- 2.3 The Permittee shall not process more than 497,000 oven dried tons of wood chips in the wood pellet dryer (ID No. DR1), 337,968 tons of wood chips from the green hammermill (ID No. GHM1), and 246,234 tons of wood chips from the dry hammermills (ID No. DHM1-DHM3) during any twelve consecutive months.
[391-3-1-.03(8)(a) and Georgia Air Toxic Guidelines]

- 2.4 The Permittee shall operate the wet electrostatic precipitator (ID No. WES1) and regenerative thermal oxidizer (ID No. RTO1) during all periods in which the dryer (ID No. DR1) is in operation.
[Avoidance of 40 CFR 52.21 for PM/PM₁₀/PM_{2.5}, VOC, and CO]

- 2.5 The Permittee shall operate the cyclones (ID Nos. CYC1 through CYC8) and regenerative catalytic oxidizer (ID No. RCO1) during all periods in which the associate emission units (ID Nos. GHM1, DHM1 – DHM3, PM1 – PM11, and PC1 – PC3) are in operation.
[Avoidance of 40 CFR 52.21 for PM/PM₁₀/PM_{2.5}, VOC, and CO]

- 2.6 The Permittee shall operate the cyclone (ID No. CYC9) during all periods in which the pellet storage (ID No. PS1) is in operation.
[Avoidance of 40 CFR 52.21 for PM/PM₁₀/PM_{2.5}]

- 2.7 The Permittee shall not fire any fuel other than wood in the dryer (ID No. DR1).
[391-3-1-.03(2)(c); 391-3-1-.02(2)(g)2.(subsumed); and Georgia Air Toxic Guidelines]

- 2.8 The Permittee shall not fire any fuel other than natural gas in the regenerative thermal oxidizer (ID No. RTO1) and regenerative catalytic oxidizer (ID No. RCO1).
[391-3-1-.03(2)(c); 391-3-1-.02(2)(g)2.(subsumed); and Georgia Air Toxic Guidelines]

- 2.9 The Permittee shall comply with all applicable provisions of 40 CFR 60 Subpart A – “General Provisions,” and Subpart IIII – “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines,” for the operation of the emergency fire pump (ID No. FP1).
[40 CFR 60 Subparts A and IIII]

- 2.10 The Permittee shall not cause, let, suffer, permit, or allow emissions from the emergency fire pump (ID No. FP1), which contain in excess of the following:
[40 CFR 60.4205(c) and Table 4 of 40 CFR 60 Subpart IIII]

ID No.	g/hp-hr		
	NMHC+NO _x	CO	PM
75 ≤ Hp < 100	3.5	N/A	0.30
100 ≤ Hp < 175	3.0	N/A	0.22
175 ≤ Hp < 300	3.0	N/A	0.15

NMHC = Non-methane Hydrocarbons
PM = Particulate Matter

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- 2.11 The Permittee shall fire in the emergency fire pump (ID No. FP1) only diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, which is subject to the following per-gallon standards:
[40 CFR 60.4207(b), 40 CFR 80.510(b), and 391-3-1-.02(2)(g)2.(subsumed)]
- a. Sulfur content: 15 parts per million (ppm) maximum.
 - b. Cetane index or aromatic content, as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent.
- 2.12 The Permittee shall comply with the emission standards specified in Condition 2.10 by purchasing an engine certified to the emission standards in that condition.
[40 CFR 60.4211(c)]
- 2.13 The Permittee shall operate and maintain the emergency fire pump (ID No. FP1) according to the engine manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the engine manufacturer.
[40 CFR 60.4206 and 40 CFR 60.4211(a)]
- 2.14 The Permittee shall not operate the emergency fire pump (ID No. FP1) for purposes other than emergency uses, maintenance checks, and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engines. Maintenance checks and readiness testing of each engine is limited to 100 hours per year.
[40 CFR 60.4211(f)(2)]
- 2.15 The Permittee shall comply with all applicable provisions of 40 CFR Part 63, in Subpart A – “General Provisions,” and Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” for the operation of the emergency fire pump (ID No. FP1).
[40 CFR 63 Subparts A and ZZZZ]
- 2.16 The Permittee shall not cause, let, suffer, permit, or allow any emissions from equipment subject to GA Rule (b), which exhibit visible emissions, the opacity of which is equal to or greater than forty (40) percent.
[391-3-1-.02(2)(b)1.]
- 2.17 The Permittee shall not cause, let, suffer, permit, or allow the emission from equipment subject to GA Rule (e), which contains particulate matter (PM) in total quantities equal to or exceeding the allowable rate as calculated using the applicable equation below, unless otherwise specified in this Permit.
[391-3-1-.02(2)(e)1.(i)]

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

Where: E = allowable emission rate in pounds per hour;
P = process input weight rate in tons per hour.

3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions to prevent fugitive dust from becoming airborne. Reasonable precautions that should be taken to prevent dust from becoming airborne include, but are not limited to, the following:

[391-3-1-.02(2)(n)1]

- a. Periodic application of water on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts. The frequency of application of water shall be determined by the facility based on the moisture content of the materials, recent rainfall, and the weather conditions at the facility. The facility shall keep a log of actions taken and make it available for inspection.
- b. Sandblasting must be done indoors; if sandblasting is done outdoors facility will erect a temporary structure to contain the emissions from sandblasting operations.
- c. Covering, at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dusts.
- d. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.
- e. Daily blow down of all interior equipment.
- f. Daily cleaning of the floor to minimize dust accumulation on the floor.

3.2 The opacity from any fugitive dust source shall not equal or exceed 20 percent.

[391-3-1-.02(2)(n)2]

4. Process & Control Equipment

4.1 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)]

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- 4.2 The Permittee shall maintain the combustion zone temperature of the regenerative thermal oxidizer (ID No. RTO1) at 1500 degrees Fahrenheit (1,500°F) until the performance test required by Condition 6.3 is completed. After the performance test, the Permittee shall operate RTO1 with the combustion zone temperature at or above the minimum temperature set point established during the most recent performance test.
[391-3-1-.02(6)(b)1(i)]
- 4.3 The Permittee shall maintain the combustion zone temperature of the regenerative catalytic oxidizer (ID No. RCO1) at 850 degrees Fahrenheit (850°F) until the performance test required by Condition 6.3 is completed. After the performance test, the Permittee shall operate RCO1 with the combustion zone temperature at or above the minimum temperature set point established during the most recent performance test.
[391-3-1-.02(6)(b)1(i)]

5. Monitoring

- 5.1 Any monitoring system or device installed by the Permittee shall be in continuous operation except during calibration checks, zero and span adjustments or periods of repair. 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 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 specifications(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1]
- a. A temperature indicator for the measurement of the combustion zone temperature of the regenerative thermal oxidizer (ID No. RTO1). The temperature monitoring device shall have an accuracy of $\pm 2\%$ (°F). Data shall be recorded continuously when the dryer (ID No. DR1) is in operation. This data shall be used to calculate hourly averages of combustion zone temperature in RTO1. The hourly averages shall be used to calculate the 3-hour rolling average.
- b. A temperature indicator for the measurement of the combustion zone temperature of the regenerative catalytic oxidizer (ID No. RCO1). The temperature monitoring device shall have an accuracy of $\pm 2\%$ (°F). Data shall be recorded continuously when any of the green hammermill (ID No. GHM1), dry hammermill (ID Nos. DHM1 – DHM3), pelletizers (ID Nos. PM1 – PM11), and pellet coolers (ID Nos. PC1 – PC3) are in operation. This data shall be used to calculate hourly averages of combustion zone temperature in RCO1. The hourly averages shall be used to calculate the 3-hour rolling average.

