TITLE V AIR PERMIT APPLICATION

Amite BioEnergy LLC > Gloster, MS
AI No. 57796

drax

Prepared By:

TRINITY CONSULTANTS
One Galleria Blvd., Suite 1030
Metairie, Louisiana 70001
(504) 828-5845
www.TrinityConsultants.com

February 2022

Project 211902.0030

Trinity Consultants

Environmental solutions delivered uncommonly well

TABLE OF CONTENTS

LIST OF TABLES

1. AIR PERMIT APPLICATION EXECUTIVE SUMMARY

1.1. PROJECT BACKGROUND / DESCRIPTION

Amite BioEnergy LLC (Amite) owns and operates a wood pellet manufacturing facility located in Amite County, Gloster, MS. The facility is currently permitted to operate under Permit-to-Construct No. 0080-00031, issued on November 26 ,2012, modified on March 21, 2014, and then modified again on March 9, 2021.

Amite is including the following revisions from the Construction Permit in this Title V application package:

- Change the annual pellet production capacity to 624,700 US ODT (oven-dried tons) from the previously permitted 771,392 ODT/year in the Construction Permit.
- Remove the 5 gravity-feed green hammermills. They will not be constructed.
- The 3 secondary hammermills will not be converted into dry shavings hammermills. They will remain in operation per the original design.
- Added Bypass During Furnace Startup/Shutdown at 50 hrs/yr (AA-203b).
- Added Bypass During Furnace Idling at 500 hrs/yr (AA-203c).
- Added Bypass During Dryer Startup/Shutdown at 50 hrs/yr (AA-204b).

Table 1-1. Facility-Wide Emissions Summary

Pollutant	Currently Permitted Emissions[1] (tpy)	Proposed Facility-wide PTE Emissions (tpy)	Change (tpy)
PM_{10}	35.88	34.78	-1.10
$PM_{2.5}$	28.49	29.86	1.37
SO_2	50.80	50.89	0.09
NO_x	223.26	96.12	-127.14
CO	160.31	248.52	88.21
VOC	195.52	120.53	-74.99
Total HAPs	23.88	40.07	16.19
CO_2e[2]	19,606	19,533	-73

[1] Based on Title V Application MDEQ Section B forms submitted in August 2020.

[2] CO_2e totals exclude biogenic CO_2e emissions.

2.1. FACILITY OPERATIONS OVERVIEW

Amite produces wood pellets from whole logs, wood chips, and clean mill and forest residuals. The raw material is delivered to the site by trucks, and the produced pellets are shipped off site by railcars. The facility comprises several process areas, such as: wood receiving and storage; wood debarking, chipping, and storage; biomass fuel sizing and storage; chip drying; hammermills; pellet mills; pellet storage; and load out.

2.1.1. Wood Receiving and Storage

The facility receives approximately 25-30 percent of the raw material as whole logs via trucks and 75-80 percent as wood chips and clean mill (saw dust) and forest residuals (chips). The wood logs are stored outdoors in piles. Trees are usually sourced within a 100-mile radius of the facility.

2.1.2. Logs Processing

The log crane transfers the whole logs to a conveyor that moves the whole logs through a debarking drum. These debarked whole logs are fed to a chipper, and the chips produced are transferred by conveyor to an outdoor storage pile(s). The bark is conveyed to a storage pile and used as fuel in the biomass furnace.

2.1.3. Chip Dryer/Biomass Furnace

Chips are transferred from chip storage and are then are dried in a single pass rotary dryer to a moisture content of approximately 11 percent and then sent through high efficiency cyclones to remove fines. Heat for the dryer is supplied by a furnace burning bark and other clean biomass (e.g., clean mill and forest residuals) which is delivered via a conveyor from the fuel storage building to the biomass furnace. The emissions from the furnace, dryer, and the cyclones (fines) are routed to a wet electrostatic precipitator (WESP) and then to a regenerative thermal oxidizer (RTO) prior to discharge to the atmosphere. The WESP and RTO control particulate, acid gas, and volatile organic compound (VOC) emissions.

2.1.4. Primary Hammermills

The dried wood chips are fed to the Hammermill Feed Silo via a conveyor. The wood chips then are conveyed to the primary hammermills, where they are ground. Each of the primary hammermills is equipped with a pneumatic system equipped with a filter to limit particulate emissions to 0.015 gr/scf. After the filters the emissions from the system are routed to the RCO (regenerative catalytic oxidizer) / RTO (regenerative thermal oxidizer) prior to discharge to the atmosphere. The RCO controls particulate, acid gas, and VOC emissions.

2.1.5. Secondary Hammermills

The secondary hammermills further reduce the size of the chips. The emissions from the system are routed to the RCO prior to discharge to the atmosphere. The RCO controls particulate, acid gas, and VOC emissions.

2.1.6. Starch Silo System

The starch silo and starch addition system add starch as a binder just upstream of the pellet mills. The starch is delivered via truck. The starch silo has a particulate matter filter to limit emissions to 0.015 gr/scf.

2.1.7. Pellet Mills

The ground wood is conveyed from the primary hammermills or the secondary hammermills to six pellet mill lines. Each line is equipped with two mills and a cooler. The ground wood is compressed by pelletizer rotating press rolls and then passed through sizing dies perforated with round holes. The high pressure of the dies and the heat of friction activates the lignin in the wood thereby bonding the ground wood into a pellet. The pellet temperature is maintained at 200 to 250 degrees Fahrenheit (F) to minimize the use of adhesives and bonding agents. The pellet mills are subsequently cooled in the pellet coolers.

The pelletizers and coolers exhaust to six air and dust extraction systems, each equipped with filters to limit particulate emissions to 0.015 gr/scf. After the filters, the emissions from the system are routed to RCO prior to discharge to the atmosphere. The RCO controls particulate, acid gas, and VOC emissions.

The pellets are then conveyed to two pellet storage silos. The silos are equipped with filters to limit the particulate emissions to 0.015 gr/scf.

2.1.8. Regenerative Catalytic Oxidizer (RCO)

The RCO controls VOC emissions from the primary hammermills, the secondary hammermills, and the pellet coolers.

2.1.9. Pellet Loadout

Pellets from the pellet silos are transferred via enclosed conveyors to the pellet loadout building. The pellets are screened prior to loadout to reduce fugitive emissions, and the loadout system is equipped with a fugitive dust capture system to minimize fugitive emissions. The fines from these two dust capture systems are pneumatically conveyed to a point between the primary hammermill and secondary hammermill feed silos for remanufacturing into wood pellets. This pneumatic system is equipped with a filter to limit particulate emissions to 0.015 gr/scf.

2.1.10. General Activities

The facility minimizes particulate emissions while receiving logs, transferring wood chips, and shipping pellets by using primarily paved roads. The facility has installed an emergency diesel generator and a diesel fire pump as backup.

3.1.1. Regenerative Thermal Oxidizer (RTO)

SO_2 emissions were calculated based on a February 2016 stack test conducted at a sister facilty in Louisiana, Morehouse BioEnergy (Morehouse). Emissions of all other pollutants were calculated based on performance test conducted at Amite in July 2021.

3.1.2. Regenerative Catalytic Oxidizer (RCO)

SO_2 emissions were calculated based on a February 2016 stack test conducted at a sister facilty in Louisiana, Morehouse BioEnergy (Morehouse). Emissions of all other pollutants were calculated based on performance test conducted at Amite in July 2021.

3.1.3. Primary Hammermill Feed Silo

PM_{10} and $PM_{2.5}$ emissions were calculated using vendor data. VOC, Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from a sister facility, Morehouse, on February 10-16, 2016. A 25% safety factor was added to the test data to calculate emissions.

3.1.4. Primary Hammermill Pneumatic Systems 1-6

PM_{10} and $PM_{2.5}$ emissions were calculated using data from stack testing conducted on March 12 -15, 2019 at a sister facility, Morehouse. VOC emissions were calculated using data from stack testing conducted in November 2018 at Amite. Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from a sister facility, Morehouse, on February 10-16, 2016. A 25% safety factor was added to all test data to calculate emissions. Note that VOC emissions are routed to the RCO.

3.1.5. Secondary Hammermill Pneumatic System

PM_{10} and $PM_{2.5}$ emissions were calculated using data from stack testing conducted at a sister facility, Morehouse, on March 12 -15, 2019. VOC emissions were calculated using data from stack testing conducted at Amite in November 2018. Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 t a sister facility,Morehosuse. A 25% safety factor was added to all test data to calculate emissions. Note that VOC emissions are routed to the RCO.

3.1.6. Secondary Hammermill Nos. 1 & 2 Feed Silo Bin Vents

PM_{10} and $PM_{2.5}$ emissions were calculated using vendor data. VOC, Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 at a sister facility, Morehouse. A 25% safety factor was added to the test data to calculate emissions.

3.1.7. Pellet Cooler Pneumatic Systems 1-6

PM_{10} and $PM_{2.5}$ emissions were calculated using data from stack testing conducted on March 12 -15, 2019 at a sister facility, Morehouse. VOC emissions were calculated using data from stack testing

conducted in November 2018 at Amite. Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 at a sister facility, Morehouse. A 25% safety factor was added to all test data to calculate emissions. Note that VOC emissions are routed to the RCO.

3.1.8. Starch Silo

Emissions from the new starch silo were calculated using the exhaust flow estimated from a sister facility[3] and particulate content.

3.1.9. Pellet Storage Silo Bin Vents 1 & 2

PM_{10} and $PM_{2.5}$ emissions were calculated using vendor data. VOC, Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 at a sister facility, Morehouse. A 25% safety factor was added to the test data to calculate emissions.

3.1.10. Screened Materials Return System

PM_{10} and $PM_{2.5}$ emissions were calculated using vendor data. VOC, Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 at a sister facility, Morehouse. A 25% safety factor was added to the test data to calculate emissions.

3.1.11. Pellet Loading System Pneumatic System Filter

PM_{10} and $PM_{2.5}$ emissions were calculated using data from stack testing conducted on March 12 -15, 2019 at a sister facility, Morehouse. VOC emissions were calculated using data from stack testing conducted at Amite in November 2018. Methanol, Formaldehyde, and Acetaldehyde emissions were calculated using performance test data from February 10-16, 2016 at a sister facility, Morehouse. A 25% safety factor was added to all test data to calculate emissions.

3.1.12. Paved Roads (Fugitives)

Emissions from paved roads were calculated using an emission factor from AP-42 Section 13.2.1 – Equation 1 (1/2011) and other information from AP-42 Tables 13.2.1-1, 13.2.1-2, and 13.2.1-3.

3.1.13. Fire Pump Engine

PM_{10}, $PM_{2.5}$, NO_X, and VOC emissions were calculated using 40 Code of Federal Regulations (CFR) 60 Subpart IIII, Table 4. SO_2 and CO emissions were calculated using AP-42, Table 3.3-1 (1/96). Emissions of HAPs/TAPs were calculated using AP-42, Table 3.3-2 (1/96).

[3] Data from LaSalle BioEnergy LLC.

3.1.14. Emergency Generator

PM_{10}, $PM_{2.5}$, NO_X, and VOC emissions were calculated using 40 CFR 60 Subpart IIII, Table 4. SO_2 and CO emissions were calculated using AP-42, Table 3.3-1 (1/96). Emissions of HAPs/TAPs were calculated using AP-42, Table 3.3-2 (1/96).

Amite has evaluated the applicable Federal and Mississippi State air regulations that apply to the facility as well as to individual emission units. Included below is a brief overview of the applicable regulations. For more details, refer to Appendix A – Permit Application forms.

4.1. FEDERAL REGULATIONS

4.1.1. Prevention of Significant Deterioration - 40 CFR 52.21

40 CFR Part 52 establishes the federal Prevention of Significant Deterioration (PSD) Air Quality program. Because of the installation of the RTO and RCO to control VOC emissions, Amite is a minor source under the PSD program.

4.1.2. Title V Operating Permit Program

40 CFR 70 establishes the federal Title V operating permitting program. The Title V major source threshold for a facility is 100 tpy of criteria pollutants. A facility is also considered a Title V major source if emissions of individual or total HAP exceed major source thresholds of 10 tpy or 25 tpy, respectively. Amite is a major source under Title V because criteria pollutant emissions exceed 100 tpy.

4.1.1. Compliance Assurance Monitoring (CAM)

Under 40 CFR Part 64, Compliance Assurance Monitoring (CAM), facilities are required to prepare and submit monitoring plants for certain emission units with the initial or renewal Title V operating permit application. This rule requires pollutant specific monitoring for those emission units which meet the following criteria:

- The unit is located at a Title V air operating permit source;
- The unit is subject to an emission limitations or standard for the applicable regulated air pollutant, other than an emission limitation or standard that is exempt;
- The unit uses a control device to achieve compliance with any such emission limitation or standard; and
- The unit has potential pre-control device emissions of applicable regulated air pollutants that are equal to or greater than the Title V major source threshold of 100 tons per year. For Amite, the following sources are subject to CAM requirements: RTO and the new RCO.

4.1.2. New Source Performance Standards (NSPS) - 40 CFR Part 60

NSPS requires new, modified, or reconstructed sources in applicable source categories to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. A regulatory applicability determination and a summary of potentially applicable NSPS subparts for the emission sources associated with Amite is included in the permit application.

4.1.2.1. 40 CFR 60 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

This subpart applies to the owners and operators of stationary compression ignition (CI) internal combustion engines (ICE). The facility has two sources that must comply with NSPS Subpart IIII: AA-501 – Fire Pump Engine, and AA-502 – Emergency Generator. 40 CFR Subpart IIII sets specific emissions limitations based on the engine's type, fuel, and manufacture date.

4.1.2.2. 40 CFR 60 Subpart A – General Provisions

NSPS subpart A applies to stationary sources. All affected sources subject to an NSPS are also subject to the general provisions of NSPS Subpart A unless specifically excluded by the source-specific NSPS in accordance with 40 CFR 60.1. NSPS Subpart A has the following requirements for facilities subject to a source-specific NSPS:

- Initial construction/reconstruction notification
- Initial startup notification
- Performance tests
- Performance test date initial notification
- General monitoring requirements
- General recordkeeping requirements
- Semiannual monitoring system and/or excess emission reports
- General control device and work practice requirements

None of the source-specific NSPS subparts that are applicable to the proposed project exclude NSPS Subpart A – General Provisions. Therefore, the facility is subject to Subpart A.

4.1.3. National Emission Standards for Hazardous Air Pollutants - 40 CFR Part 61

National Emission Standards for Hazardous Air Pollutants (NESHAP) were developed by the EPA to provide pollutant specific control requirements. Amite is not subject to any NESHAP Part 61 standards.

4.1.4. National Emission Standards for Hazardous Air Pollutants for Source Categories - 40 CFR Part 63

A facility can be subject to one or National Emission Standards for Hazardous Air Pollutants (NESHAPS), if the total emissions of all regulated hazardous air pollutants (HAPs) for the facility exceeds 25 tpy, or total emissions for an individual regulated HAP exceed 10 tpy. Such a source is referenced as a "major source" for the purposes of NESHAPs applicability. A facility that is not a major source is referred as "area source". It has been assumed that Amite is an area source of HAPs because HAP emissions are controlled by the RCO.

4.1.4.1. 40 CFR 63 Subpart A – General Provisions

The facility includes sources subject to individual MACT subparts, and consequently is subject to the requirements of Subpart A. These requirements include general notifications, testing requirements, and monitoring requirements.