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5.3 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1]

- a. A device for the measurement of total secondary voltage (kilovolts) of each field of the wet electrostatic precipitator (ID No. WES1). Such device shall have a required accuracy of approximately 2%. Data shall be recorded every 15 minutes when the dryer (ID No. DR1) is in operation.
- b. A device for the measurement of total secondary current (milliamps) of each field of the wet electrostatic precipitator (ID No. WES1). Such device shall have a required accuracy of approximately 2%. Data shall be recorded every 15 minutes when the dryer (ID No. DR1) is in operation.
- c. A non-resettable hour meter to continuously measure the number of hours operated during any type of operation, for the fire pump (ID No. FP1). The Permittee shall record the reason why the engine is in operation each time. Data shall be recorded monthly. The monthly total net operating hours, for each type of operating reason, shall be recorded in accordance with Condition 7.7.

[40 CFR 60.4209(a)]

5.4 The Permittee shall, for each day or portion of a day that the regenerative thermal oxidizer (ID No. RTO1), regenerative catalytic oxidizer (ID No. RCO1), or pellet storage cyclone (ID No. CYC9) are operated, conduct a check of visible emissions from each control device. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal, upon request. Should the Permittee be unable to conduct the required VE check when atmospheric conditions or sun position prevent a daily reading, no VE check is required and the Permittee shall indicate such in the VE log. Any operational day when atmospheric conditions or sun position prevent a daily reading shall be reported semiannually as monitor downtime/excursion. The check shall be conducted using the following procedure:

[391-3-1-.02(6)(b)1]

- a. Determine, in accordance with the procedures specified in paragraph c. of this condition, if visible emissions are present at the discharge point to the atmosphere from each of the sources 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 source that emits any visible emissions, 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, the pressure drop, any other pertinent operating parameters, and the corrective action taken in the maintenance log.

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- c. The person performing the determination shall stand at a distance of at least three stack heights, with a clear view of the plume against a contrasting background with the sun in the 140° 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.

5.5 The Permittee shall perform the following applicable operation and maintenance checks on all cyclones (ID Nos. CYC1 – CYC9) and retain a record suitable for inspection or submittal for each week or portion of each week of operation. A checklist or other similar log may be used for this purpose:

[391-3-1-.02(6)(b)1]

- a. Check exterior of the units for holes in the body or evidence of malfunction in interior of the cyclone.
- b. Check hopper for bridging and plugging.
- c. Check particulate transfer device for proper operation to ensure dust removal. 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.

5.6 The Permittee shall develop and implement a Preventive Maintenance Program (PMP) for the regenerative thermal oxidizer (ID No. RTO1) and regenerative catalytic oxidizer (ID No. RCO1) in order 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 the RCO1 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.

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- 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 RCO1 catalyst media annually according to the manufacturer's recommendations.
- 5.7 The Permittee shall prepare a core sampling plan for the regenerative catalytic oxidizer (ID No. RCO1) per manufacturer's recommendation and submit to the Division thirty (30) days in advance of conducting any core sampling activity required by Condition 5.8. The following information shall be included in the required core sampling plan:
[391-3-1-.02(6)(b)1]
- a. Location of samples taken.
 - b. Size of samples taken.
 - c. Number of samples taken.
- 5.8 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 5.7 and test core sample for catalyst activity. The first such sampling shall occur within 12 months after the initial startup for normal operation of the regenerative catalytic oxidizer (ID No. RCO1).
[391-3-1-.02(6)(b)1]
- 5.9 The Permittee shall replace or clean the catalyst per manufacturer's recommendation if the core sample tested per Condition 5.8 shows a catalyst activity level 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]
- 5.10 The Permittee shall perform a check of visible emissions from the truck unloading, whole log pile, drum debarker, chipper, wood chip pile, and green chip screening. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each day or portion of each day of operation using procedures a. through c. below except when atmospheric conditions or sun positioning prevent any opportunity to perform the daily VE check. Any operational day when atmospheric conditions or sun position prevent a daily reading shall be reported as monitor downtime/excursion in the report required by Condition 7.5.
[391-3-1-.02(6)(b)1]
- a. Determine if visible emissions are present at the discharge point to the atmosphere from each of the fugitive sources and record the results in the daily (VE) log.

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- b. For each source that emits visible emissions, 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, any other pertinent operating parameters, and the corrective action taken in the maintenance log.

6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

- a. All 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.
- b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.
- c. The Permittee shall provide the Division thirty (30) days 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.
- d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

6.2 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 Section 2.0 are as follows:

[391-3-1-.02(3)(a)]

- 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.

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- e. Method 5 for the determination of particulate matter emissions, and in conjunction with Method 202 as deemed appropriate by the Division.
- f. Method 201A in conjunction with Method 202 for PM₁₀ and PM_{2.5}. Method 5 in conjunction with Method 202 can be used as an alternative for PM₁₀ and PM_{2.5}.
- g. Method 7 or 7E shall be used for determination of NO_x emissions.
- h. Method 9 and the procedures of the above referenced document shall be used to determine the opacity.
- i. Method 10 shall be used for the determination of CO concentrations.
- j. 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).
- k. Method 26 or 26A shall be used to determine Hydrogen Chloride emission concentrations.
- l. EPA OTM-26 (Interim VOC Measurement Protocol for the Wood Products Industry – July 2007) or “WPP1 VOC” (Wood Products Protocol 1 VOC) shall be used for the calculation and summation of VOC emissions.
 - i. Method 25A shall be used for the determination of VOC concentrations.
 - ii. NCASI 99.02 or Method 308 shall be used for the determination of methanol concentrations.
 - iii. NCASI 99.02 or Method 316 or NCASI 98.01 or shall be used for the determination of formaldehyde concentrations.
 - iv. NCASI 99.02 or SW 846 Method 0011 shall be used for the determination of acetaldehyde concentrations.

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.