4.1.4.2. 40 CFR 63 Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines

This subpart applies to stationary reciprocating internal engines (RICE). The following ICE are subject to this regulation: AA-501 – Fire Pump Engine, and AA-502 – Emergency Generator.

4.1.5. Stratospheric Ozone Protection - 40 CFR Part 82

40 CFR 82 Subpart F has requirements for facilities that own or operate refrigeration, industrial refrigeration, or comfort cooling equipment containing Class I or Class II substance containing refrigerants.

4.2. MISSISSIPPI STATE REGULATIONS

Applicability of Mississippi state regulations is addressed in the following section.

4.2.1. 11 Miss. Admin. Code Pt. 2, Ch. 2, Rule 2.2

This regulation addresses weekly observations for visible emissions.

4.2.2. 11 Miss. Admin. Code Pt. 2, Ch. 1, Rule 1.3

This regulation addresses particulate matter as related to opacity.

4.2.3. 11 Miss. Admin. Code Pt. 2, Ch. 1, Rule 1.4

This regulation limits emissions of SO_2 from fuel burning and processes.

APPENDIX A: APPLICATION FOR AIR POLLUTION CONTROL PERMIT

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

1. Name, Address, and Location of Facility

A. Owner/Company Name: Amite BioEnergy LLC

B. Facility Name (if different than A. above): N/A

C. Facility Air Permit No. (if known): 0080-00031

D. Agency Interest No. (if known): 57796

E. Physical Address

1. Street Address: 1763 Georgia Pacific Road #2
2. City: Gloster
3. State: MS
4. County: Amite
5. Zip Code: 39638
6. Telephone No.
7. Fax No.

F. Mailing Address *(if different from physical address)*

1. Street Address or P.O. Box: 1500 North 19th; Suite 501
2. City: Monroe
3. State: LA
4. Zip Code: 71201

G. Latitude/Longitude Data

1. Collection Point *(check one)*

[X] Plant Entrance [ ] Other:

2. Method of Collection *(check one)*

[ ] GPS Specify coordinate system (NAD 83, etc.)

[X] Map Interpolation (Google Earth etc.) [ ] Other:

3. Latitude (degrees/minutes/seconds): 31° 11’ 00”
4. Longitude (degrees/minutes/seconds): 91°02’ 00”
5. Elevation: 415 feet

H. SIC/NAICS Codes *(primary code listed first)*

SIC: 2499

NAICS: 32199

(NAICS Code should correspond with the SIC Code directly above.)

2. Name and Address of Facility Contact

A. Name: Brennen Beard Title: HSE Manager

B. Mailing Address

1. Street Address or P.O. Box: 1763 Georgia Pacific Road #2
2. City: Gloster
3. State: MS
4. Zip Code: 39638
5. Email: brennen.beard@draxbiomass.com
6. Telephone No.: 318-816-0461
7. Fax No.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

3. Name and Address of Air Contact *(if different from Facility Contact)*

A. Name: N/A Title: _____

B. Mailing Address

1. Street Address: _____
2. City: _____ 3. State: _____
4. County: _____ 5. Zip Code: _____
6. Telephone No. _____ 7. Fax No. _____

4. Name and Address of the Responsible Official for the Facility

The Responsible Official is defined as one of the following:

a. For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $ 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated in accordance with corporate procedures.

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For purposes of these regulations, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA). A principal executive officer of a military facility includes the facility commander, chief executive officer, or any other similar person who performs similar policy or decision-making functions for the institution.

A. Name: Amber D. Bouska Title : VP HSE North America

B. Mailing Address

1. Street Address: 1500 North 19th Street
2. City : Monroe 3. State: LA
4. Zip Code: 71201 5. Email: amber.bouska@draxbiomass.com
6. Telephone No. 318-816-6590 7. Fax No. _____

C. Is the person above a duly authorized representative? [X] Yes [ ] No

If yes, has written notification of such authorization been submitted to MDEQ?

[x] Yes [ ] No [ ] Request for authorization is attached

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

5. Type of Permit Application ***(Check all that apply)***

State Permit to Construct (i.e., non-PSD or PSD avoidance)

[ ] Initial Application [X] Modification

New Source Review (NSR) Permit to Construct (includes both Prevention of Significant Deterioration (PSD) and Nonattainment)

[ ] Initial Application [ ] Modification

N/A **Title V Operating Permit**

[X] Initial Application

[ ] Re-issuance: Are any modification to the permit/facility being requested? [ ] Yes [ ] No

If yes, provide a separate sheet identifying the modification(s) and resulting change to emissions.

[ ] Modification (*Specify type*): [ ] Significant [ ] Minor [ ] Administrative

N/A **Synthetic Minor Operating Permit** ***(Appendix B must be completed and attached.)***

[ ] Initial Application

[ ] Re-issuance: Are any modification to the permit/facility being requested? [ ] Yes [ ] No

[ ] Modification

N/A **State Permit to Operate a Significant Minor Source** ***(defined in APC-S-2, Section I.C.25)***

[ ] Initial Application

[ ] Re-issuance: Are any modification to the permit/facility being requested? [ ] Yes [ ] No

[ ] Modification

True Minor Determination

[ ] Uncontrolled potential to emit air pollutants is below the Title V thresholds

6. Process/Product Details

A. List Significant Raw Materials (*if applicable*):
Logs, wood chips, dry shavings, clean mill and forest residuals

B. List All Products (*if applicable*):
Wood pellets

C. Brief Description of Principal Process(es):
Manufacture of wood pellets

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

6. Process/Product Details (continued)

D. Maximum Throughput for Raw Material(s) (*if applicable*):

Raw Materials	Throughput	Units
Logs, wood chips, dry shavings	1,733,239.00	US tons/year

E. Maximum Throughput for Principal Product(s) (*if applicable*):

Product	Throughput	Units
Wood Pellets	660,000	US ODT*/year

(*) = oven-dried tons (US tons)

7. Facility Operating Information

A. Number of employees at the facility: 3-Mar

	Average Actual	Maximum Potential
B. Hours per day the facility will operate:	24	24
C. Days per week the facility will operate:	7	7
D. Weeks per year the facility will operate:	52	52
E. Months the facility will operate:	12	12

8. Maps

A. Attach a topographical map of the area extending to at least 1/2 mile beyond the property boundaries. The map must show the outline of the property boundaries.

B. Attach a site map/diagram showing the outline of the property, and outline of all buildings and roadways on the site, and the location of each significant air emission source.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

9. Zoning

A. Is the facility (either existing or proposed) located in accordance with any applicable city and/or county zoning ordinances? If no, please explain.

Yes

B. Is the facility (either existing or proposed) required to obtain any zoning variance to locate/ expand the facility at this site? If yes, please explain.

No

10. Risk management Plan

A. Is the facility required to develop and register a risk management plan pursuant to Section 112(r), regulated under 40 CFR Part 68? [ ] Yes [X] No

B. If yes, to whom was the plan submitted? _____

11. *Is confidential information being submitted with this application?* [ ] Yes [X] No

If so, please follow the procedures outlined in the Mississippi Code Ann. Sections 49-17-39 and 17-17-27(6), as outlined in MCEQ-2-"Regulation regarding the review and reproduction of public records".

12. MS Secretary of State Registration / Certificate of Good Standing

No permit will be issued to a company that is not authorized to conduct business in Mississippi. If the company applying for the permit is a corporation, limited liability company, a partnership or a business trust, the application package should include proof of registration with the Mississippi Secretary of State and/or a copy of the company's Certificate of Good Standing. The name listed on the permit will include the company name as it is registered with the Mississippi Secretary of State.

It should be noted that for an application submitted in accordance with 11 Miss. Admin. Code Pt. 2, R. 2.8.B. to renew a State Permit to Operate or in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.A(1)(c). to renew a Title V Permit to be considered timely and complete, the applicant shall be registered and in good standing with the Mississippi Secretary of State to conduct business in Mississippi.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

13. Certification

Note: If approved by the MDEQ, a duly authorized representative (DAR) may sign the air permit application. The DAR must be listed in Section 4 of this application.

I certify to the best of knowledge and belief formed after reasonable inquiry; the statements and information in this application are true, complete, and accurate, and that as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Amber Bouska

Digitally signed by Amber Bouska
DN: cn=Amber Bouska, o=Drax, ou=VP HSE North America, email=amber.bouska@drax.com, c=US
Date: 2022.03.08 11:25:04 -06'00'

Signature of Responsible Official/DAR

March 8, 2022

Date

Amber D. Bouska

Printed Name

VP HSE North America

Title

Section B.0: Emission Point Descriptions & Status

This form should list all the of the Emission Points and descriptions as proposed or as otherwise identified in an existing permit. This worksheet should be updated to reflect changes to the Status of the emission points over time. Emission Point ID's should match those assigned in the current MDEQ permit. Facility ID is optional. For proposed emission points, the facility should leave the Emission Point ID blank but may complete the Facility ID (if any). Under "Status," for Emission Points that are proposed or under construction but not yet operating, indicate their status as "Proposed." For emissions points already operating or for which construction has been certified complete, indicate their status as "Operating." Include all control devices for each emission point and the pollutant(s) the device controls. Control devices may be specified in general terms (e.g., baghouse, catalytic oxidizer, fabric filter, wet ESP, etc.). When an Emission Point is removed, indicate so by changing the "Status" to "Removed." Remove the emissions on the subsequent worksheets or indicate they are removed with a "-" for all pollutants.

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
AA-102	AA-102	Log Chipper	Operating						
AA-101	AA-101	Log Debarker	Operating						
AA-201	AA-201	WESP, RTO, Burner, Dryer Furnace	Operating	RTO	VOC				
AA-203b	AA-203b	Furnace SUSD Bypass Stack	Operating						
AA-203c	AA-203c	Furnace Idling Bypass Stack	Operating						
AA-204b	AA-204b	Dryer SUSD Bypass Stack	Operating						
AA-302	AA-302	Primary Hammermill Feed Silo with bin vent	Operating						
AA-303	AA-303	Six (6) Primary Hammermill Pneumatic Systems (A-F)	Operating	RCO					
AA-307A	AA-307A	Secondary Hammermill Pneumatic System A	Operating	RCO	VOC	Baghouse	PM		
AA-307B	AA-307B	Secondary Hammermill Pneumatic System B	Operating	RCO	VOC	Baghouse	PM		
AA-307C	AA-307C	Secondary Hammermill Pneumatic System C	Operating	RCO	VOC	Baghouse	PM		
AA-305	AA-305	Secondary Hammermill Silo 1 with bin vent	Operating			Bin Vent	PM		
AA-306	AA-306	Secondary Hammermill Silo 2 with bin vent	Operating			Bin Vent	PM		
AA-308A	AA-308A	Pellet Mill/Cooler Pneumatic System A	Operating	RCO	VOC	Baghouse	PM		
AA-308B	AA-308B	Pellet Mill/Cooler Pneumatic System B	Operating	RCO	VOC	Baghouse	PM		
AA-308C	AA-308C	Pellet Mill/Cooler Pneumatic System C	Operating	RCO	VOC	Baghouse	PM		
AA-308D	AA-308D	Pellet Mill/Cooler Pneumatic System D	Operating	RCO	VOC	Baghouse	PM		
AA-308E	AA-308E	Pellet Mill/Cooler Pneumatic System E	Operating	RCO	VOC	Baghouse	PM		
AA-308F	AA-308F	Pellet Mill/Cooler Pneumatic System F	Operating	RCO	VOC	Baghouse	PM		
AA-301	AA-301	RCO, Burner	Operating	RCO	VOC				
AA-309	AA-309	Starch Silo	Operating			Baghouse	PM		
AA-401A	AA-401A	Pellet Storage Silo No. 1 with bin vent	Operating			Baghouse	PM		
AA-401B	AA-401B	Pellet Storage Silo No. 2 with bin vent	Operating			Baghouse	PM		
AA-401C	AA-401C	Screened Materials Return System	Operating			Baghouse	PM		
AA-401D	AA-401D	Pellet Truck Loadout System	Operating			Baghouse	PM		
		Paved Road Fugitives	Operating						
AA-501	AA-501	250 hp Diesel Fire Pump Engine	Operating						
AA-502	AA-502	402 hp Emergency Diesel Generator	Operating						
AA-304	AA-304	Dry Shavings Truck Dump	Operating						

Section B.1: Maximum Uncontrolled Emissions (under normal operating conditions)

Maximum Uncontrolled Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) in Section B.3 and GHGs in Section B.4. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Emissions > 0.01 TPY must be included. Please do not change the column widths on this table.

Emission Point ID	TSP[1] (PM)		PM-10[1]		PM-2.5[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead		Total HAPs	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-102	0.75	3.29	0.25	1.10	0.06	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-101	0.04	0.19	0.02	0.09	0.005	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-201	82.68	362.13	82.68	362.13	71.13	311.54	4.14	18.13	38.65	169.30	100.98	442.28	10.31	45.14	-	-	0.01	0.03	6.60	28.92
AA-203b											19.80	0.50	0.56	0.01					1.31	0.03
AA-203c											9.90	2.48	0.28	0.07					0.66	0.16
AA-204b	50.91	1.27	50.91	1.27	50.91	1.27	3.47	0.09	62.48	1.56	81.00	2.02	108.77	2.72					9.75	0.24
AA-302	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	1.48	6.50	-	-	-	-	0.29	1.27
AA-303	0.52	2.27	0.52	2.27	0.38	1.68	-	-	-	-	-	-	30.37	133.04	-	-	-	-	0.78	3.44
AA-307A	0.13	0.58	0.13	0.58	0.11	0.50	-	-	-	-	-	-	8.84	38.72	-	-	-	-	0.17	0.73
AA-307B	0.13	0.58	0.13	0.58	0.11	0.50	-	-	-	-	-	-	8.84	38.72	-	-	-	-	0.17	0.73
AA-307C	0.13	0.58	0.13	0.58	0.11	0.50	-	-	-	-	-	-	8.84	38.72	-	-	-	-	0.17	0.73
AA-305	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	1.32	5.79	-	-	-	-	0.26	1.14
AA-306	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	0.74	3.23	-	-	-	-	0.13	0.57
AA-308A	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-308B	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-308C	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-308D	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-308E	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-308F	0.25	1.11	0.25	1.11	0.20	0.88	-	-	-	-	-	-	21.26	93.13	-	-	-	-	0.09	0.41
AA-301	0.10	0.46	0.10	0.46	0.10	0.46	0.01	0.04	1.37	6.01	1.15	5.05	0.08	0.33	-	-	2.47E-08	1.08E-07	0.03	0.11
AA-309	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	0.04	0.17	0.04	0.17	0.04	0.17	-	-	-	-	-	-	1.00	4.36	-	-	-	-	0.20	0.86
AA-401B	0.04	0.17	0.04	0.17	0.04	0.17	-	-	-	-	-	-	1.00	4.36	-	-	-	-	0.20	0.86
AA-401C	0.96	4.20	0.96	4.20	0.96	4.20	-	-	-	-	-	-	0.20	0.87	-	-	-	-	0.04	0.17
AA-401D	0.17	0.74	0.17	0.74	0.13	0.55	-	-	-	-	-	-	2.21	9.67	-	-	-	-	0.39	1.69
Truck Dump	0.01	0.04	0.01	0.04	0.001	0.01	-	-	-	-	-	-	-	-	-	-	-	-		
Paved Roads	0.66	2.87	0.66	2.87	0.16	0.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	0.08	0.004	0.08	0.004	0.08	0.004	0.51	0.03	1.65	0.08	1.67	0.08	1.65	0.08	-	-	-	-	0.01	0.0003
AA-502	0.13	0.01	0.13	0.01	0.13	0.01	0.82	0.04	2.64	0.13	2.31	0.12	2.64	0.13	-	-	-	-	0.01	0.001
AA-304	0.01	0.04	0.01	0.04	0.001	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**139.58**	**388.79**	**139.05**	**386.49**	**126.25**	**330.32**	**8.96**	**18.32**	**106.81**	**177.09**	**216.81**	**452.52**	**316.70**	**891.25**	**0.00**	**0.00**	**0.01**	**0.03**	**21.71**	**44.15**

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

[3] Uncontrolled emissions from the RTO are lower for some pollutants compared to the proposed allowable emissions because the inclusion of the RTO controls CO and VOC emissions, but the combustion emissions from the RTO burner result in an increase in other pollutants.

[4] Uncontrolled emissions from the RCO include the RCO burner only.

Section B.2: Proposed Allowable Emissions

Proposed Allowable Emissions (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard (e.g., a MACT standard); or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Additional columns may be added if there are regulated pollutants (other than HAPs and GHGs) emitted at the facility.

Emission Point ID	TSP[1] (PM)		PM-10[1]		PM-2.5[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-102	0.04	0.16	0.01	0.05	0.003	0.01												
AA-101	0.04	0.19	0.02	0.09	0.005	0.02												
AA-201	3.68	16.12	3.68	16.12	3.68	16.12	11.58	50.70	20.61	90.29	43.23	189.36	10.31	45.14	-	-	0.0001	0.001
AA-203b											19.80	0.50	0.56	0.01				
AA-203c											9.90	2.48	0.28	0.07				
AA-204b	50.91	1.27	50.91	1.27	50.91	1.27	3.47	0.09	62.48	1.56	81.00	2.02	108.77	2.72				
AA-302	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	1.48	6.50	-	-	-	-
AA-303	Emissions captured under the RCO																	
AA-307A	Emissions captured under the RCO																	
AA-307B	Emissions captured under the RCO																	
AA-307C	Emissions captured under the RCO																	
AA-305	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	1.32	5.79	-	-	-	-
AA-306	0.19	0.84	0.19	0.84	0.19	0.84	-	-	-	-	-	-	0.74	3.23	-	-	-	-
AA-308A	Emissions captured under the RCO																	
AA-308B	Emissions captured under the RCO																	
AA-308C	Emissions captured under the RCO																	
AA-308D	Emissions captured under the RCO																	
AA-308E	Emissions captured under the RCO																	
AA-308F	Emissions captured under the RCO																	
AA-301	2.78	12.19	1.52	6.65	0.94	4.12	0.01	0.03	0.93	4.06	12.32	53.97	8.58	37.58	-	-	2.47E-08	1.08E-07
AA-309	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	0.04	0.17	0.04	0.17	0.04	0.17	-	-	-	-	-	-	1.00	4.36	-	-	-	-
AA-401B	0.04	0.17	0.04	0.17	0.04	0.17	-	-	-	-	-	-	1.00	4.36	-	-	-	-
AA-401C	0.96	4.20	0.96	4.20	0.96	4.20	-	-	-	-	-	-	0.20	0.87	-	-	-	-
AA-401D	0.17	0.74	0.17	0.74	0.13	0.55	-	-	-	-	-	-	2.21	9.67	-	-	-	-
Truck Dump	0.01	0.04	0.01	0.04	0.001	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Paved Roads	0.66	2.87	0.66	2.87	0.16	0.71	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	0.08	0.004	0.08	0.004	0.08	0.004	0.51	0.03	1.65	0.08	1.67	0.08	1.65	0.08	-	-	-	-
AA-502	0.13	0.007	0.13	0.01	0.13	0.01	0.82	0.04	2.64	0.13	2.31	0.12	2.64	0.13	-	-	-	-
AA-304	0.01	0.04	0.001	0.006														
Totals	**60.04**	**40.32**	**58.78**	**34.78**	**57.65**	**29.86**	**16.39**	**50.89**	**88.32**	**96.12**	**170.24**	**248.52**	**140.74**	**120.53**	**0.00**	**0.00**	**1.40E-04**	**6.14E-04**

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		Acetaldehyde		Acrolein		Benzene		Carbon Tetrachloride		Chlorine		Chlorobenzene		Chloroform		Chloromethane	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Chipper																		
Debarker																		
AA-201	4.00	17.52	0.35	1.54	0.15	0.65	0.05	0.21	0.001	0.002	0.01	0.04	0.0004	0.002	0.0003	0.001	0.0003	0.001
AA-203b	1.31	0.03	2.74E-02	-	1.32E-01	3.30E-03	1.39E-01	3.47E-03	-	-	2.61E-02	6.52E-04	-	-	-	-	-	-
AA-203c	0.66	0.16	1.37E-02	3.42E-03	6.60E-02	1.65E-02	6.93E-02	1.73E-02	7.43E-04	1.86E-04	1.30E-02	3.26E-03	5.45E-04	1.36E-04	4.62E-04	1.16E-04	3.80E-04	9.49E-05
AA-204b	9.75	0.24	1.74	0.04	0.53	0.01	0.18	0.004										
AA-302	0.29	1.27	0.07	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-303	Emissions captured under the RCO.																	
AA-307A	Emissions captured under the RCO.																	
AA-307B	Emissions captured under the RCO.																	
AA-305	0.26	1.14	0.07	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-306	0.13	0.57	0.03	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-308A	Emissions captured under the RCO.																	
AA-308B	Emissions captured under the RCO.																	
AA-308C	Emissions captured under the RCO.																	
AA-308D	Emissions captured under the RCO.																	
AA-308E	Emissions captured under the RCO.																	
AA-308F	Emissions captured under the RCO.																	
AA-301	3.55	15.55	0.26	1.16	0.10	0.44	-	-	-	-	-	-	-	-	-	-	-	-
AA-309	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	0.20	0.86	0.05	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401B	0.20	0.86	0.05	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401C	0.04	0.17	0.01	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401D	0.39	1.69	0.10	0.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paved Roads	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	0.007	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-502	0.005	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals:	**20.78**	**40.07**	**2.78**	**4.43**	**0.98**	**1.12**	**0.43**	**0.24**	**0.001**	**0.002**	**0.05**	**0.04**	**0.001**	**0.002**	**0.0008**	**0.002**	**0.0006**	**0.001**

Emission Point ID	Dibromoethane (1,2-)		Dichloroethane (1,2-)		Dichloromethane		Dichloropropane (1,2-)		Ethylbenzene		Formaldehyde		n-Hexane		Hydrochloric Acid		Mercury (and compounds)	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Chipper																		
Debarker																		
AA-201	0.001	0.003	0.0003	0.001	0.003	0.01	0.000	0.002	0.000	0.002	0.88	3.86	0.03	0.13	0.11	0.49	0.000	0.002
AA-203b	-	-	-	-	0.01	2.39E-04	-	-	-	-	0.15	3.63E-03	-	-	0.63	0.02	-	-
AA-203c	9.08E-04	2.27E-04	4.79E-04	1.20E-04	4.79E-03	1.20E-03	5.45E-04	1.36E-04	5.12E-04	1.28E-04	7.26E-02	1.82E-02			3.14E-01	7.84E-02	5.78E-05	1.44E-05
AA-204b											3.24	0.08						
AA-302	-	-	-	-	-	-	-	-	-	-	0.14	0.62	-	-	-	-	-	-
AA-303	Emissions captured under the RCO.																	
AA-307A	Emissions captured under the RCO.																	
AA-307B	Emissions captured under the RCO.																	
AA-305	-	-	-	-	-	-	-	-	-	-	0.13	0.55	-	-	-	-	-	-
AA-306	-	-	-	-	-	-	-	-	-	-	0.06	0.28	-	-	-	-	-	-
AA-308A	Emissions captured under the RCO.																	
AA-308B	Emissions captured under the RCO.																	
AA-308C	Emissions captured under the RCO.																	
AA-308D	Emissions captured under the RCO.																	
AA-308E	Emissions captured under the RCO.																	
AA-308F	Emissions captured under the RCO.																	
AA-301	-	-	-	-	-	-	-	-	-	-	0.25	1.09	0.01	0.05	0.06	0.25	-	-
AA-309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	-	-	-	-	-	-	-	-	-	-	0.09	0.41	-	-	-	-	-	-
AA-401B	-	-	-	-	-	-	-	-	-	-	0.09	0.41	-	-	-	-	-	-
AA-401C	-	-	-	-	-	-	-	-	-	-	0.02	0.08	-	-	-	-	-	-
AA-401D	-	-	-	-	-	-	-	-	-	-	0.19	0.83	-	-	-	-	-	-
Paved Roads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	-	-	-	-	-	-	-	-	-	-	0.002	0.0001	-	-	-	-	-	-
AA-502	-	-	-	-	-	-	-	-	-	-	0.001	0.0001	-	-	-	-	-	-
Totals:	**0.002**	**0.003**	**0.0008**	**0.002**	**0.018**	**0.02**	**0.001**	**0.002**	**0.001**	**0.002**	**5.32**	**8.24**	**0.04**	**0.19**	**1.11**	**0.83**	**0.000**	**0.002**

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Naphthalene (and Methylnaphthalenes)		Phenol		PAH		Proprionaldehyde		Styrene		Tetrachloroethylene		Toluene		Trichloroethane (1,1,1-)		Trichloroethylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Chipper																		
Debarker																		
AA-201	0.001	0.005	0.683	2.991	0.0003	0.001	0.101	0.444	0.02	0.10	0.0004	0.002	0.01	0.05	0.0004	0.002	0.0004	0.002
AA-203b	3.20E-03	8.00E-05	-	-	-	-	-	-	0.06	1.57E-03	-	-	0.03	7.59E-04	-	-	-	-
AA-203c	1.60E-03	4.00E-04	8.42E-04	2.10E-04	4.61E-04	1.15E-04	1.01E-03	2.52E-04	3.14E-02	7.84E-03	6.27E-04	1.57E-04	1.52E-02	3.80E-03	5.12E-04	1.28E-04	4.95E-04	1.24E-04
AA-204b			0.65	0.02			0.30	0.01	0.01	0.0002			0.30	0.01				
AA-302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-303	Emissions captured under the RCO.																	
AA-307A	Emissions captured under the RCO.																	
AA-307B	Emissions captured under the RCO.																	
AA-305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-308A	Emissions captured under the RCO.																	
AA-308B	Emissions captured under the RCO.																	
AA-308C	Emissions captured under the RCO.																	
AA-308D	Emissions captured under the RCO.																	
AA-308E	Emissions captured under the RCO.																	
AA-308F	Emissions captured under the RCO.																	
AA-301	-	-	1.58	6.93	-	-	0.24	1.06	-	-	-	-	0.00002	0.0001	-	-	-	-
AA-309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paved Roads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals:	**0.006**	**0.01**	**2.915**	**9.941**	**0.0008**	**0.002**	**0.646**	**1.514**	**0.12**	**0.11**	**0.001**	**0.002**	**0.36**	**0.06**	**0.001**	**0.002**	**0.001**	**0.002**

Emission Point ID	Trichlorofluoromethane		Xylene		Arsenic (and compounds)		Barium (and compounds)		Copper (and compounds)		Lead compounds		Manganese (and compounds)		Nickel (and compounds)		Phosphorus	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Chipper																		
Debarker																		
AA-201	0.00	0.02	0.0003	0.001	0.0001	0.0003	0.000	0.002	0.0001	0.001	0.0001	0.001	0.00	0.02	0.0001	0.000	0.0001	0.0003
AA-203b	0.01	3.38E-04	-	-	-	-	0.01	1.40E-04	-	-	-	-	0.05	1.32E-03	-	-	-	-
AA-203c	6.77E-03	1.69E-03	4.13E-04	1.03E-04	3.63E-04	9.08E-05	2.81E-03	7.01E-04	8.09E-04	2.02E-04	7.92E-04	1.98E-04	2.64E-02	6.60E-03	5.45E-04	1.36E-04	4.46E-04	1.11E-04
AA-204b			0.01	0.0003														
AA-302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-303	Emissions captured under the RCO.																	
AA-307A	Emissions captured under the RCO.																	
AA-307B	Emissions captured under the RCO.																	
AA-305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-308A	Emissions captured under the RCO.																	
AA-308B	Emissions captured under the RCO.																	
AA-308C	Emissions captured under the RCO.																	
AA-308D	Emissions captured under the RCO.																	
AA-308E	Emissions captured under the RCO.																	
AA-308F	Emissions captured under the RCO.																	
AA-301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00003	0.0001	-	-
AA-309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-401D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paved Roads	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals:	**0.03**	**0.02**	**0.0118**	**0.002**	**0.0004**	**0.0004**	**0.009**	**0.003**	**0.0010**	**0.001**	**0.0009**	**0.001**	**0.08**	**0.03**	**0.0007**	**0.001**	**0.0005**	**0.0005**

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Zinc (and compounds)		Methanol	
	lb/hr	ton/yr	lb/hr	ton/yr
Chipper				
Debarker				
AA-201	0.001	0.01	-	-
AA-203b	0.014	3.47E-04		
AA-203c	0.007	0.002		
AA-204b			2.55	0.06
AA-302	-	-	0.07	0.33
AA-303	Emissions captured under the RCO.			
AA-307A	Emissions captured under the RCO.			
AA-307B	Emissions captured under the RCO.			
AA-305	-	-	0.07	0.30
AA-306	-	-	0.03	0.15
AA-308A	Emissions captured under the RCO.			
AA-308B	Emissions captured under the RCO.			
AA-308C	Emissions captured under the RCO.			
AA-308D	Emissions captured under the RCO.			
AA-308E	Emissions captured under the RCO.			
AA-308F	Emissions captured under the RCO.			
AA-301	-	-	2.92	12.81
AA-309	-	-	-	-
AA-401A	-	-	0.05	0.22
AA-401B	-	-	0.05	0.22
AA-401C	-	-	0.01	0.04
AA-401D	-	-	0.10	0.43
Paved Roads	-	-	-	-
AA-501	-	-	-	-
AA-502	-	-	-	-
Totals:	**0.022**	**0.01**	**5.85**	**14.56**

Section B.4: Greenhouse Gas Emissions

Applicants must report potential emission rates in SHORT TONS per year, as opposed to metric tons required by Part 98. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC[3] ton/yr				Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**298**	**25**	**22,800**	**footnote 4**					
AA-201	**mass GHG**	12298.76		0.02	0.23						**12299.01**	
	CO_2e	12298.76		6.91	5.79							**12311.46**
AA-301	**mass GHG**	7174.27		0.01	0.14						**7174.42**	
	CO_2e	7174.27		4.03	3.38							**7181.68**
AA-501	**mass GHG**	14.27		0.0001	0.001						**14.27**	
	CO_2e	14.27		0.03	0.01							**14.32**
AA-502	**mass GHG**	22.95		0.0002	0.001						**22.95**	
	CO_2e	22.95		0.06	0.02							**23.02**
										FACILITY TOTAL	**mass GHG**	**19,510.66**	
											CO_2e		**19,530**

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] Biogenic CO2 is defined as carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms.

[3] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[4] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[5] Greenhouse gas emissions on a **mass basis** is the ton per year greenhouse gas emission before adjustment with its GWP. Do not include biogenic CO_2 in this total.