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6.3 The Permittee shall conduct the following initial performance testing within 180 days after the initial startup of the associated emission units and control devices. The test shall be conducted at the maximum operating capacities of all the associated emission units and control devices. [391-3-1-.02(6)(b)1(i)]

a. Nitrogen Oxides (NO_x)

i. The dryer (ID No. DR1) and tar buildup:

Test at the regenerative thermal oxidizer (ID No. RTO1) outlet. The test results shall be recorded in pounds NO_x per ton wood processed by DR1 (lbs NO_x/ton wood).

b. Particulate Matter (PM/PM₁₀/PM_{2.5}, must all include condensable PM)

i. DR1 and the tar buildup:

Test at the RTO1 outlet. The test results shall be recorded in pounds per hour (lbs/hr).

ii. The green hammermill (ID No. GHM1), dry hammermill (ID Nos. DHM1 – DHM3), pelletizers (ID Nos. PM1 – PM11), and pellet coolers (ID Nos. PC1 – PC3):

Test at the RCO1 outlet. The test results shall be recorded in pounds per hour (lbs/hr).

iii. The dry chip storage (ID No. CS1):

Test at the CS1 stack. The test results shall be recorded in pounds per hour (lbs/hr).

iv. The pellet storage (ID No. PS1):

Test at the cyclone (ID No. CYC9) outlet. The test results shall be recorded in pounds per hour (lbs/hr).

c. Carbon Monoxide (CO)

i. DR1 and tar buildup:

Test at both the regenerative thermal oxidizer (ID No. RTO1) inlet and outlet. The test results shall be recorded in pounds CO per ton wood processed by DR1 (lbs CO/ton wood).

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- d. Volatile Organic Compounds (VOC)
 - i. DR1 and tar buildup:

Test at both the regenerative thermal oxidizer (ID No. RTO1) inlet and outlet. The test results shall be recorded in pounds VOC per ton wood processed by DR1 (lbs VOC/ton wood).
 - ii. GHM1, DHM1 – DHM3, PM1 – PM11, and PC1 – PC3:

Test at both the RCO1 inlet and outlet. The test results shall be recorded in pounds VOC per ton pellet produced by all of PM1 – PM11, combined (lbs VOC/ton pellet).
 - iii. CS1:

Test at the CS1 stack. The test results shall be recorded in pounds VOC per ton wood processed by CS1 (lbs VOC/ton wood).
 - iv. PS1:

Test at the PS1 stack. The test results shall be recorded in pounds VOC per ton wood processed by PS1 (lbs VOC/ton wood).
- e. Hazardous Air Pollutants (Acetaldehyde, Formaldehyde, Hydrogen chloride, and Methanol.)
 - i. DR1 and tar buildup:

Test at both the regenerative thermal oxidizer (ID No. RTO1) inlet and outlet. The test results shall be recorded in pounds HAP per ton wood processed by DR1 (lbs HAP/ton wood).
 - ii. GHM1, DHM1 – DHM3, PM1 – PM11, and PC1 – PC3:

Test at both the RCO1 inlet and outlet. The test results shall be recorded in pounds HAP per ton pellet produced by all of PM1 – PM11, combined (lbs HAP/ton pellet).
 - iii. CS1:

Test at the CS1 stack. The test results shall be recorded in pounds HAP per ton wood processed by CS1 (lbs HAP/ton wood).
 - iv. PS1:

Test at the PS1 stack. The test results shall be recorded in pounds HAP per ton wood processed by PS1 (lbs HAP/ton wood).

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f. Hazardous Air Pollutants (Acrolein, Phenol, and Propionaldehyde)

i. DR1

Test at the RTO1 outlet. The test results shall be recorded in pounds HAP per ton wood processed by DR1 (lbs HAP/ton wood).

6.4 The Permittee shall repeat the performance tests specified in Condition 6.3, except Condition 6.3f., according to the following schedule:
[391-3-1-.02(6)(b)1.(i)]

a. Subsequent performance tests shall be conducted no more than 37 months after the previous performance test.

b. If any test results are less than 50 percent of the associated emission rates specified in Tables 7.13 through 7.17, the Permittee may opt to conduct the subsequent test for that pollutant from the associated stack/outlet no more than 61 months after the previous performance test.

c. If any test results of the 5-yr testing per Paragraph b. are 50 percent and up of the associated emission rates specified in Tables 7.13 through 7.17, then the Permittee shall resume the 3-yr test requirements specified in Paragraph a.

6.5 For the performance testing required in Conditions 6.3 and 6.4:
[391-3-1-.02(6)(b)1(i)]

a. The Permittee shall conduct the NO_x and CO testing for the same emission units and control devices simultaneously.

b. The Permittee shall conduct the VOC and HAP testing for the same emission units and control devices simultaneously.

c. The Permittee shall monitor and record the process weight input rate for the dryer (ID No. DR1), green hammermill (ID No. GHM1), dry hammermill (ID Nos. DHM1 – DHM3), pelletizers (ID Nos. PM1 – PM11), pellet coolers (ID Nos. PC1 – PC3), dry chip storage (ID No. CS1), and pellet storage (ID No. PS1).

d. The Permittee shall monitor and record the combustion zone temperature of the regenerative thermal oxidizer (ID No. RTO1) during the CO, VOC, and HAP testing.

e. The Permittee shall monitor and record the combustion zone temperature of the regenerative catalytic oxidizer (ID No. RCO1) during the CO, VOC, and HAP testing.

f. The Permittee shall monitor and record the total secondary power of the wet electrostatic precipitator (ID No. WES1) during the PM/PM₁₀/PM_{2.5} testing.

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6.6 The Permittee shall use the results of the most recent performance testing specified in Conditions 6.3 and 6.4 and the records recorded in accordance with Condition 6.5c. to document the following emission factors (E.F.) and total destruction efficiencies.
[391-3-1-.02(6)(b)1(i)]

- a. NO_x E.F. for the RTO1 outlet, in lbs NO_x/ton wood.
- b. PM/PM₁₀/PM_{2.5} E.F. for the RTO1 outlet, RCO1 outlet, CS1 stack, and PS1 stack, each, in lbs/hr.
- c. CO E.F. for the RTO1 inlet and outlet, in lbs CO/ton wood.
- d. CO destruction/removal efficiency (DRE) for RTO1.
$$\text{DRE (\%)} = (\text{Inlet E.F.} - \text{Outlet E.F.}) * 100 / (\text{Inlet E.F.})$$
- e. VOC E.F. for the RTO1 inlet and outlet; RCO1 inlet and outlet; CS1 stack; and PS1 stack; each, in lbs VOC/ton wood.
- f. VOC DRE for RTO1 and RCO1, each.
- g. HAP (Acetaldehyde, Formaldehyde, Hydrogen chloride, and Methanol) E.F. for the RTO1 inlet and outlet; RCO1 inlet and outlet; CS1 stack; and PS1 stack; each, in lbs HAP/ton wood.
- h. HAP DRE for RTO1 and RCO1, each.
- i. HAP (Acrolein, Phenol, and Propionaldehyde) E.F. for the RTO1 outlet, each, in lbs HAP/ton wood.

For the emission factors in the unit of lbs/hr, if any of the most recent tests are conducted at a capacity lower than the maximum/design capacity, the test results must be adjusted proportionally to show the emission rates at the maximum/design capacity.

6.7 If the outlet/stack emission rates recorded in accordance with Condition 6.6 exceed the corresponding emission factors currently being used in Conditions 7.13 through 7.17, then the Permittee shall calculate the emissions for that pollutant using the new and higher outlet/stack emission factors starting on the test date. The Permittee shall also submit a permit application within 180 days after testing, either requesting the higher emission factors or demonstrating that the emission factors derived are not representative of normal emissions.
[391-3-1-.02(6)(b)1(i)]

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- 6.8 The Permittee shall establish the following monitoring parameter set points using the records obtained in accordance with Conditions 6.5d. thru f., during the most recent performance tests.
[391-3-1-.02(6)(b)1(i)]
- a. The minimum combustion zone temperature for RTO1, in °F.
 - b. The minimum combustion zone temperature for RCO1, in °F.
 - c. The minimum total secondary power for WES1, in watts (W).

The Permittee shall submit the above records to the Division for approval within 60 days of the completion of testing.

7. Notification, Reporting and Record Keeping Requirements

- 7.1 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)]
- 7.2 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)]
- 7.3 The Permittee shall submit written notification of startup to the Division within 15 days after such date. The notification shall be submitted to:

Mr. Sean Taylor
Stationary Source Compliance Program
4244 International Parkway, Suite 120
Atlanta GA 30354

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- 7.4 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 60.48c(c)]

- 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.
- 7.5 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 7.4, the following excess emissions, exceedances, and excursions shall be reported:
- [391-3-1-.02(6)(b)(1)]
- a. Excess emissions: (means for the purpose of this Condition and Condition 7.4, 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 7.4.

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- b. Exceedances: (means for the purpose of this Condition and Condition 7.5, 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 CO, NO_x, PM, or VOC emissions from the entire facility, each, exceeds 249 tons.
 - ii. Any consecutive twelve month total of any individual Hazardous Air Pollutant (HAP) or two or more HAPs emissions from the facility equal to or in excess of 10 tons or 25 tons, respectively.
 - iii. Any twelve consecutive month period for which the total amount of wood dried by the dryer (ID No. DR1), recorded in accordance with Condition 7.6, exceeds 497,000 tons.
 - iv. Any twelve consecutive month period for which the total amount of wood processed by the green hammermill (ID No. GHM1), recorded in accordance with Condition 7.6, exceeds 337,968 tons.
 - v. Any twelve consecutive month period for which the total amount of wood processed by the dry hammermills (ID Nos. DHM1 – DHM3), combined and recorded in accordance with Condition 7.6, exceeds 246,234 tons.
 - vi. Any twelve consecutive month period during which total hours of operation for the fire pump (ID No. FP1), during maintenance checks and readiness testing, as determined in accordance with Condition 7.7, exceeds 100 hours.
 - vii. Any period the fuel burned in RTO1 or RCO1 is not natural gas.
 - viii. Any period during which fuel oil burned in the fire pump (ID No. FP) does not meet the specifications in Condition 2.11.
- c. Excursions: (means for the purpose of this Condition and Condition 7., 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 three-hour average RTO1 combustion zone temperature measured and recorded per Condition 5.2a. that is below the minimum combustion zone temperature established in accordance with Condition 6.8a. The minimum RTO1 combustion zone temperature before the initial performance testing is 1,500°F.

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- ii. Any three-hour average RCO1 combustion zone temperature measured and recorded per Condition 5.2b. that is below the minimum combustion zone temperature established in accordance with Condition 6.8b. The minimum RCO1 combustion zone temperature before the initial performance testing is 850°F.
 - iii. Any three-hour average total secondary power for the wet electrostatic precipitator (ID No. WES1) is less than 80 percent of the value established in accordance with Condition 6.8c. Prior to any performance testing, the Permittee shall follow the manufacturer recommended total secondary power range.
 - iv. Any time period that the annual catalyst bed core sampling was not performed as required by Condition 5.8.
 - v. Any time period that the catalyst was not cleaned or replaced as required by Condition 5.9.
 - vi. Any two consecutive day during which visible emissions are observed per Condition 5.4.
 - vii. Any two consecutive day during which visible emissions are observed per Condition 5.10.
 - viii. Any failure to perform the daily VE check per Condition 5.4 and/or Condition 5.10.
 - ix. Any adverse condition regarding fugitive dust emissions as required per Conditions 3.1 and 3.2.
- 7.6 The Permittee shall, using the hourly secondary voltages and secondary currents of each field of the wet electrostatic precipitator (ID No. WES1) recorded in accordance with Conditions 5.2.3a. and b., determine and record the total secondary power to WES1 with the following equation:
[391-3-1-.02(6)(b)1]

$$P_t = \sum V_i I_i$$

where: P_t = Total secondary power to WES1, in watts (W).
 V_i = Secondary volts of field i, in kilovolts (kV).
 I_i = Secondary current of field i, in milliamps (ma).

These records shall be kept in a form suitable for inspection or submittal to the Division.

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- 7.7 The Permittee shall use operating logs and the hour meters required by Condition 5.3c. to determine and record the following, for the fire pump (ID No. FP1), at the end of every calendar month:
[391-3-1-.02(6)(b)1; 40 CFR 60.4209(a); and 40 CFR 60.4211(f)]
- a. The total hours of operation for maintenance checks/readiness testing.
 - b. The total hours of operation for emergency purposes.
- 7.8 The Permittee shall use the records required by Condition 7.7a. to calculate the 12-consecutive month total hours of operation for the fire pump (ID No. FP1), for maintenance checks and readiness testing, ending at each calendar month in the semiannual reporting period.
[391-3-1-.02(6)(b)1; 40 CFR 60.4209(a); and 40 CFR 60.4211(e),]
- 7.9 The Permittee shall keep records of engine manufacturer data indicating compliance with the emission limits specified in Condition 2.10.
[391-3-1-.02(6)(b)1 and 40 CFR 60.4211(b)(3)]
- 7.10 The Permittee shall maintain the following monthly records. The records shall be retained in a permanent form suitable and available for inspection or submittal to the Division upon request. These records shall be retained for at least five years following the day of record. The Permittee shall notify the Division in writing if any monthly throughput exceeds 1/12 of the respective limits in Condition 2.3 during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the throughput limits specified in Condition 2.3.
[391-3-1-.02(6)(b)(1)]
- a. The amount of wood, in tons, processed through the dryer (ID No. DR1).
 - b. The amount of wood, in tons, processed through the green hammermill (ID No. GHM1).
 - c. The amount of wood, in tons, processed through the dry hammermill (ID Nos. DHM1 – DHM3).
 - d. The amount of pellets, in tons, produced by the facility.
- 7.11 The Permittee shall, each calendar month, calculate and record the twelve-month rolling total of the production records specified in Conditions 7.10a. through d., each. A twelve-month rolling total shall be defined as the sum of the current month's total plus the totals for the previous eleven consecutive months. The Permittee shall notify the Division in writing if any twelve-month total throughput exceeds the respective limits in Condition 2.3 ending in any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the throughput limits specified in Condition 2.3.
[391-3-1-.02(6)(b)(1)]

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7.12 The Permittee shall maintain the following monthly records. The records shall be retained in a permanent form suitable and available for inspection or submittal to the Division, upon request. These records shall be retained for at least five years following the day of record.