[6] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the greenhouse gas by its GWP. Do not include biogenic CO_2e in this total.

Section B.5: Stack Parameters and Exit Conditions

Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

Emission Point ID	Orientation (H-Horizontal V=Vertical)	Rain Caps	Height Above Ground	Base Elevation	Exit Temp.	Inside Diameter or Dimensions	Velocity	Moisture by Volume	Geographic Position (degrees/minutes/seconds)	
		(Yes or No)	(ft)	(ft)	(^{o}F)	(ft)	(ft/sec)	(%)	Latitude	Longitude
*Note: Modeling was not required; therefore, stack parameters are not provided.										

[1] A WAAS-capable GPS receiver should be used and in the WGS84 or NAD83 coordinate system. Coordinates listed are in Zone 15.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - External Combustion Sources — Section C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-203a/AA-203b/AA-203c

B. Equipment Description: Wood Fired Furnace/Wood Fired Furnace Bypass Stack

C. Manufacturer: Dieffenbacher

D. Model Yr and No.: N/A

E. Maximum Heat Input (higher heating value): 165 MMBtu/hr

F. Nominal Heat Input Capacity: N/A MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate > 70,000 Btu/hr-ft3? [ ] Yes [ ] No

H. Use: [ ] Electrical Generation [ ] Steam [X] Process Heat [ ] Space Heat [ ] Standby/Emergency [ ] Other (describe):

I. Heat Mechanism: [X] Direct [ ] Indirect

J. Burner Type (e.g., pulverized coal, forced draft, atomizing oil, low-NOx, etc.): Spreader stoker

K. Additional Design Controls (e.g., FGR, etc.): N/A

L. Status: [X] Operating [ ] Proposed [ ] Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE[1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
biomass	4500 BTU/lb	0.0056	3	53.35 tons	467,316 tons

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Engines — Section D

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-501

B. Equipment Description: Emergency Pump Engine

C. Manufacturer: John Deere Power Systems

D. Model Yr and No.: 2013 JU6H-UFADR8

E. Maximum Heat Input (higher heating value): 0.64 MMBtu/hr

F. Rated Power: 250 hp 187 kW

G. Use: [ ] Non-Emergency [X] Emergency

Complete H through K for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [X] <10 Liters [ ] 10 to <30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [X] Compression Ignition

J. Engine Burn Type: [X] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(check all that apply)

K. Design Controls (e.g., catalytic converter, diesel particulate, etc.): N/A

Complete L through M for Stationary Gas Turbines

L. Turbine Type: [ ] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle
[ ] Combined Heat and Power (Cogeneration)

M. Controls: [ ] Water-steam injection [ ] Lean Premix
[ ] Other Controls (SCR, oxidation catalyst, etc.): _____

N. Status: [ ] Operating [ ] Proposed [ ] Under Construction

O. Engine Manufactured Date: _____ N. Engine Order Date: _____

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

R. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Ultra-Low Sulfur Diesel	140,000 Btu/gal	15 ppm	0.02	4.6 gal	2,290 gal

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Engines — Section D

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-502

B. Equipment Description: Emergency Generator Engine

C. Manufacturer: Generac Industrical Power D. Model Yr and No.: 2015 SD 300

E. Maximum Heat Input (higher heating value): 0.81 MMBtu/hr

F. Rated Power: 402 hp 300 kW

G. Use: [ ] Non-Emergency [X] Emergency

Complete H through K for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] <10 Liters [X] 10 to <30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [X] Compression Ignition

J. Engine Burn Type: [X] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(check all that apply)

K. Design Controls (e.g., catalytic converter, diesel particulate, etc.): N/A

Complete L through M for Stationary Gas Turbines

L. Turbine Type: [ ] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle
[ ] Combined Heat and Power (Cogeneration)

M. Controls: [ ] Water-steam injection [ ] Lean Premix
[ ] Other Controls (SCR, oxidation catalyst, etc.):

N. Status: [ ] Operating [ ] Proposed [ ] Under Construction

O. Engine Manufactured Date: N. Engine Order Date:

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

R. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction:

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Ultra-Low Sulfur Diesel	140,000 Btu/gal	15 ppm	0.02	17 gal	8570 gal

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): **AA-202 - Five Green Hammermills - DELETE SOURCE**

B. Process Description: Five Green Hammermills

C. Manufacturer: _____ D. Model: _____

E. Maximum Design Capacity (specify units): _____
Equivalent to: _____ tons/hr

F. Status: ☐ Operating ☐ Proposed ☐ Under Construction

G. Operating Schedule (Actual): ____ hrs/day ____ days/week ____ weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: _____

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	88 tons/hr	88 tons/hr	578,052 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-204a/AA-204b

B. Process Description: Wood Chip Rotary Dryer with 12.5 MMBTU/hr Wood Chip Rotary Dryer Bypass Stack (AA-204b).

C. Manufacturer: Dieffenbacher D. Model: Rotary Dyer

E. Maximum Design Capacity (specify units):
Equivalent to: 158 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	158 tons/hr	158 tons/hr	1,266,000 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	88 tons/hr	53.3 tons/hr	467,316 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-302

B. Process Description: Primary Hammermill Feed Silo with Bin Vent

C. Manufacturer: Hoffman D. Model: Dry Chip Silo

E. Maximum Design Capacity (specify units):
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-303 (A-F)

B. Process Description: Primary Hammermill Pneumatic System Vents (6 systems each with an emission point for a total of 6 emission points). Each system is equipped with a baghouse filter to control PM emissions. Emissions from these sources are routed to the RCO (AA-301).

C. Manufacturer: CPM - Roskamp D. Model: HM 5448

E. Maximum Design Capacity (specify units): _____
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-304

B. Process Description: Truck Dump

C. Manufacturer: _____ D. Model: _____

E. Maximum Design Capacity (specify units): _____

Equivalent to: _____ tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: July 2020

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	53.35 tons/hr	53.35 tons/hr	467,216 tons/yr

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	53.35 tons/hr	53.3 tons/hr	467,216 tons/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-305

B. Process Description: Secondary Hammermill Feed Silo No.1 with Bin Vent

C. Manufacturer: Hoffman D. Model: Dry Chip Silo

E. Maximum Design Capacity (specify units):
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-306

B. Process Description: Secondary Hammermill Feed Silo No. 2 with Bin Vent

C. Manufacturer: Hoffman D. Model: Dry Chip Silo

E. Maximum Design Capacity (specify units):
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-307

B. Process Description: Three (3) Secondary Hammermill Pneumatic Systems A, B, & C. Each system is equipped with a baghouse filter to control PM emissions. Emissions from these sources are routed to the RCO (AA-301).

C. Manufacturer: CPM - Roskamp D. Model: HM 5448

E. Maximum Design Capacity (specify units):
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-308 (A though F)

B. Process Description: SIx (6) Pellet Mill / Cooler Pneumatic Systems A-F. Each system is equipped with a baghouse filter to control PM emissons. Emissions from these sources are routed to the RCO (AA-301).

C. Manufacturer: CPM - Roskamp D. Model: Pellet Cooler

E. Maximum Design Capacity (specify units):
Equivalent to: 528 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Manufacturing Processes — Section E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-401

B. Process Description: Two (2) Pellet Storage Silos, Screened Materials Return System, and Pellet Truck Loadout System. Emissions from all sources controlled by a common baghouse.

C. Manufacturer: Advance Conveying Technologies (ACT) D. Model: Pellet Silo

E. Maximum Design Capacity (specify units):
Equivalent to: 88 tons/hr

F. Status: [X] Operating [ ] Proposed [ ] Under Construction

G. Operating Schedule (Actual): 24 hrs/day 7 days/week 52 weeks/yr

N. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: August 2015

2. Raw Material Input

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

3. Product Output

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR MAXIMUM
Wood	71.31 tons/hr	71.31 tons/hr	624,700 tons/year

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Baghouses/Fabric Filters — **Section L1**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-303 (1-6)

B. Equipment Description (include the process(es) that adsorption controls emissions from):

Primary Hammermill Pneumatic Systems 1 – 6 [each system equipped with a baghouse filter to control particulate matter emissions; emissions from these sources are routed to the RCO (AA-301)]

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Baghouse Data

A. Cloth Area _____ ft^2 B. Air to cloth ratio _____ $acfm/ft^2$

C. Type of bag: [ ] Woven [ ] Felted [ ] Membrane [ ] Other

D. Filter Material _____ E. Max. Filter Operating Temp. _____ ^oF

F. No. of compartments _____ G. No. of bags per compartment: _____

H. Bag Length _____ ft I. Bag diameter _____ ft

J. Pressure drop: _____ in H_20 K. Inlet air flow rate: _____ acfm

L. Air temperature 70 ^oF M. Efficiency (PM): 99 %

N. Is a pressure measurement device installed [ ] Yes [ ] No Warning alarm? [ ] Yes [ ] No

O. Dirty air is on ..: [ ] Inside of bag [ ] Outside of bag

P. Time between bag cleaning (specify units): ___ sec. [ ] [ ] Timed [ ] Manual

Q. Method of cleaning [ ] Shaking [ ] Reverse air [ ] Pulse Jet
[ ] Other: _____

R. Are extra bags readily available? [ ] Yes [ ] No If yes, how many? 5

S. Method of determining when to replace bags: [ ] Alarm [ ] Internal Inspection [ ] Visible emissions
[ ] Other: _____

T. How is the collected dust stored, handled, and disposed of? Dust is discharged back into the bin???

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Baghouses/Fabric Filters — **Section L1**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-307 (A, B, & C)

B. Equipment Description (include the process(es) that adsorption controls emissions from):

Three (3) Secondary Hammermill Pneumatic Systems A & B (each system equipped with a baghouse filter to control particulate matter emissions; emissions from these sources are routred to the RCO (AA-301).

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Baghouse Data

A. Cloth Area _____ ft^2 B. Air to cloth ratio _____ $acfm/ft^2$

C. Type of bag: [ ] Woven [ ] Felted [ ] Membrane [ ] Other

D. Filter Material _____ E. Max. Filter Operating Temp. _____ ^oF

F. No. of compartments _____ G. No. of bags per compartment: _____

H. Bag Length _____ ft I. Bag diameter _____ ft

J. Pressure drop: _____ in H_20 K. Inlet air flow rate: _____ acfm

L. Air temperature 70 ^oF M. Efficiency (PM): 99 %

N. Is a pressure measurement device installed [ ] Yes [ ] No Warning alarm? [ ] Yes [ ] No

O. Dirty air is on ..: [ ] Inside of bag [ ] Outside of bag

P. Time between bag cleaning (specify units): ___ sec. [ ] [ ] Timed [ ] Manual

Q. Method of cleaning [ ] Shaking [ ] Reverse air [ ] Pulse Jet
[ ] Other: _____

R. Are extra bags readily available? [ ] Yes [ ] No If yes, how many? 5

S. Method of determining when to replace bags: [ ] Alarm [ ] Internal Inspection [ ] Visible emissions
[ ] Other: _____

T. How is the collected dust stored, handled, and disposed of? Dust is discharged back into the bin???

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Baghouses/Fabric Filters — **Section L1**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-308 (A-F)

B. Equipment Description (include the process(es) that adsorption controls emissions from):

Six (6) Pellet Mill / Cooler Pneumatic Systems A-F (each system comprised of t2 pellet mills and one pellet cooler; each system equipped with a baghouse filter to control particulate matter emissions; emissions from these sources are routed to the RCO (AA-301).

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [X] Proposed [ ] Under Construction (2 are proposed)

2. Baghouse Data

A. Cloth Area _____ ft^2 B. Air to cloth ratio _____ $acfm/ft^2$

C. Type of bag: [ ] Woven [ ] Felted [ ] Membrane [ ] Other

D. Filter Material _____ E. Max. Filter Operating Temp. _____ ^oF

F. No. of compartments _____ G. No. of bags per compartment: _____

H. Bag Length _____ ft I. Bag diameter _____ ft

J. Pressure drop: _____ in H_20 K. Inlet air flow rate: _____ acfm

L. Air temperature 70 ^oF M. Efficiency (PM): 99 %

N. Is a pressure measurement device installed [ ] Yes [ ] No Warning alarm? [ ] Yes [ ] No

O. Dirty air is on ..: [ ] Inside of bag [ ] Outside of bag

P. Time between bag cleaning (specify units): ___ sec. [ ] [ ] Timed [ ] Manual

Q. Method of cleaning [ ] Shaking [ ] Reverse air [ ] Pulse Jet
[ ] Other: _____

R. Are extra bags readily available? [ ] Yes [ ] No If yes, how many? 5

S. Method of determining when to replace bags: [ ] Alarm [ ] Internal Inspection [ ] Visible emissions
[ ] Other: _____

T. How is the collected dust stored, handled, and disposed of? Dust is discharged back into the bin???

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Baghouses/Fabric Filters — **Section L1**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-309

B. Equipment Description (include the process(es) that adsorption controls emissions from):

Starch Storage Silo with bin vent (equipped with baghouse filter)

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Baghouse Data

A. Cloth Area _____ ft^2 B. Air to cloth ratio _____ $acfm/ft^2$

C. Type of bag: [ ] Woven [ ] Felted [ ] Membrane [ ] Other

D. Filter Material _____ E. Max. Filter Operating Temp. _____ ^oF

F. No. of compartments _____ G. No. of bags per compartment: _____

H. Bag Length _____ ft I. Bag diameter _____ ft

J. Pressure drop: _____ in H_20 K. Inlet air flow rate: _____ acfm

L. Air temperature 70 ^oF M. Efficiency (PM): 99 %

N. Is a pressure measurement device installed [ ] Yes [ ] No Warning alarm? [ ] Yes [ ] No

O. Dirty air is on ..: [ ] Inside of bag [ ] Outside of bag

P. Time between bag cleaning (specify units): ___ sec. [ ] [ ] Timed [ ] Manual

Q. Method of cleaning [ ] Shaking [ ] Reverse air [ ] Pulse Jet
[ ] Other: _____

R. Are extra bags readily available? [ ] Yes [ ] No If yes, how many? 5

S. Method of determining when to replace bags: [ ] Alarm [ ] Internal Inspection [ ] Visible emissions
[ ] Other: _____

T. How is the collected dust stored, handled, and disposed of? Dust is discharged back into the bin???

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Baghouses/Fabric Filters — **Section L1**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-401

B. Equipment Description (include the process(es) that adsorption controls emissions from):

Two (2) Pellet Storage Silos, Screened Materials Return System, and Pellet Truck Loadout System
(emissions from all sources are controlled by a common baghouse).