[391-3-1-.02(6)(b)(1)]

- a. The amount of wood, in tons, processed through the dry chip storage (ID No. CS1).
- b. The amount of wood, in tons, processed through the pellet storage (ID No. PS1).
- c. The total hours per month that the regenerative thermal oxidizer (ID No. RTO1) is in operation.
- d. The total hours per month that the regenerative catalytic oxidizer (ID No. RCO1) is in operation.
- e. The total hours per month that the tar buildup (ID No. TB) is in operation.
- f. The total hours per month that CS1 is in operation.
- g. The total hours per month that PS1 is in operation.

7.13 The Permittee shall calculate and record the amount of NO_x emissions from the entire facility in each calendar month, using the following equation and records obtained in accordance with Conditions 7.7 and 7.12:

[391-3-1-.02(6)(b)1.]

$$ER_{NO_x} = (EF_{NO_x/RTO1} * W_{DRI} + EF_{NO_x/TB} * T_{TB} + EF_{NO_x/RCO1} * T_{RCO1} + EF_{NO_x/FP1} * T_{FP1}) / 2,000$$

Where:

- ER_{NO_x} = Monthly NO_x Emission Rate from the Entire Facility, in tons per month.
- EF_{NO_x/RTO1} = RTO1 Outlet NO_x Emission Factor, in lb NO_x/ton Wood.
- W_{DRI} = Monthly Throughput of DRI, determined and recorded in accordance with Condition 7.10a., in ton/mo.
- EF_{NO_x/TB} = Tar Buildup (ID No. TB) NO_x Emission Factor, in lb/hr.
- T_{TB} = Monthly Operating Hours of TB, determined and recorded in accordance with Condition 7.12e., in hr/mo.
- EF_{NO_x/RCO1} = RCO1 Outlet NO_x Emission Factor, in lb/hr.
- T_{RCO1} = Monthly Operating Hours of RCO1, determined and recorded in accordance with Condition 7.12d., in hr/mo.
- EF_{NO_x/FP1} = NO_x Emission Factor Equivalent to the 40 CFR 60 Subpart IIII NO_x Emission Standard, in lb/hr.
- T_{FP1} = Monthly Operating Hours of FP1, determined and recorded in accordance with Condition 7.7a. and b., in hr/mo.
- 2,000 = Conversion Factor to Convert Pound into Ton.

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The Permittee shall calculate NOx emissions from the entire facility by using the following emission factors and the equation provided in this condition. If any performance testing required in Conditions 6.3 and 6.4 reveals emission factors higher than these listed below, the Permittee shall comply with Condition 6.7.

Table 7.13: NOx Emission Factors That Should Be Used before Any Test Results Are Available				
Pollutant	RTO1 Outlet		RCO1 Outlet	FP1 Stack
	DR1	TB		
NOx	0.93 lb/ton	0.49 lb/hr	3.14 lbs/hr	1.98 lbs/hr

The Permittee shall use the monthly records to calculate the facility-wide NOx emissions during each calendar month. The Permittee shall notify the Division in writing if the facility-wide NOx emissions exceed 20.75 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limitation in Condition 2.1.

7.14 The Permittee shall calculate and record the amount of CO emissions from the entire facility in each calendar month, using the following equation and records obtained in accordance with Conditions 7.7, 7.10, and 7.12:
[391-3-1-.02(6)(b)1.]

$$ER_{CO} = [(EF_{CO/DR1} * W_{DR1} + EF_{CO/TB} * T_{TB}) * (1 - DRE_{CO/RTO1}) + EF_{inCO/RCO1} * T_{RCO1} * (1 - DRE_{CO/RCO1}) + EF_{CO/FP1} * T_{FP1}] / 2,000$$

Where:

- ER_{CO} = Monthly CO Emission Rate from the Entire Facility, in tons per month.
- EF_{CO/DR1} = Uncontrolled DR1 CO Emission Factor, in lb CO/ton wood.
- W_{DR1} = Monthly Throughput of DR1, determined and recorded in accordance with Condition 7.10a., in ton/mo.
- EF_{CO/TB} = Uncontrolled Tar Buildup (ID No. TB) CO Emission Factor, in lb/hr.
- T_{TB} = Monthly Operating Hours of TB, determined and recorded in accordance with Condition 7.12e., in hr/mo.
- DRE_{CO/RTO1} = CO Destruction Removal Efficiency of RTO1, in percentage; determined in accordance with Condition 6.6d.
- EF_{inCO/RCO1} = Uncontrolled RCO1 CO Emission Factor, in lb/hr.
- T_{RCO1} = Monthly Operating Hours of RCO1, determined and recorded in accordance with Condition 7.12d., in hr/mo.
- DRE_{CO/RCO1} = CO Destruction Removal Efficiency (use the RTO1 CO DRE) of RCO1, in percentage; determined in accordance with Condition 6.6d.
- EF_{CO/FP1} = FP1 CO Emission Factor, in lb/hr.
- T_{FP1} = Monthly Operating Hours of FP1, determined and recorded in accordance with Condition 7.7a. and b., in hr/mo.
- 2,000 = Conversion Factor to Convert Pound into Ton.

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The DRE shall be assumed to be zero when the 3-hour rolling average temperature falls below the temperature established during the most recent performance test (use 1,500°F for RTO1 and 850°F for RCO1 before the initial performance tests). Use a CO DRE of 50 percent for both RTO1 and RCO1 until the initial performance test required by Condition 6.3 is completed.

The Permittee shall calculate CO emissions from the entire facility by using the following emission factors and the equation provided in this condition. If any performance testing required in Conditions 6.3 and 6.4 reveals the RTO1 outlet CO emission factor higher than 46.0 lbs/hr, or the RCO1 outlet CO emission factor higher than 1.32 lbs/hr, the Permittee shall comply with Condition 6.7.

Table 7.14: Uncontrolled CO Emission Factors That Should Be Used before Any Test Results Are Available				
Pollutant	RTO1 (Uncontrolled)		RCO1 (Uncontrolled)	FP1 Stack
	DR1	TB		
CO	1.61 lbs/ton	0.412 lb/hr	2.64 lbs/hr	2.00 lbs/hr

In the event if any tested RTO1 outlet CO emission factor higher than 46.0 lbs/hr, the following equation shall be used, instead of the first equation in this Condition, to track facility-wide CO emissions.

$$ER_{CO} = [EF_{inCO/RTO1} * W_{DR1} * (1 - DRE_{CO/RTO1}) + EF_{inCO/RCO1} * T_{RCO1} * (1 - DRE_{CO/RCO1}) + EF_{CO/FP1} * T_{FP1}] / 2,000$$

Where:

$$EF_{inCO/RTO1} = \text{RTO1 inlet CO Emission Factor, in lb CO/ton wood.}$$

The Permittee shall use the monthly records to calculate the facility-wide CO emissions during each calendar month. The Permittee shall notify the Division in writing if the facility-wide CO emissions exceed 20.75 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limitation in Condition 2.1.

7.15 The Permittee shall calculate and record the amount of PM/PM₁₀/PM_{2.5} emissions from the entire facility each calendar month, using the following equation and records obtained in accordance with Conditions 7.7 and 7.12:

[391-3-1-.02(6)(b)1.]

$$ER_{PM} = (EF_{PM/RTO1} * T_{RTO1} + EF_{PM/RCO1} * T_{RCO1} + EF_{PM/CS1} * T_{CS1} + EF_{PM/PS1} * T_{PS1} + EF_{PM/FP1} * T_{FP1}) / 2,000$$

Where:

$$ER_{PM} = \text{Monthly PM/PM}_{10}/\text{PM}_{2.5} \text{ Emission Rate from the Entire Facility, in tons per month.}$$

$$EF_{PM/RTO1} = \text{RTO1 Outlet PM/PM}_{10}/\text{PM}_{2.5} \text{ Emission Factor, in lb/hr.}$$

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- T_{RTO1} = Monthly Operating Hours of RTO1, determined and recorded in accordance with Condition 7.12c., in hr/mo.
- EF_{PM/RCO1} = RCO1 Outlet PM/PM₁₀/PM_{2.5} Emission Factor, in lb/hr.
- T_{RCO1} = Monthly Operating Hours of RCO1, determined and recorded in accordance with Condition 7.12d., in hr/mo.
- EF_{PM/CS1} = PM/PM₁₀/PM_{2.5} Emission Factor at the CS1 Stack, in lb/hr.
- T_{CS1} = Monthly Operating Hours of CS1, determined and recorded in accordance with Condition 7.12f., in hr/mo.
- EF_{PM/PS1} = PM/PM₁₀/PM_{2.5} Emission Factor at the PS1 Stack, in lb/hr.
- T_{PS1} = Monthly Operating Hours of PS1, determined and recorded in accordance with Condition 7.12g., in hr/mo.
- EF_{PM/FP1} = PM/PM₁₀/PM_{2.5} Emission Factor Equivalent to the 40 CFR 60 Subpart III PM Emission Standard, in lb/hr.
- T_{FP1} = Monthly Operating Hours of FP1, determined and recorded in accordance with Condition 7.7a. and b., in hr/mo.
- 2,000 = Conversion Factor to Convert Pound into Ton.

The Permittee shall calculate PM/PM₁₀/PM_{2.5} emissions from the entire facility by using the following emission factors and the equation provided in this condition. If any performance testing required in Conditions 6.3 and 6.4 reveals emission factors higher than these listed below, the Permittee shall comply with Condition 6.7.

Table 7.15: After-control PM/PM ₁₀ /PM _{2.5} Emission Factors That Should Be Used before Any Test Results Are Available (lbs/hr)					
Pollutant	RTO1 Outlet	RCO1 Outlet	CS1 Stack*	PS1 Stack	FP1 Stack*
PM/PM ₁₀ /PM _{2.5}	18.8	10.6	0.00337	0.429	0.0992

* CS1 and FP1 are not equipped with any controls.

The Permittee shall use the monthly records to calculate the facility-wide PM/PM₁₀/PM_{2.5} emissions during each calendar month. The Permittee shall notify the Division in writing if the facility-wide PM/PM₁₀/PM_{2.5} emissions exceed 20.75 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limitation in Condition 2.1.

7.16 The Permittee shall calculate and record the amount of VOC emissions from the entire facility in each calendar month, using the following equation and records obtained in accordance with Conditions 7.7, 7.10, and 7.12:
[391-3-1-.02(6)(b)1.]

$$ER_{VOC} = [(EF_{VOC/DR1} * W_{DR1} + EF_{VOC/TB} * T_{TB}) * (1 - DRE_{VOC/RTO1}) + (EF_{VOC/GHM} * W_{GHM} + EF_{VOC/DHM} * W_{DHM} + EF_{VOC/PM} * W_{PM} + EF_{VOC/RCOB} * T_{RCO1}) * (1 - DRE_{CO/RCO1}) + EF_{VOC/CS1} * W_{CS1} + EF_{VOC/PS1} * W_{PS1} + EF_{VOC/FP1} * T_{FP1}] / 2,000$$

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Where:

- ER_{VOC} = Monthly VOC Emission Rate from the Entire Facility, in tons per month.
- EF_{VOC/DR1} = Uncontrolled DR1 VOC Emission Factor, in lb VOC/ton wood.
- W_{DR1} = Monthly Throughput of DR1, determined and recorded in accordance with Condition 7.10a., in ton/mo.
- EF_{VOC/TB} = Uncontrolled Tar Buildup (ID No. TB) VOC Emission Factor, in lb/hr.
- T_{TB} = Monthly Operating Hours of TB, determined and recorded in accordance with Condition 7.12e., in hr/mo.
- DRE_{VOC/RTO1} = VOC Destruction Removal Efficiency of RTO1, in percentage; determined in accordance with Condition 6.6f.
- EF_{VOC/GHM} = Uncontrolled Green Hammermill (ID No. GHM1) VOC Emission Factor, in lb VOC/ton wood.
- W_{GHM} = Monthly Throughput of GHM1, determined and recorded in accordance with Condition 7.10b., in ton/mo.
- EF_{VOC/DHM} = Uncontrolled Dry Hammermill (ID No. DHM1 – DHM3) VOC Emission Factor, in lb VOC/ton wood.
- W_{DHM} = Monthly Throughput of DHM1 – DHM3, combined, determined, and recorded in accordance with Condition 7.10c., in ton/mo.
- EF_{VOC/PM} = Uncontrolled Pelletizer (ID Nos. PM1 – PM11) VOC Emission Factor, in lb VOC/ton wood.
- W_{PM} = Monthly Throughput of PM1 – PM11, combined, determined, and recorded in accordance with Condition 7.10d., in ton/mo.
- EF_{VOC/RCOB} = Uncontrolled VOC Emission Factor from RCO1 Burner, in lb/hr.
- T_{RCO1} = Monthly Operating Hours of RCO1, determined and recorded in accordance with Condition 7.12d., in hr/mo.
- DRE_{VOC/RCO1} = VOC Destruction Removal Efficiency of RCO1, in percentage; determined in accordance with Condition 6.6f.
- EF_{VOC/CS1} = CS1 VOC Emission Factor, in lb VOC/ton wood.
- W_{CS1} = Monthly Throughput of CS1, determined and recorded in accordance with Condition 7.12a., in ton/mo.
- EF_{VOC/PS1} = PS1 VOC Emission Factor, in lb VOC/ton wood.
- W_{PS1} = Monthly Throughput of PS1, determined and recorded in accordance with Condition 7.12b., in ton/mo.
- EF_{VOC/FP1} = Emission Factor Equivalent to the 40 CFR 60 Subpart IIII NMHC Emission Standard, in lb/hr.
- T_{FP1} = Monthly Operating Hours of FP1, determined and recorded in accordance with Condition 7.7a. and b., in hr/mo.