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Baghouse Data

A. Cloth Area _____ ft^2 B. Air to cloth ratio _____ $acfm/ft^2$

C. Type of bag: [ ] Woven [ ] Felted [ ] Membrane [ ] Other

D. Filter Material _____ E. Max. Filter Operating Temp. _____ ^oF

F. No. of compartments _____ G. No. of bags per compartment: _____

H. Bag Length _____ ft I. Bag diameter _____ ft

J. Pressure drop: _____ in H_20 K. Inlet air flow rate: _____ acfm

L. Air temperature 70 ^oF M. Efficiency (PM): 99 %

N. Is a pressure measurement device installed [ ] Yes [ ] No Warning alarm? [ ] Yes [ ] No

O. Dirty air is on ..: [ ] Inside of bag [ ] Outside of bag

P. Time between bag cleaning (specify units): ___ sec. [ ] [ ] Timed [ ] Manual

Q. Method of cleaning [ ] Shaking [ ] Reverse air [ ] Pulse Jet
[ ] Other: _____

R. Are extra bags readily available? [ ] Yes [ ] No If yes, how many? 5

S. Method of determining when to replace bags: [ ] Alarm [ ] Internal Inspection [ ] Visible emissions
[ ] Other: _____

T. How is the collected dust stored, handled, and disposed of? Dust is discharged back into the bin???

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Oxidation Systems — **Section L4**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-201

B. Equipment Description (include t Finished Pellet Operations

Regenerative Thermal Oxidizer (RTO) controls emissions from chip dryer

C. Manufacturer: MEGTEC D. Model: Clean Switch RTO

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Oxidation System Data

A. Type of Oxidation Process:

[ ]	Afterburner	[ ]	Flare
[ ]	Recuperative Thermal Oxidizer	[ ]	Recuperative Catalytic Oxidizer
[X]	Regenerative Thermal Oxidizer	[ ]	Regenerative Catalytic Oxidizer
[ ]	Other:		

B. Efficiency: 72.5 % (estimated) Controlling the following pollutant(s): CO
Efficiency: 96 % (estimated) Controlling the following pollutant(s): VOC

C. Inlet air flow rate: 200,000 acfm

D. Combustion Chamber Temperature: Minimum: 1450 °F Maximum: 1800 °F

E. Maximum burner rating: 24.0 MMBtu/hr F. Fuel Type: Natural Gas

G. Fuel Usage Rate (specify units): 23,529 scf/hr H. Sulfur in Fuel: 0.02 gr/scf wt %

I. Residence Time: 0.4 seconds J. Percent Excess Air: N/A %

K. Combustion Chamber Volume: 3,637 ft^3

L. VOC Concentration: Inlet: 107 ppmv Outlet: 4.3 ppmv

2. Oxidation System Data (continued)

M. Catalyst Data (if applicable):

1. Catalyst type: _____

2. Catalyst volume: _____ ft^3

3. How is spent catalyst disposed of? _____

N. Flare Data (if applicable):

1. Flare Type: ☐ Non-assisted ☐ Steam-assisted ☐ Air-assisted
   ☐ Other: _____

2. Net heating value of combusted gas: _____ Btu/scf

3. Design exit velocity: _____ ft/sec

4. Is the presence of a flare pilot flame monitored? ☐ Yes ☐ No

   If yes, please describe the monitoring: _____

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Oxidation Systems | **Section L4**

1. Oxidation System Equipment

A. Emission Point Designation (Ref. No.): AA-301

B. Equipment Description (include t Finished Pellet Operations

Regenerative Catalytic Oxidizer (RCO) controls emissions from the Primary Hammermills, the Secondary Hammermills, and the Pellet Coolers.

C. Manufacturer: NESTEC Inc.

D. 2 Model: 908 RCOs

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Oxidation System Data

A. Type of Oxidation Process:

- [ ] Afterburner
- [ ] Flare
- [ ] Recuperative Thermal Oxidizer
- [ ] Recuperative Catalytic Oxidizer
- [ ] Regenerative Thermal Oxidizer
- [X] Regenerative Catalytic Oxidizer
- [ ] Other: _____

B. Efficiency: 96.3 % (estimated) Controlling the following pollutant(s): VOC
Efficiency: _____ % (estimated) Controlling the following pollutant(s): _____

C. Inlet air flow rate: 293,042 acfm

D. Combustion Chamber Temperature: Minimum: 750 °F Maximum: 1400 °F

E. Maximum burner rating: 5.0 MMBtu/hr F. Fuel Type: Natural Gas

G. Fuel Usage Rate (specify units): 3.13 mmBTU/hr H. Sulfur in Fuel: 0.02 gr/scf wt %

I. Residence Time: 1 seconds J. Percent Excess Air: 10 %

K. 2 Combustion Chamber Volume: 9,470 ft^3

L. VOC (CH_4) Concentration: Inlet: 726 ppmvd Outlet: 26 ppmvd

2. Oxidation System Data (continued)

M. Catalyst Data (if applicable):

1. Catalyst type: manganese oxide

2. Catalyst volume: _____ ft^3

3. How is spent catalyst disposed of? _____

N. Flare Data (if applicable):

1. Flare Type: ☐ Non-assisted ☐ Steam-assisted ☐ Air-assisted
   ☐ Other: _____

2. Net heating value of combusted gas: _____ Btu/scf

3. Design exit velocity: _____ ft/sec

4. Is the presence of a flare pilot flame monitored? ☐ Yes ☐ No

   If yes, please describe the monitoring: _____

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Electrostatic Precipitators (ESP) — **Section L6**

1. Electrostatic Precipitator Description

A. Emission Point Designation (Ref. No.): AA-201

B. Equipment Description (include t Finished Pellet Operations

Wet ESP (WESP) controls emissions from chip dryer

C. Manufacturer: B & W MEGTEC D. Model: Wet ESP

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Electrostatic Precipitator Data

A. Precipitator Type [X] Wet [ ] Dry [ ] Single-stage

[ ] Two-stage [ ] Other:

B. Efficiency: 97.5 % Controlling the following pollutant(s): PM

C. Inlet air flow rate: 171,409 acfm

D. Pressure Drop: 1 in. of H_2O

E. Inlet Temperature: 248 °F

F. Total collection plate area: 38,301 ft^2

G. Collector Plate Size: Length: 19.5 ft Width: 1 ft (diameter)

H. Gas Viscosity: N/A poise

I. Pollutant Resistivity: N/A ohm-cm

J. Field strength: Charging: 22.4 kV/inch volts Collecting: volts

^3.7 inch voltage gap

K. No. of fields 1 field using 3 transformers/rectifier sets in parallel

L. No. of collector plates per field: 567

2. Electrostatic Precipitator Data (continued)

M. Spacing between collector plates 12 in.

N. No. of compartments: 1

O. No. of discharge electrodes 567

P. Corona Power: 210 watts/1000cfm

Q. Electrical Usage: 153 kW/hr

R. Cleaning Method: [ ] Plate Rapping [ ] Plate Vibrating [X] Washing
[ ] Other: _____

S. Rapper Frequency: _____ min/cycle [ ] Automatic [ ] Manual

T. Is flue gas conditioning required? [ ] Yes [X] No

U. Fan location relative to precipitator: [X] Upstream [ ] Downstream

V. How is the collected dust stored, handled, and disposed of?

Spent flush water containing the collected dust flows by gravity into the wet ESP sump. The wastewater is then routed to the furnace system for evaporation.

W. List the electrical conditions per field:

FIELD NO.	VOLTAGE (kV)	AMPERAGE (mA)
N/A		

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Other Control Device | **Section L7**

1. Description

A. Emission Point Designation (Ref. No.): AA-302

B. Equipment Description (include the process(es) that the equipment controls emissions from):

Primary Hammermill Feed Silo with Bin Vent

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Relevant Data

A. Efficiency: 99 % Controlling the following pollutant(s): PM

B. Inlet air flow rate: _____ acfm

C. Pressure Drop: _____ in. of H_2O

D. Inlet Temperature (Water): _____ °F E. Outlet Temperature (Water): _____ °F

F. How is any generated waste (e.g., dust, wastewater, etc.) collected, stored, handled, and disposed of?

G. Provide any additional details regarding important design and operating parameters below:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Other Control Device | **Section L7**

1. Description

A. Emission Point Designation (Ref. No.): AA-305

B. Equipment Description (include the process(es) that the equipment controls emissions from):

Secondary Hammermill Silo No. 1 with Bin Vent

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Relevant Data

A. Efficiency: 99 % Controlling the following pollutant(s): PM

B. Inlet air flow rate: _____ acfm

C. Pressure Drop: _____ in. of H_2O

D. Inlet Temperature (Water): _____ °F E. Outlet Temperature (Water): _____ °F

F. How is any generated waste (e.g., dust, wastewater, etc.) collected, stored, handled, and disposed of?

G. Provide any additional details regarding important design and operating parameters below:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Other Control Device | **Section L7**

1. Description

A. Emission Point Designation (Ref. No.): AA-302

B. Equipment Description (include the process(es) that the equipment controls emissions from):

Secondary Hammermill Silo No. 2 with Bin Vent

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Relevant Data

A. Efficiency: 99 % Controlling the following pollutant(s): PM

B. Inlet air flow rate: _____ acfm

C. Pressure Drop: _____ in. of H_2O

D. Inlet Temperature (Water): _____ °F E. Outlet Temperature (Water): _____ °F

F. How is any generated waste (e.g., dust, wastewater, etc.) collected, stored, handled, and disposed of?

G. Provide any additional details regarding important design and operating parameters below:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Other Control Device | **Section L7**

1. Description

A. Emission Point Designation (Ref. No.): AA-309

B. Equipment Description (include the process(es) that the equipment controls emissions from):

Starch Silo with bin vent

C. Manufacturer: _____ D. Model: _____

E. Status: [X] Operating [ ] Proposed [ ] Under Construction

2. Relevant Data

A. Efficiency: 99 % Controlling the following pollutant(s): PM

B. Inlet air flow rate: _____ acfm

C. Pressure Drop: _____ in. of H_2O

D. Inlet Temperature (Water): _____ °F E. Outlet Temperature (Water): _____ °F

F. How is any generated waste (e.g., dust, wastewater, etc.) collected, stored, handled, and disposed of?

G. Provide any additional details regarding important design and operating parameters below:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Stack Testing — **Section M6**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-201

B. Emission Point Description: RTO

C. For what emission limit or standard does the monitoring demonstrate compliance?
PM (filterable only), PM10/PM2.5 (filterable + condensable), CO, NOx, VOCs, methanol, acetaldehyde, formaldehyde, acrolein, propionaldehyde, hydrogen chloride (HCl), & phenol

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?
Condition 5.8 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Stack Testing Information

A. Test method(s) and corresponding pollutants(s):
Applicable EPA-approved test methods in Appendix A of 40 CFR Part 60, Appendix M of 40 CFR Part 51, or Appendix A of 40 CFR Part 63.

B. Testing frequency: [ ] Annual [ ] Biennial [X] Other: Within 25 months of previous test

C. Has EPA approved an alternative method or has the applicant proposed an alternative test method?

[ ] Yes [X] No

If yes, provide details on the alternative method and the date the alternative method was approved (if applicable).

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Stack Testing — **Section M6**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-301

B. Emission Point Description: RCO

C. For what emission limit or standard does the monitoring demonstrate compliance?
PM (filterable only), PM10/PM2.5 (filterable + condensable), CO, NOx, VOCs, methanol, acetaldehyde, formaldehyde, acrolein, propionaldehyde, hydrogen chloride (HCl), & phenol

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?
Condition 5.8 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Stack Testing Information

A. Test method(s) and corresponding pollutants(s):
Applicable EPA-approved test methods in Appendix A of 40 CFR Part 60, Appendix M of 40 CFR Part 51, or Appendix A of 40 CFR Part 63.

B. Testing frequency: [ ] Annual [ ] Biennial [X] Other: Within 25 months of previous test

C. Has EPA approved an alternative method or has the applicant proposed an alternative test method?

[ ] Yes [X] No

If yes, provide details on the alternative method and the date the alternative method was approved (if applicable).

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Stack Testing — **Section M6**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-301

B. Emission Point Description: RCO

C. For what emission limit or standard does the monitoring demonstrate compliance?
Perform apparent density testing on RCO catalytic media in grams/m3.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?
Condition 5.21 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Stack Testing Information

A. Test method(s) and corresponding pollutants(s):
As required - apparent density testing

B. Testing frequency: [ ] Annual [ ] Biennial [X] Other: Within 16 months of previous test

C. Has EPA approved an alternative method or has the applicant proposed an alternative test method?

[ ] Yes [X] No

If yes, provide details on the alternative method and the date the alternative method was approved (if applicable).

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-000

B. Emission Point Description: Facility--Wide

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

HAP Emissions (methanol, acetaldehyde, formaldehyde, acrolein, propionaldehyde, hydrogen chloride, phenol)

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued……., etc.)?

Condition 5.3 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
HAP Emissions	US ODT/month & US ODT/year	Monthly & Rolling 12-Month Total	Calculate and record the emissions of each HAP and all HAPs in total on a monthly and on a rolling 12-month total basis.

ODT = ovendried tons.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Monthly & Rolling 12-Month Total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-200

B. Emission Point Description: Wood Drying Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Criteria Pollutant Emissions

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued……., etc.)?

Condition 5.4 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
PM/PM10/PM2.5, NOx, CO, VOCs	US ODT/month & US ODT/year	Monthly & Rolling 12-Month Total	Calculate and record the emissions of each pollutant on a monthly and on a rolling 12-month total basis.

ODT = ovendried tons.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Monthly & Rolling 12-Month Total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-300

B. Emission Point Description: Wood Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Criteria Pollutant Emissions

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.4 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
PM/PM10/PM2.5, NOx, CO, VOCs	US ODT/month & US ODT/year	Monthly & Rolling 12-Month Total	Calculate and record the emissions of each pollutant on a monthly and on a rolling 12-month total basis.

ODT = ovendried tons.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Monthly & Rolling 12-Month Total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-400

B. Emission Point Description: Finished Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Criteria Pollutant Emissions

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.4 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
PM/PM10/PM2.5, NOx, CO, VOCs	US ODT/month & US ODT/year	Monthly & Rolling 12-Month Total	Calculate and record the emissions of each pollutant on a monthly and on a rolling 12-month total basis.

ODT = ovendried tons.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Monthly & Rolling 12-Month Total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-500

B. Emission Point Description: Emergency Engines

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Criteria Pollutant Emissions

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued……., etc.)?

Condition 5.4 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
PM/PM10/PM2.5, NOx, CO, VOCs	US ODT/month & US ODT/year	Monthly & Rolling 12-Month Total	Calculate and record the emissions of each pollutant on a monthly and on a rolling 12-month total basis.

ODT = ovendried tons.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Monthly & Rolling 12-Month Total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-201

B. Emission Point Description: RTO

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Combustion chamber temperature

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.11 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Combustion chamber temperature	Degrees F	3-hour block average	Continuously monitor & record the combustion chamber temperature.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As specified above

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-301

B. Emission Point Description: RCO

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Combustion chamber temperature

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.11 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Combustion chamber temperature	Degrees F	3-hour block average	Continuously monitor & record the combustion chamber temperature.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As specified above

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-201

B. Emission Point Description: RTO

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Opacity

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.12 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Opacity	%	Weekly	Use EPA Test Method 22 on the exhaust weekly. If visible emissions are detected, immediately perfrom and record a visible emission evaluation (VEE) in accordance with EPA Test Method 9.

B. Compliance is determined:

[ ] Daily [X] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-301

B. Emission Point Description: RCO

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Opacity

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.12 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Opacity	%	Weekly	Use EPA Test Method 22 on the exhaust weekly. If visible emissions are detected, immediately perfrom and record a visible emission evaluation (VEE) in accordance with EPA Test Method 9.

B. Compliance is determined:

[ ] Daily [X] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-201

B. Emission Point Description: WESP - RTO Control System

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Secondary Voltage

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.14 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Secondary Voltage	Volts	3-hour block average	Continuously monitor & record the secondary voltage.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As required based on the above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-203b & AA203c

B. Emission Point Description: Furnace Bypass Stack

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Bypass Hours

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.15 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Hours bypass stack is used	Hours	As needed	Monitor & record date, time, & duration of every start-up & shurtdown period that resulting in emissions being diverted to the bypass stack. Also, record the total duration of start-up & shutdown periods in hours/year based on a rolling 12-month total.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As required based on the above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-204b

B. Emission Point Description: Wood Chip Rotary Dryer Bypass

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Bypass Hours

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.15 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Hours bypass stack is used	Hours	As needed	Monitor & record date, time, & duration of every start-up & shurtdown period that resulting in emissions being diverted to the bypass stack. Also, record the total duration of start-up & shutdown periods in hours/year based on a rolling 12-month total.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As required based on the above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-203b

B. Emission Point Description: Furnace Bypass Stack

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Idle mode hours

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.16 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Hours bypass stack is used	Hours	As needed	Monitor & record date, time, & duration of every period the furnace operates in idle mode. Also, record the total duration of all idle mode periods in hours/year based on a rolling 12-month total.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As required based on the above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping — **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-204a

B. Emission Point Description: Wood Chip Rotary Dryer

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Dried wood chips throughput from Wood Chip Rotary Dryer

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.17 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Throughput of dried wood chips from Chip Dryer	ODT (oven-dried tons)	Monthly & rolling 12-month basis	Monitor & record the throughput of dried wood chips from the dryer on a montly basis & a rolling 12-month total basis

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As required based on the above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-300

B. Emission Point Description: Wood Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of weekly inspections for each baghouse & any maintenance performed.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.18 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Bahgouse inspections & maintenance	Each occurrence	Weely	Keep records of weekly baghouse inspections and any maintenance performed.

B. Compliance is determined:

[ ] Daily [X] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-400

B. Emission Point Description: Finished Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of weekly inspections for each baghouse & any maintenance performed.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.18 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Bahgouse inspections & maintenance	Each occurrence	Weely	Keep records of weekly baghouse inspections and any maintenance performed.

B. Compliance is determined:

[ ] Daily [X] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-300

B. Emission Point Description: Wood Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of baghouse daily differential pressure drop readings.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.19 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Differential pressure drop & maintenance for corrective measures	Inches of water	Daily	Keep records of baghouse daily differential pressure drop readings & any corrective measures to return to the recommended pressure drop (if needed).

B. Compliance is determined:

[X] Daily [ ] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-400

B. Emission Point Description: Finished Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of baghouse daily differential pressure drop readings.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.19 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Differential pressure drop & maintenance for corrective measures	Inches of water	Daily	Keep records of baghouse daily differential pressure drop readings & any corrective measures to return to the recommended pressure drop (if needed).

B. Compliance is determined:

[X] Daily [ ] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-300

B. Emission Point Description: Wood Pellet Operations

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of total wood pellet production in ODT.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Condition 5.20 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Wood Pellet Production	ODT (oven-dried tons)	Monthly & Rolling 12-month Total	Keep records of total wood pellet production on a monthly basis & rolling 12-month total basis.

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: As included above

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping — **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-500

B. Emission Point Description: Emergency Engines (AA-501, AA-502)

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Keep records of hours of operation for each engine and the purpose of the operating hours.

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued……., etc.)?

Condition 5.22 - Permit to Construct No. 0080-00031 issued March 9, 2021

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Hours of operation	Hours	Monthly	Keep records of monthly hours of operation of each engine & the purpose of the operating hours as emergency, maintenance, testing, or other non-emergency use.

B. Compliance is determined:

[ ] Daily [ ] Weekly [X] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-200, AA-300, AA-400, AA-500

B. Emission Point Description: Wood Drying Operations, Wood Pellet Operations, Finished Pellet Operations, Emergency Engines

C. For what emission limit or standard does the recordkeeping demonstrate compliance?
Nitrogen Oxides ≤ 245 tons/year

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?
Permit to Construct issued March 9, 2021; Condition 3.6

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Heat Input	MMBtu/hr	Continuous	Process knowledge and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Rolling 12-month total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-000

B. Emission Point Description: Facility

C. For what emission limit or standard does the recordkeeping demonstrate compliance?
Opacity ≤ 40%

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?
Permit to Construct issued March 9, 2021; Conditions 3.1 & 3.2

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Visual Observations	%	Weekly	EPA Method 22
Opacity	%	As needed based on visual observations	EPA Method 9

B. Compliance is determined:

[ ] Daily [X] Weekly [ ] Monthly

[ ] Other:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-000

B. Emission Point Description: Facility Wide

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Particulate Matter – E = 4.1 * p^0.67 where E is the emission rate in lbs/MMBTU and p is the process weight input in tons/hr

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.3

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Process weight	tons/hr	Continuous	Process knowledge, input records, and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: 3-hour block averages

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-200, AA-300, AA-400, AA-500

B. Emission Point Description: Wood Drying Operations, Wood Pellet Operations, Finished Pellet Operations, Emergency Engines

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

VOC ≤ 245 tons/year

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.6

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Throughput	tons/hr	Continuous	Process knowledge and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Rolling 12-month total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-200, AA-300, AA-400, AA-500

B. Emission Point Description: Wood Drying Operations, Wood Pellet Operations, Finished Pellet Operations, Emergency Engines

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

≤ 245 tons/year Particulate Matter (filterable +condensable PM, PM10, PM2.5), filterable PM

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.6

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Throughput	tons/hr	Continuous	Process knowledge and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Rolling 12-month total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-200, AA-300, AA-400, AA-500

B. Emission Point Description: Wood Drying Operations, Wood Pellet Operations, Finished Pellet Operations, Emergency Engines

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

CO ≤ 245 tons/year

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.6

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Carbon Monoxide	tons/hr	Continuous	Process knowledge and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Rolling 12-month total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-000

B. Emission Point Description: Facility Wide

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

HAPs < 9.0 tpy (individual), 24.0 tpy (total)

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.5

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
HAPs	tons/yr	Continuous	Process knowledge and emission calculations

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: 12-month rolling total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-203b, AA-204b, AA-203c

B. Emission Point Description: Furnace, Dryer

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

Bypass Hours

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021; Condition 3.11

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
CO, NOx, PM, PM10, PM2.5, VOC, HAPs	Hours	Monthly	For start-ups & shutdowns, bypass emissions ≤ 50 hours
CO, NOx, PM, PM10, PM2.5, VOC, HAPs	Hours	Monthly	While in idle mode, bypass emissions ≤ 500 hours
CO, NOx, PM, PM10, PM2.5, VOC, HAPs	Hours	Monthly	Bypass hours during dryer start-ups & shutdowns ≤ 50 hrs/yr

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Rolling 12-month total

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-501

B. Emission Point Description: 250 HP Diesel Emergency Pump

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

100 hours/year for maintenance and testing

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 9, 2021 and 40 CFR 60, Subpart IIII

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Operation times and reasons for operation	Hours	Continuous	Non-resettable hour meter

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Annually (Calendar Year Basis)

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Recordkeeping | **Section M8**

1. Applicable Emission Point Description

A. Emission Point Designation (Ref. No.): AA-502

B. Emission Point Description: 402 HP Diesel Emergency Generator

C. For what emission limit or standard does the recordkeeping demonstrate compliance?

500 hours of operation per year, 100 hours for maintenance and testing per year

D. Is there an applicable underlying requirement for the recordkeeping?

[X] Yes [ ] No

If yes, what is that requirement (e.g., NSPS Subpart QQ, Permit to Construct issued…....., etc.)?

Permit to Construct issued March 21, 2021 and 40 CFR 60, Subpart IIII

2. Recordkeeping Information

A. Data/information recorded:

Parameter/Material	Units	Recordkeeping Frequency	Sampling and analysis method (e.g., EPA Method 24)
Operation times and reasons for operation	Hours	Continuous	Non-resettable hour meter

B. Compliance is determined:

[ ] Daily [ ] Weekly [ ] Monthly

[X] Other: Annually (Calendar Year Basis)

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — **Section N**

1. Summary of Applicable Requirements

Provide a list of all applicable federal standards for which your facility is or will be subject to, as well as a list of all Construction Permits establish AA-400 facility. The specific emission standards and limitations applicable to each emission point shall be provided on the following pages (F Finished Pellet Operations

Federal Regulations:

40 CFR Part	Subpart
60	IIII
63	ZZZZ

State Construction Permits[1]:

	MM/DD/YY[2]	PSD	PSD Avoidance[3]	Other
Permit to Construct issued:				
	March 21, 2014	☐	X	X
	March 9, 2021	☐	X	X
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

[1] Any Construction Permit containing requirements that are currently appplicable to the facility should be addressed in this section.

[2] If the permit has been modified, give the most recent modification date.

[3] Because permits are issued on a pollutant-by-pollutant basis, a PSD permit may be significant for one pollutant while also containing PSD avoidance limits for another pollutant. Therefore, you may check multiple boxes for each permit.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.1.3 F(1)	Particulate Matter	$E = 4.1\ (p)^{0.67}$	Process knowledge, fuel records, and emissions calculations	In
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.1.3.A. & B.	Opacity	≤ 40% opacity	Visual observations, if needed, EPA Method 22	In
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R..2.2.B(10) (Major Source Avoidance Limits)	HAPs	9.0 tpy (Individual) 24.0 tpy (Total) (Rolling 12-Month Total)	Process knowledge, fuel records, and emissions calculations	In
AA-000 (Facility)	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11)	NA	Maintain all records required for a period of 5 years.	Recordkeeping	In
AA-200 (Wood Drying Operations) AA-300 (Wood Pellet Operations) AA-400 (Finished Pellet Operations) AA-500 (Emergency Engines)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10) (PSD Avoidance Limits)	PM (filterable only)	245 tpy (Rolling 12-Month Total)	Process knowledge and emissions calculations	In
		$PM_{10}/PM_{2.5}$ (filterable + condensable)	245 tpy (Rolling 12-Month Total)		
		NO_x	245 tpy (Rolling 12-Month Total)		
		CO	245 tpy (Rolling 12-Month Total)		
		VOCs	245 tpy (Rolling 12-Month Total)		

1. Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.
2. Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-201 (WESP/RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	PM / PM_{10} / $PM_{2.5,}$ VOCs, HAPs	Always Operate the WESP / RTO When the Wood Chip Rotary Dryer and the Green Hammermills are in Operation	Operating records	In
AA-201 (WESP/RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	HAPs	Maintian 90% control efficiency for the RTO, measured as VOCs	Performance testing and emissions calculations using emission factor developed from testing.	In
AA-203a (165 MMBTU/hr Wood-Fired Furnace)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	Fuel Restriction	Combust only uncontaminated wood waste	Operating records	In
AA-204a (Wood Chip Rotary Dryer)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	Dried Wood Chip Throughput	Limit throughput to 578,708 ODT/year on a rolling 12-month total basis	Monthly throughput records and rolling 12-month total throughput calculations	In
AA-203b, AA-204b (165 MMBTU/hr Wood Fired Furnace Bypass Stack, 12.5 MMBTU.hr Wood Chip Rotary Dryer Bypass Stack	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	CO, NO_x, PM / PM_{10} / $PM_{2.5,}$ VOCs, HAPs	*Start-Up and Shutdown Requirements* : Limit Bypass Emissions for ≤ 100 Hours; *Idle Mode Requirements* : Limit Bypass Emissions for ≤ 500 Hours; (Rolling 12-Month Total Basis)	Operating records and rolling 12-month total bypass hours calculations	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-300 & AA-400 (Wood Pellet Operations & Finished Pellet Operations)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	PM / PM_{10} / $PM_{2.5}$	Always Operate a Baghouse When a Corresponding Process Unit is in Active Operation	Operating Records	In
AA-500 (Emergency Engines AA-501 & 502)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.1.3.D(1)(a)	PM	Limit PM emissions to 0.6 lbs/MMBTU per hour heat input	Emissions calculations	In
	Construction Permit Issued on March 9, 2021 and 40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Combustion Engines (40 CFR 60.*4200(a)(2), Subpart IIII)*	NMHC+NOx, CO, PM(filterable)	Comply with provisions	N/A	In
	Construction Permit Issued on March 9, 2021 40 CFR 60.4207(b), Subpart IIII 40 CFR 80.510(b), Subpart I	Diesel Fuel Requirements	Use diesel fuel with a 15 ppm Maximum Sulfur Content; and 40 Minimum Cetane Index or 35% Maximum Aromatic Content	Fuel Purchase Records	In
	Construction Permit Issued on March 9, 2021 40 CFR 60.4211(f)(1)-(3), Subpart IIII	Hours of operation	Limit hours of operations to 100 Hours / Calendar Year for Maintenance and Testing and 50 Hours / Calendar Year for Non-Emergency Situations	Operating Records	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-500 (Emergency Engines AA-501 & 502)	Construction Permit Issued on March 9, 2021 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 CFR 63.6590(c)(1), Subpart ZZZZ	HAPs	Comply with provisions.	N/A	In
AA-501(250-hp Diesel Emergency Firewater Pump)	40 CFR 60.4205(c), 60.4206, and 60.4211(c), Subpart IIII	NMHC+NOx, PM(filterable)	Purchase certified engine.	N/A	In
AA-502 (402-hp Diesel Emergency Generator)	40 CFR 60.4205(b), 60.4202(a)(2), 60.4206, and 60.4211(c), Subpart IIII	NMHC+NOx, CO, PM(filterable)	Purchase certified engine.	N/A	In
AA-500 (Emergency Engines AA-501 & 502)	40 CFR 60.4211(a), Subpart IIII	Work Practice	Comply with the work practices in 40 CFR 60.4211(a).	N/A	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-201 (WESP)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Secondary Voltage (volts)	Install, calibrate, monitor, operate, and inspect continuous monitoring/ recording system for secondary voltage.	Recordkeeping for secondary voltage in volts	In
AA-201 (RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Temperature (F)	Install, calibrate, monitor, operate, and inspect continuous monitoring/ recording system for combustion chamber temperature.	Recordkeeping for temperature in degrees F	In
AA-201 (RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	PM/PM10/PM2.5	Establish the secondary voltage range for the WESP.	Operating records	In
AA-201 (RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Secondary Voltage (volts)	Continuously monitor and record the secondary voltage (in volts) for the WESP based on a 3-hour block average.	Operating records	In
AA-201 (RTO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Opacity	Conduct weekly visible emission observations/evaluations.	Operating records	In
AA-204a (Wood Chip Rotary Dryer)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Dried Wood Chip Throughput	Monitor the throughput of wood chips dried on a monthly and rolling 12-month total.	Monthly throughput records and rolling 12-month total throughput calculations	In
AA-300 (Wood Pellet Operations), AA-400 (Finished Pellet Operations)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	PM / PM_{10} / $PM_{2.5}$	Conduct an inspection on each baghouse weekly.	Inspection records	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
AA-300 (Wood Pellet Operations), AA-400 (Finished Pellet Operations)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Opacity	Monitor and record the differential pressure drop across each baghouse daily (in inches of water).	Operating records	In
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Report	Submit a Semi-Annual Monitoring Report by January 31 & July 31 for the preceding 6-month period.	Submittal of Semi-Annual Monitoring Report	In
AA-500 (Emergency Engines AA-501 & 502)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Report	Submit Annual Monitoring Report on hours of operation and inlcude with Semi-Annual Monitoring Report.	Submittal of Annual Monitoring Report	In
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.1.3 F(1)	PM / PM_{10} / $PM_{2.5}$	Develop & implement a Dust Management Plan	Compliance with plan	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT			
Applicable Requirements and Status					**Section N**