The DRE shall be assumed to be zero when the 3-hour rolling average temperature falls below the temperature established during the most recent performance test (use 1,500°F for RTO1 and 850°F for RCO1 before the initial performance tests). Use a VOC DRE of 95 percent for both RTO1 and RCO1 until the initial performance test required by Condition 6.3 is completed.

The Permittee shall calculate VOC emissions from the entire facility by using the following emission factors and the equation provided in this condition. If any performance testing

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required in Conditions 6.3 and 6.4 reveals emission factors higher than the “After-control Composite E.F.” listed below, the Permittee shall comply with Condition 6.7.

Table 7.16-1: Uncontrolled VOC Emission Factors That Should Be Used before Any Test Results Are Available			
Control Device/ Outlet / Stack	Emission Factor Name	Emission Factor and Unit	After-control Composite E.F.
RTO1	EF _{VOC/DR1}	6.00 lbs VOC/ton wood	0.3 lb VOC/ton wood
	EF _{VOC/TB}	0.0270 lb/hr	
RCO1	EF _{VOC/GHM}	1.08 lbs VOC/ton wood	0.124 lb/ton pellet
	EF _{VOC/DHM}	2.50 lbs VOC/ton wood	
	EF _{VOC/PM}	0.500 lb VOC/ton wood	
	EF _{VOC/RCOB}	0.173 lb/hr	
CS1	EF _{VOC/CS1}	0.120 lb VOC/ton wood	n/a
CYC9	EF _{VOC/PS1}	0.400 lb VOC/ton wood	n/a
FP1	EF _{VOC/FP1}	0.741 lb/hr	n/a

If any tested RTO1 outlet VOC emission factor is higher than 0.3 lb VOC/ton wood, or if any tested RCO1 outlet VOC emission factor is higher than 0.124 lb/ton pellet produced, the following terms in the equation shall be replaced as follows.

Table 7.16-2: When and How to Replace the Terms in the Equation in Condition 7.16		
Criteria	Original Term	New Term
If RTO1 outlet VOC > 0.3 lb/ton wood	EF _{VOC/DR1} * W _{DR1} + EF _{VOC/TB} * T _{TB}	EF _{inVOC/RTO1} * W _{DR1}
If RCO1 outlet VOC > 0.124 lb/ton pellet	EF _{VOC/GHM} * W _{GHM} + EF _{VOC/DHM} * W _{DHM} + EF _{VOC/PM} * W _{PM} + EF _{VOC/RCOB} * T _{RCO1}	EF _{inVOC/RCO1} * W _{PM}

Where:

EF_{inVOC/RTO1} = RTO1 Inlet VOC Emission Factor, in lb VOC/ton wood; determined in accordance with Condition 6.3.d.i.

EF_{inVOC/RCO1} = RCO1 Inlet VOC Emission Factor, in lb/ton pellet produced; determined in accordance with Condition 6.3.d.ii.

The Permittee shall use the monthly records to calculate the facility-wide VOC emissions during each calendar month. The Permittee shall notify the Division in writing if the facility-wide VOC emissions exceed 20.75 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limitation in Condition 2.1.

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7.17 The Permittee shall calculate and record the amount of HAP emissions from the entire facility in each calendar month, using the following equation and records obtained in accordance with Conditions 7.7, 7.10, and 7.12:

[391-3-1-.02(6)(b)1.]

$$ER_{HAP} = [EF_{HAP/DR1} * W_{DR1} * (1 - DRE_{HAP/RTO1}) + (EF_{HAP/GHM} * W_{GHM} + EF_{HAP/DHM} * W_{DHM} + EF_{HAP/PM} * W_{PM} + EF_{HAP/RCOB} * T_{RCO1}) * (1 - DRE_{HAP/RCO1}) + EF_{HAP/CS1} * W_{CS1} + EF_{HAP/PS1} * W_{PS1} + EF_{HAP/FP1} * T_{FP1}] / 2,000$$

Where:

- ER_{HAP} = Monthly HAP Emission Rate from the Entire Facility, in tons per month.
- EF_{HAP/DR1} = Uncontrolled DR1 HAP Emission Factor, in lb HAP/ton wood.
- W_{DR1} = Monthly Throughput of DR1, determined and recorded in accordance with Condition 7.10a., in ton/mo.
- DRE_{HAP/RTO1} = HAP Destruction Removal Efficiency of RTO1, in percentage; determined in accordance with Condition 6.6h.
- EF_{HAP/GHM} = Uncontrolled Green Hammermill (ID No. GHM1) HAP Emission Factor, in lb HAP/ton wood.
- W_{GHM} = Monthly Throughput of GHM1, determined and recorded in accordance with Condition 7.10b., in ton/mo.
- EF_{HAP/DHM} = Uncontrolled Dry Hammermill (ID No. DHM1 – DHM3) HAP Emission Factor, in lb HAP/ton wood.
- W_{DHM} = Monthly Throughput of DHM1 – DHM3, combined, determined, and recorded in accordance with Condition 7.10c., in tons/mo.
- EF_{HAP/PM} = Uncontrolled Pelletizer (ID Nos. PM1 – PM11) HAP Emission Factor, in lb HAP/ton wood.
- W_{PM} = Monthly Throughput of PM1 – PM11, combined, determined, and recorded in accordance with Condition 7.10d., in tons/mo.
- EF_{HAP/RCOB} = Uncontrolled HAP Emission Factor from RCO1 Burner, in lb/hr.
- T_{RCO1} = Monthly Operating Hours of RCO1, determined and recorded in accordance with Condition 7.12d., in hrs/mo.
- DRE_{HAP/RCO1} = HAP Destruction Removal Efficiency of RCO1, in percentage; determined in accordance with Condition 6.6h.
- EF_{HAP/CS1} = CS1 HAP Emission Factor, in lb HAP/ton wood.
- W_{CS1} = Monthly Throughput of CS1, determined and recorded in accordance with Condition 7.12a., in tons/mo.
- EF_{HAP/PS1} = PS1 HAP Emission Factor, in lb HAP/ton wood.
- W_{PS1} = Monthly Throughput of PS1, determined and recorded in accordance with Condition 7.12b., in tons/mo.
- EF_{HAP/FP1} = FP1 HAP Emission Factor, in lb/hr.
- T_{FP1} = Monthly Operating Hours of FP1, determined and recorded in accordance with Condition 7.7a. and b., in hrs/mo.