2. Future Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-300 (Wood Pellet Operations)	Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	Wood Pellet Production	Limit wood pellet production to 624,700 US ODT/year on a rolling 12-month total basis	Monthly production records and rolling 12-month total production calculations	In
AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	VOCs, HAPs	Always Operate the RCO When the Primary Hammermills, the Dry Shavings Hammermills, Pellet Mills / Pellet Coolers are in Operation	Operating Records	In
AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	HAPs	Maintain 95% control efficiency, measured as VOCs	Performance testing and emissions calculations using emission factor developed from testing.	In
AA-000 (Facility)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.1.3 F(1)	HAPs	Calculate emissions on a monthly and rolling 12-month total. Comply with limits of 9.0 tpy (individual HAP) and 24.0 tpy (total HAPs).	Emissions calculations	In
AA-200 (Wood Drying Operations) AA-300 (Wood Pellet Operations) AA-400 (Finished Pellet Operations) AA-500 (Emergency Engines)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	CO, NO_x, PM / PM_{10} / $PM_{2.5,}$ VOCs	Calculate emissions on a monthly and rolling 12-month total. Comply with the limit of 245 tpy for each pollutant.	Emissions calculations	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT			
Applicable Requirements and Status					**Section N**
2. Future Applicable Requirements					
List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.					
EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Temperature (F)	Install, calibrate, monitor, operate, and inspect continuous monitoring/ recording system for combustion chamber temperature.	Recordkeeping for temperature in degrees F	In
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	PM (filterable only), PM10/PM2.5 (filterable + condensable), CO, HAPs, NO_x, VOCs	Conduct initial performance testing using EPA-approved methods while the average wood chip throughput and/or the average wood pellet production is at no less than ninety percent (90%) of the maximum permitted equipment production capacity (in oven-dried tons per hour).	Initial Performance Testing	In
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	PM (filterable only), PM10/PM2.5 (filterable + condensable), CO, HAPs, NO_x, VOCs	Conduct subsequent performance testing using EPA-approved methods no later than twenty-five (25) months after the previously completed performance test while the average wood chip throughput and/or the average wood pellet production is at no less than ninety percent (90%) of the maximum permitted equipment production capacity (in oven-dried tons per hour).	Subsequent Performance Testing	No later than 25 months after the previous performance test

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.
2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT			
Applicable Requirements and Status					**Section N**

2. Future Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-300 (Wood Pellet Operations)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Wood Pellet Production	Monitor and record the total production of wood pellets in ODT both on a monthly basis and a rolling 12-month total basis.	Production records	In
AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	VOCs, HAPs	Monitor the effective life of the catalytic media in the RCO by determining the apparent density (in grams per cubic centimeter) and percent saturation no later than 16 months after the initial start-up. Thereafter, perform subsequent apparent density testing no later than 16 months after the previously completed test.	Test results	Within 16 months of start-up of RCO and every 16 months thereafter
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	PM / PM10 / PM2.5, CO, HAPs, NO_x, VOCs	Submit site-specific emission factors for review and approval.	Submittal of emission factors	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

2. Future Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Test Results	Submit the Apparent Density Testing Results no later than 30 days after testing.	Test results	No later than 30 days after testing is complete
AA-204a (Wood Chip Rotary Dryer)	11 Miss. Admin. Code Pt. 2, R.2.2.B(10)	DriedWood Chip Throughput	Limit throughput to 660,000 US ODT/year on a rolling 12-month total basis	Monthly production records and rolling 12-month total production calculations	In
AA-203b (165 MMBTU/hr Wood Fired Furnace Bypass Stack)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Hours of Duration	Monitor and record the date, time, and duration of every period that the furnace operates in idle mode. Additionally, calculate and record the total duration of all idle mode periods for the furnace in hours per year based on a rolling 12-month total. During any period that the furnace operates in idle mode, monitor the volume of wood waste fed into the furnace and calculate the hourly heat input rate based on a 3-hour block average.	Operating Records	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT			
Applicable Requirements and Status					**Section N**
2. Future Applicable Requirements					
List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.					
EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-203b (165 MMBTU/hr Wood Fired Furnace Bypass Stack)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Hours of Duration	Monitor and record the date, time, and duration of every period that the furnace operates in idle mode. Additionally, calculate and record the total duration of all idle mode periods for the furnace in hours per year based on a rolling 12-month total. During any period that the furnace operates in idle mode, monitor the volume of wood waste fed into the furnace and calculate the hourly heat input rate based on a 3-hour block average.	Operating Records	In
AA-203b, AA-204b (165 MMBTU/hr Wood Fired Furnace Bypass Stack, 12.5 MMBTU.hr Wood Chip Rotary Dryer Bypass Stack)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Hours of Duration	Monitor and record the date, time, and duration of every start-up and shutdown period experienced by the furnace and/or the dryer that resulted in emissions being diverted to the corresponding bypass stacks. Additionally, record the total respective duration of start-up and shutdown periods for the furnace and the dryer in hours per year based on a rolling 12-month total.	Operating Records	In
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Test Results	Submit Performance Test Results no later than 60 days after completion of the test.	Submittal of test results	In
1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term. 2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.					

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT			
Applicable Requirements and Status					**Section N**
2. Future Applicable Requirements					
List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.					
EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING	COMPLIANCE DATE[1]
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	PM / PM10 / PM2.5, CO, HAPs, NO_x, VOCs	Establish site-specific emission factors for PM, PM10, PM2.5, NOX, CO, VOCs, methanol, acetaldehyde, formaldehyde, acrolein, propionaldehyde, hydrogen chloride (HCl), and phenol in pounds per oven-dried tons using both the test results and applicable throughput data collected during the initial performance testing event.	Emission factors calculated using initial performance test data and throughput data	Following initial performance test
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Combustion Chamber Temperature	Continuously monitor and record the combustion chamber temperature (in degrees Fahrenheit) based on a 3-hour block average.	Operating Records	In
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Protocol, 10-day Notification	Submit Performance Tesing Protocol within 30 days of performing testing and 10-day Notification of Performance Testing.	Submittal of protocol & 10-day notification	Prior to subsequent performance tests
AA-201 (RTO); AA-301 (RCO)	Construction Permit Issued on March 9, 2021 and 11 Miss. Admin. Code Pt. 2, R.2.2.B(11)	Opacity	Perform and record a weekly visible emission observation in accordance with EPA Test Method 22 on the exhaust of each control system during daylight hours and during representative operating conditions.	Operating Records	In

1 Per APC-S-6, Section II.C.8.b(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

2 Per APC-S-6, Section II.C.8.b(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with APC-S-6, Section II.C.8.c.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Insignificant Activities *(for Title V facilities only)*

1 List of Insignificant Activities

List all insignificant activities identified in 11 Miss. Admin. Code Pt. 2, R. 6.7., with the exception of those in 11 Miss. Admin. Code Pt. 2, R.6.7.A.

1. Road dust from truck traffic on paved roads
2. Ultra low sulfur diesel (ULSD) tank - 10,000 gallon rated capacity
3. Bark and wood residues conveyors
4. Bark and wood residues hog

2 Emissions Information

List the total emissions for each regulated pollutant from the combined insignificant activities listed above in accordance with the Permit Application Instructions *(calculations not needed unless requested by DEQ)* .

POLLUTANT	POTENTIAL TO EMIT	
	lb/hr	tons/yr
PM	2.6	11.5
PM_{10}	0.5	2.1
$PM_{2.5}$	0.12	0.5
VOC	0.0007	0.003

APPENDIX B: EMISSIONS CALCULATIONS

Emission Point	Description	Potential-to-Emit Summary (After Adding RCO)														
		$PM_{2.5}$ (tpy)	PM_{10} (tpy)	SO_2 (tpy)	NO_x (tpy)	CO (tpy)	VOC (tpy)	CO_2e (tpy)	Methanol (tpy)	Formadehyde (tpy)	Acetaldehyde (tpy)	Acrolein (tpy)	Phenol (tpy)	Propionaldehyde (tpy)	HCl (tpy)	Total HAPs (tpy)
AA-102	Log Chipper	0.01	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
AA-101	Log Debarker	0.02	0.09	--	--	--	--	--	--	--	--	--	--	--	--	--
AA-201	WESP, RTO, Burner, Dryer Furnace	16.12	16.12	50.70	90.29	189.36	45.14	12,312	6.92	3.86	1.54	0.65	2.991	0.444	0.49	17.52
AA-203b	Furnace SUSD Bypass Stack					0.50	0.01			0.004	0.001	0.003	4.21E-05	5.03E-05	0.02	0.03
AA-203c	Furnace Idling Bypass Stack					2.48	0.07			0.02	0.003	0.02	2.10E-04	2.52E-04	0.08	0.16
AA-204b	Dryer SUSD Bypass Stack	1.27	1.27	0.09	1.56	2.02	2.72			0.08	0.04	0.01	0.016	0.008	--	0.24
AA-302	Primary Hammermill Feed Silo with bin vent	0.84	0.84	--	--	--	6.50	--	0.33	0.62	0.33	--	--	--	--	1.27
AA-305	Secondary Hammermill Silo 1 with bin vent	0.84	0.84	--	--	--	5.79	--	0.30	0.55	0.30	--	--	--	--	1.14
AA-306	Secondary Hammermill Silo 2 with bin vent	0.84	0.84	--	--	--	3.23	--	0.15	0.28	0.15	--	--	--	--	0.57
AA-301	RCO, Burner	4.12	6.65	0.03	4.06	53.97	37.58	7,182	12.81	1.09	1.16	0.44	6.93	1.06	--	15.55
AA-309	Starch Silo	0.0002	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--
AA-401A	Pellet Storage Silo No. 1 with bin vent	0.17	0.17	--	--	--	4.36	--	0.22	0.41	0.22	--	--	--	--	0.86
AA-401B	Pellet Storage Silo No. 2 with bin vent	0.17	0.17	--	--	--	4.36	--	0.22	0.41	0.22	--	--	--	--	0.86
AA-401C	Screened Materials Return System	4.20	4.20	--	--	--	0.87	--	0.04	0.08	0.04	--	--	--	--	0.17
AA-401D	Pellet Truck Loadout System	0.55	0.74	--	--	--	9.67	--	0.43	0.83	0.43	--	--	--	--	1.69
AA-304	Truck Dump	0.01	0.038	--	--	--	--	--	--	--	--	--	--	--	--	--
	Paved Roads (Fugitives)	0.71	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--
AA-501	250 hp Diesel Fire Pump Engine	0.004	0.004	0.03	0.08	0.08	0.08	15.00	--	0.0001	0.0001	8.09E-06	--	--	--	0.0003
AA-502	402 hp Emergency Diesel Generator	0.01	0.01	0.04	0.13	0.12	0.13	24.00	--	0.0002	0.0001	1.30E-05	--	--	--	0.0006
	Total Emissions	**29.86**	**34.78**	**50.89**	**96.12**	**248.52**	**120.53**	**19,533.00**	**21.41**	**8.24**	**4.43**	**1.12**	**9.941**	**1.514**	**0.58**	**40.07**

Notes:

Emissions from the RCO burner, 6 primary hammermills, 3 secondary hammermills, and 6 pellet coolers are routed to the RCO emission point included above.

Bypas stack scenarios (AA-203b, AA-203c, and AA-204b) have been included for startup and shutdown scenarios for the biomass furnace and rotary dryer, as well as idling for the biomass furnace.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Log Debarker	DBK	AA-101

Debarker Emission Factors

Emission Factor (lb/ton of logs debarked)		
PM [1]	PM_{10} [2]	$PM_{2.5}$ [3]
0.00018	8.25E-05	1.98E-05

[1] Per manufacturer's guarantee dated February 12, 2013 at a sister facility.

[2] The emission factor for PM_{10} is determined based on the ratio of the PM_{10} to PM emissions from TCEQ *Draft Wood Industry Emission Factors* guidance document, dated May 9, 2005.

[3] The emission factor for $PM_{2.5}$ is determined based on the ratio of the $PM_{2.5}$ to PM emissions from the chipper. The PM_{10} and $PM_{2.5}$ emissions from the chipper were provided from the manufacturer and is representative of emissions at a similar facility.

Debarker Emissions

Emission Point ID No.	Description	Process Rate [1] (metric tons/hr)	Hours of Operation [2] (hrs/yr)	PTE (lb/hr)			Annual Emissions [4] (tpy)		
				PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
AA-101	Debarking Operations	220	8,760	0.044	0.02	4.80E-03	0.19	0.09	0.02

[1] Based on maximum design rate at a similar facility.

2 Assuming continuous operations.

[3] PTE Emissions (lb/hr) = Process Rate (metric tons/hr) * 1.102 (tons/metric ton) * Emission Factor (lb/ton of logs debarked)

$$\text{Hourly PM Emissions (lb/hr)} = \frac{220 \text{ metric tons}}{\text{hr}} \times \frac{1.102 \text{ tons}}{\text{metric ton}} \times \frac{0.00018 \text{ lb}}{\text{tons of logs debarked}} = 0.04 \text{ lb/hr}$$

[4] Annual Emissions (tpy) = Hourly Emissions (lb/hr) * Hours of Operation (hrs/yr) * 1 ton / 2,000 lb

$$\text{Annual PM Emissions (tpy)} = \frac{0.04 \text{ lb}}{\text{hr}} \times \frac{8{,}760 \text{ hrs}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = 0.19 \text{ tpy}$$

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Log Chipper	CHIP	AA-102

Hours of Operation [1]	8,760	hrs/yr
Partial Enclosure Control Factor [2]	95	%

[1] Based on a similar facility located in Woodville, Texas and Urania, Louisiana.

[2] Assumed control factor for partial enclosure of source.

Chipper Emissions

Emission Point ID No.	Description	Pollutant	PTE (lb/hr) Uncontrolled [1]	PTE (lb/hr) Controlled [2]	Annual Emissions [3] (tpy) Uncontrolled	Annual Emissions [3] (tpy) Controlled
AA-102	Chipper	PM	0.75	0.04	3.29	0.16
		PM_{10}	0.25	0.01	1.10	0.05
		$PM_{2.5}$	0.06	3.00E-03	0.26	0.01

[1] Per manufacturer's guarantee dated July 8, 2011.

[2] Hourly Controlled Emissions (lb/hr) = Hourly Uncontrolled Emissions (lb/hr) * (1 - (Partial Enclosure Control Factor (%) / 100))

$$\text{PM Controlled Hourly Emissions (lb/hr)} = \frac{0.75 \text{ lb}}{\text{hr}} \times (1 - (95\% / 100)) = 0.04 \text{ lb/hr}$$

[3] Annual Emissions (tpy) = Hourly Emissions (lb/hr) * Hours of Operation (hrs/yr) * 1 ton / 2,000 lb

$$\text{PM Uncontrolled Annual Emissions (tpy)} = \frac{0.75 \text{ lb}}{\text{hr}} \times \frac{8{,}760 \text{ hrs}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = 3.29 \text{ tpy}$$

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Chip Dryer/Biomass Furnace System	RTO	AA-201

The RTO stack exhausts controlled process VOC and PM emissions from the chip dryer as well as controlled combustion emissions from the biomass furnace. PM emissions are controlled with a wet electrostatic precipitator (WESP). VOC emissions from these sources are controlled by the RTO. Combustion emissions from the RTO's gas burner also exhaust out of the stack.