The DRE shall be assumed to be zero when the 3-hour rolling average temperature falls below the temperature established during the most recent performance test (use 1,500°F for RTO1 and

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850°F for RCO1 before the initial performance tests). Use a VOC DRE of 95 percent for both RTO1 and RCO1 until the initial performance test required by Condition 6.3 is completed.

Table 7.17-1: Uncontrolled HAP E.F. That Should Be Used before Any Test Results Are Available

Control Device/ Outlet / Stack	Emission Factor Name	Emission Factor and Unit				
		Acetaldehyde	Formaldehyde	Methanol	HCl	Combined HAP
RTO1	EF _{HAP/DR1}	0.11 lb/ton	0.14 lb/ton	0.11 lb/ton	0.019 lb/ton	0.443 lb/ton
RCO1	EF _{HAP/GHM}	0.004 lb/ton	0.008 lb/ton	0.004 lb/ton	No Data	0.0501 lb/ton
	EF _{HAP/DHM}	0.004 lb/ton	0.008 lb/ton	0.004 lb/ton	No Data	0.0313 lb/ton
	EF _{HAP/PM}	0.001 lb/ton	0.002 lb/ton	0.001 lb/ton	No Data	0.0149 lb/ton
	EF _{HAP/RCOB}	No Data	0.00235 lb/hr	No Data	No Data	0.0593 lb/hr
	Composite	0.000284 lb/ton	0.000572 lb/ton	0.000284 lb/ton	No Data	0.00327 lb/ton
CS1	EF _{HAP/CS1}	0.001 lb/ton	0.002 lb/ton	0.00195 lb/ton	No Data	0.00495 lb/ton
CYC9	EF _{HAP/PS1}	0.001 lb/ton	0.002 lb/ton	0.001 lb/ton	No Data	0.004 lb/ton
FP1	EF _{HAP/FP1}	0.00161 lb/hr	0.00248 lb/hr	No Data	No Data	0.00813 lb/hr

Note that the HAP emission rate from the tar buildup (ID No. TB) and RTO1 burners are negligible to the HAP emission rate from the dryer (ID No. DR1).

The Permittee shall calculate HAP emissions from the entire facility by using the emission factors in the above table and the equation provided in this condition. If any performance testing required in Conditions 6.3 and 6.4 reveals emission factors higher than these listed and bolded in the above table, or if the initial performance testing required in Condition 6.3f. reveals a combined emission factor of acrolein, phenol, and propionaldehyde higher than 0.0032lb/ton (equivalent to 0.064 lb/ton uncontrolled E.F.), the Permittee shall comply with Condition 6.7; note that the combined HAP emission factor for the same process must account for any increase of individual HAP emission rate above the previous data.

If any tested RCO1 outlet HAP emission factor is higher than the associated initial emission factor, as shown in the table below, the following terms in the equation for that specific HAP shall be replaced as follows.

Table 7.17-2: When and How to Replace the Terms in the Equation in Condition 7.17

Criteria for Each Pollutant	Original Term	New Term for That Pollutant
If RCO1 outlet Acetaldehyde > 0.000284 lb/ton pellet If RCO1 outlet Formaldehyde > 0.000572 lb/ton pellet If RCO1 outlet Methanol > 0.000284 lb/ton pellet If RCO1 outlet HCl > 0 lb/ton pellet	EF _{HAP/GHM} * W _{GHM} + EF _{HAP/DHM} * W _{DHM} + EF _{HAP/PM} * W _{PM} + EF _{HAP/RCOB} * T _{RCO1}	EF _{inHAP/RCO1} * W _{PM}

Where:

EF_{inHAP/RCO1} = RCO1 Inlet HAP Emission Factor, in lbs/ton pellet produced; determined in accordance with Condition 6.3e.ii.

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The Permittee shall use the monthly records to calculate the facility-wide HAP emissions during each calendar month. The Permittee shall notify the Division in writing if the facility-wide single HAP emissions exceed 0.83 ton or combined HAP emissions exceed 2.08 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limitation in Condition 2.1.

7.18 The Permittee shall use the monthly data required by Conditions 7.13 through 7.17 to determine the following:

[391-3-1-.02(6)(b)1.]

- a. The 12-month rolling total of NO_x emissions from the entire facility ending in each calendar month of the semiannual reporting period.
- b. The 12-month rolling total of CO emissions from the entire facility ending in each calendar month of the semiannual reporting period.
- c. The 12-month rolling total of PM/PM₁₀/PM_{2.5} emissions from the entire facility ending in each calendar month of the semiannual reporting period.
- d. The 12-month rolling total of VOC emissions from the entire facility ending in each calendar month of the semiannual reporting period.
- e. The 12-month rolling total of single HAP emissions from the entire facility ending in each calendar month of the semiannual reporting period.
- f. The 12-month rolling total of Combined HAP emissions from the entire facility ending in each calendar month of the semiannual reporting period.

A twelve- month rolling total shall be defined as the sum of the current month's total plus the totals for the previous eleven consecutive months.

7.19 The Permittee shall notify the Division, using the records obtained in accordance with Condition 7.18, if any of the following occurs. The notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the emission limit in Conditions 2.1 and 2.2.

[391-3-1-.02(6)(b)1.]

- a. If any 12-month rolling total NO_x emissions exceed 249 tons during any calendar month;
- b. if any 12-month rolling total CO emissions exceed 249 tons during any calendar month;
- c. if any 12-month rolling total PM/PM₁₀/PM_{2.5} emissions exceed 249 tons during any calendar month;
- d. if any 12-month rolling total VOC emissions exceed 249 tons during any calendar month;

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- e. if any 12-month rolling total single HAP emissions equal to or exceed 10 tons during any calendar month; or
- f. if any 12-month rolling total combined HAP emissions equal to or exceed 25 tons during any calendar month.

8. Special Conditions

- 8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.
- 8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Application & Annual Permit Fees."
- 8.3 The Permittee shall submit a Title V Permit Application electronically using GEOS within 12 months after startup and commencement of normal operations of the proposed pellet mill.