Operating Data	
Dryer Capacity[1]	467,316 ODT*/yr
Operating hours[1]	8,760 hrs/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:				
Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	0.0690 lb/ODT	See Note 7	3.68	16.12
PM	0.0690 lb/ODT	See Note 7	3.68	16.12
SO	0.2170 lb/ODT	See Note 3	11.58	50.70
NOx	0.3864 lb/ODT	See Note 7	20.61	90.29
CO	0.8104 lb/ODT	See Note 7	43.23	189.36
VOC Total	0.1932 lb/ODT	See Note 7	10.31	45.14
Hazardous/Toxic Air Pollutants				
Acetaldehyde	0.0066 lb/ODT	See Note 7	0.352	1.542
Acrolein	0.0028 lb/ODT	See Note 7	0.149	0.654
Benzene	0.0009 lb/ODT	See Note 2	0.049	0.215
Carbon tetrachloride	0.0000 lb/ODT	See Note 2	0.001	0.002
Chlorine	0.0002 lb/ODT	See Note 2	0.009	0.040
Chlorobenzene	0.0000 lb/ODT	See Note 2	0.0004	0.002
Chloroform	0.0000 lb/ODT	See Note 2	0.0003	0.001
Chloromethane	0.0000 lb/ODT	See Note 2	0.0003	0.001
1,2-Dibromoethane	0.0000 lb/ODT	See Note 2	0.001	0.003
1,2-Dichloroethane	0.0000 lb/ODT	See Note 2	0.0003	0.001
Dichloromethane	0.0001 lb/ODT	See Note 2	0.003	0.015
1,2-Dichloropropane	0.0000 lb/ODT	See Note 2	0.0004	0.002
Ethyl benzene	0.0000 lb/ODT	See Note 2	0.0004	0.002
Formaldehyde	0.0165 lb/ODT	See Note 7	0.880	3.855
n-Hexane	0.001 lb/ODT	See Note 2	0.0300	0.131
Hydrochloric acid	0.0021 lb/ODT		0.112	0.491
Mercury (and compounds)	7.67E-06 lb/ODT	See Note 2	0.0004	0.002
Methanol	0.0296 lb/ODT	See Note 7	1.579	6.916
Naphthalene (and Methylnaphthalenes)	2.12E-05 lb/ODT	See Note 2	0.001	0.005
Phenol	0.0128 lb/ODT	See Note 7	0.683	2.991
Polynuclear Aromatic Hydrocarbons	6.12E-06 lb/ODT	See Note 2	0.0003	0.001
Proprionaldehyde	0.0019 lb/ODT	See Note 7	0.101	0.444
Styrene	4.16E-04 lb/ODT	See Note 2	0.0222	0.097
Tetrachloroethylene	8.32E-06 lb/ODT	See Note 2	0.0004	0.002
Toluene	2.01E-04 lb/ODT	See Note 2	0.0107	0.047
1,1,1-Trichloroethane	6.79E-06 lb/ODT	See Note 2	0.0004	0.002
Trichloroethylene	6.57E-06 lb/ODT	See Note 2	0.0004	0.002
Trichlorofluoromethane	8.98E-05 lb/ODT	See Note 2	0.0048	0.021
Xylene	5.48E-06 lb/ODT	See Note 2	0.0003	0.001

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Chip Dryer/Biomass Furnace System	RTO	AA-201

The RTO stack exhausts controlled process VOC and PM emissions from the chip dryer as well as controlled combustion emissions from the biomass furnace. PM emissions are controlled with a wet electrostatic precipitator (WESP). VOC emissions from these sources are controlled by the RTO. Combustion emissions from the RTO's gas burner also exhaust out of the stack.

Operating Data	
Dryer Capacity[1]	467,316 ODT*/yr
Operating hours[1]	8,760 hrs/yr

*ODT = oven dried ton (U.S.) of chips

Hazardous/Toxic Air Pollutants				
Arsenic (and compounds)	1.20E-06 lb/ODT	See Note 2	0.0001	0.0003
Barium (and compounds)	9.31E-06 lb/ODT	See Note 2	0.0005	0.0022
Copper (and compounds)	2.68E-06 lb/ODT	See Note 2	0.0001	0.0006
Lead Compounds	2.63E-06 lb/ODT	See Note 2	0.0001	0.0006
Manganese (and compounds)	8.76E-05 lb/ODT	See Note 2	0.0047	0.0205
Nickel (and compounds)	1.81E-06 lb/ODT	See Note 2	0.0001	0.0004
Phosphorus	1.48E-06 lb/ODT	See Note 2	0.0001	0.0003
Zinc (and compounds)	2.30E-05 lb/ODT	See Note 2	0.0012	0.0054
		Total HAP Emissions	**4.00**	**17.52**
Greenhouse Gas Emissions				
CO e	-	See Note 2	-	12,312

REFERENCE/NOTES

1. Based on production information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email.

2. Emissions are the sum from the following individual components: Biomass furnace combustion of wood product and RTO burner combustion of natural gas. Calculation of individual components are attached. Note that biogenic emissions have not been included.

3. SO_2 emission rates are based on the results of February 2016 stack testing at a sister facility (Drax Morehouse BioEnergy). Note that due to high variance in the three tests conducted for SO_2, Drax has chosen the highest reported hourly emissions as a conservative estimate. These emissions have also been scaled up to account for a 25% safety factor. Therefore, the new lb/ODT for these pollutants has been calculated based on the annual PTE after scaling up.

4. $PM_{10/2.5}$ emissions are based on a March 2019 engineering test at a sister facility (Drax Morehouse BioEnergy). These emissions have been scaled up to account for a 25% safety factor. Therefore, the new lb/ODT for these pollutants has been calculated based on the annual PTE after scaling up.

5. CO and NO_x emissions are based on a December 2015 stack test for the RTO stack. These emissions have been scaled up to account for a 25% safety factor. Therefore, the new lb/ODT for these pollutants has been calculated based on the annual PTE after scaling up.

6. VOC and Formaldehyde emissions are based on stack testing performed at the site in November 2018. A 25% safety factor has been added to the test results for conservatism. Stack testing emissions account for an effective RTO control efficiency of 90%. Therefore, the new lb/ODT for these pollutants has been calculated based on the annual PTE after scaling up.

7. From July 2021 Performance Test.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Biomass Furnace Emissions ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RTO)***	RTO	AA-201

Operating Data		
Furnace capacity[1]	165	MMBtu/hr
WESP control efficiency[2]	97.5	%
RTO control efficiency[2]	90.0	%
HCl control efficiency[3]	45.0	%
Operating hours[1]	8,760	hrs/yr

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[4,8] PTE (lb/hr)	Emission Rates[4,8] Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	0.43 lb/MMBtu	AP-42; Table 1.6-1	*1.77*	*7.77*
PM	0.50 lb/MMBtu	AP-42; Table 1.6-1	*2.06*	*9.03*
SO	0.025 lb/MMBtu	AP-42; Table 1.6-2	*4.13*	*18.07*
NOx	0.22 lb/MMBtu	AP-42; Table 1.6-2	*36.30*	*158.99*
CO	0.60 lb/MMBtu	AP-42; Table 1.6-2	*9.90*	*43.36*
VOC Total	0.017 lb/MMBtu	AP-42; Table 1.6-3	*0.28*	*1.23*
Hazardous/Toxic Air Pollutants				
Acetaldehyde	0.00083 lb/MMBtu	AP-42; Table 1.6-3	*0.01*	*0.06*
Acrolein	0.004 lb/MMBtu	AP-42; Table 1.6-3	*0.07*	*0.290*
Benzene	0.0042 lb/MMBtu	AP-42; Table 1.6-3	*0.07*	*0.30*
Carbon tetrachloride	0.000045 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.003*
Chlorine	0.00079 lb/MMBtu	AP-42; Table 1.6-3	*0.01*	*0.06*
Chlorobenzene	0.000033 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.002*
Chloroform	0.000028 lb/MMBtu	AP-42; Table 1.6-3	*0.0005*	*0.002*
Chloromethane	0.000023 lb/MMBtu	AP-42; Table 1.6-3	*0.0004*	*0.002*
1,2-Dibromoethane	0.000055 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.004*
1,2-Dichloroethane	0.000029 lb/MMBtu	AP-42; Table 1.6-3	*0.0005*	*0.002*
Dichloromethane	0.00029 lb/MMBtu	AP-42; Table 1.6-3	*0.005*	*0.02*
1,2-Dichloropropane	0.000033 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.002*
Ethylbenzene	0.000031 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.002*
Formaldehyde	0.0044 lb/MMBtu	AP-42; Table 1.6-3	*0.07*	*0.32*
Hydrochloric acid*	0.019 lb/MMBtu	AP-42; Table 1.6-3	*1.72*	*7.55*
Mercury (and compounds)	0.0000035 lb/MMBtu	AP-42; Table 1.6-4	*0.0006*	*0.003*
Naphthalene	0.000097 lb/MMBtu	AP-42; Table 1.6-3	*0.002*	*0.01*
Phenol	0.000051 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.004*
Polynuclear Aromatic Hydrocarbons	See Below	See Below	*0.0005*	*0.002*
Propionaldehyde	0.000061 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.004*
Styrene	0.0019 lb/MMBtu	AP-42; Table 1.6-3	*0.03*	*0.14*
Tetrachloroethane	0.000038 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.003*
Toluene	0.00092 lb/MMBtu	AP-42; Table 1.6-3	*0.02*	*0.07*
1,1,1-Trichloroethane	0.000031 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	*0.002*
Trichloroethylene	0.00003 lb/MMBtu	AP-42; Table 1.6-3	*0.0005*	*0.002*
Trichlorofluoromethane	0.00041 lb/MMBtu	AP-42; Table 1.6-3	*0.01*	*0.03*
Xylene	0.000025 lb/MMBtu	AP-42; Table 1.6-3	*0.0004*	*0.002*
Arsenic	0.000022 lb/MMBtu	AP-42; Table 1.6-4	*0.0001*	*0.0004*
Barium	0.00017 lb/MMBtu	AP-42; Table 1.6-4	*0.001*	*0.003*
Copper	0.000049 lb/MMBtu	AP-42; Table 1.6-4	*0.0002*	*0.001*
Lead	0.000048 lb/MMBtu	AP-42; Table 1.6-4	*0.0002*	*0.001*
Manganese	0.0016 lb/MMBtu	AP-42; Table 1.6-4	*0.01*	*0.03*
Nickel	0.000033 lb/MMBtu	AP-42; Table 1.6-4	*0.0001*	*0.001*
Phosphorus	0.000027 lb/MMBtu	AP-42; Table 1.6-4	*0.0001*	*0.0005*
Zinc (and compounds)	0.00042 lb/MMBtu	AP-42; Table 1.6-4	*0.002*	*0.01*

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Biomass Furnace Emissions ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RTO)***	RTO	AA-201

Operating Data		
Furnace capacity[1]	165	MMBtu/hr
WESP control efficiency[2]	97.5	%
RTO control efficiency[2]	90.0	%
HCl control efficiency[3]	45.0	%
Operating hours[1]	8,760	hrs/yr

Polynuclear Aromatic Hydrocarbons Emissions:

Pollutant	Emission Factor		Reference	Emission Rates[4] PTE (lb/hr)	Emission Rates[4] Annual (tons/yr)
Acenaphthene	9.1E-07	lb/MMBtu	AP-42; Table 1.6-1	*1.50E-05*	*6.58E-05*
Acenaphthylene	5.0E-06	lb/MMBtu	AP-42; Table 1.6-1	*8.25E-05*	*3.61E-04*
Acetophenone	3.2E-09	lb/MMBtu	AP-42; Table 1.6-2	*5.28E-08*	*2.31E-07*
Anthracene	3.0E-06	lb/MMBtu	AP-42; Table 1.6-2	*4.95E-05*	*2.17E-04*
Benzo(a)anthracene	6.5E-08	lb/MMBtu	AP-42; Table 1.6-2	*1.07E-06*	*4.70E-06*
Benzo(a)pyrene	2.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*4.29E-05*	*1.88E-04*
Benzo(b)fluoranthene	1.0E-07	lb/MMBtu	AP-42; Table 1.6-3	*1.65E-06*	*7.23E-06*
Benzo(e)pyrene	2.6E-09	lb/MMBtu	AP-42; Table 1.6-3	*4.29E-08*	*1.88E-07*
Benzo(g,h,i)perylene	9.3E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.53E-06*	*6.72E-06*
Benzo(j,k)fluoranthene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-06*	*1.16E-05*
Benzo(k)fluoranthene	3.6E-08	lb/MMBtu	AP-42; Table 1.6-3	*5.94E-07*	*2.60E-06*
2-Chloronaphthalene	2.4E-09	lb/MMBtu	AP-42; Table 1.6-3	*3.96E-08*	*1.73E-07*
Chrysene	3.8E-08	lb/MMBtu	AP-42; Table 1.6-3	*6.27E-07*	*2.75E-06*
Dibenzo(a,h)anthracene	9.1E-09	lb/MMBtu	AP-42; Table 1.6-3	*1.50E-07*	*6.58E-07*
Fluoranthene	1.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-05*	*1.16E-04*
Fluorene	3.4E-06	lb/MMBtu	AP-42; Table 1.6-3	*5.61E-05*	*2.46E-04*
Indeno(1,2,3,c,d)pyrene	8.7E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.44E-06*	*6.29E-06*
2-Methylnaphthalene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-06*	*1.16E-05*
Perylene	5.2E-10	lb/MMBtu	AP-42; Table 1.6-3	*8.58E-09*	*3.76E-08*
Phenanthrene	7.0E-06	lb/MMBtu	AP-42; Table 1.6-3	*1.16E-04*	*5.06E-04*
Pyrene	3.7E-06	lb/MMBtu	AP-42; Table 1.6-3	*6.11E-05*	*2.67E-04*
	Total			*0.0005*	*0.002*

Greenhouse Gases

Pollutant	Emission Factor[5]		Biogenic GHG Mass Emission Rates[6] Annual (tons/yr)	Biogenic CO_2e Emission Rates[6] GWP[7]	Biogenic CO_2e Emission Rates[6] Annual (tons/yr)
CO_2	113.73	lb/MMBtu	0.00	1	*0*
CH_4	0.00873	lb/MMBtu	6.31	25	*157.729*
N_2O	0.00436	lb/MMBtu	3.15	298	*938.99*
CO e					*1,097*

REFERENCE/NOTES

1. Provided by facility.
2. Manufacturer guarantee.
3. HCl control efficiency based on engineering judgment.
4. $ER_{avg/max}$ (lb/hr) = Furnace capacity (MMBtu/hr) x EF (lb/MMBtu) x((100-Control factor)/100)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
5. 40 CFR 98 Subpart C Table C-1, C-2 and AP-42, Section 10.6-2 (lb/ODT)
6. Emission rates (ER) calculated as specified in 40 CFR 98.33(a)(1)(iii) and 40 CFR 98.33(c)(1)(ii) and in accordance with 98.33(b)(1)(v) as follows:
   GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) x Emission Factor (lb/MMBtu) x Operating Hours / 2000 lbs/ton
   CO_2e: ER (tons/yr) = GHG Mass Emission Rate x GWP
7. GWPs based on 40 CFR 98, Table A-1.
8. $PM_{10/2.5}$, CO, SO_2, NOx, and VOC emissions are included for representativeness. The total emissions out of the RTO stack have been accounted for in the overall RTO emissions estimate (AA-201).

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	Emissions Point ID
By-pass During Furnace Startup/Shutdown	Furnace SUSD Bypass Stack	AA-203b

Operating Data		
Furnace capacity[1]	33.0	MMBtu/hr
RTO control efficiency[2]	0.0	%
Operating hours[1]	50	hrs/yr

Emission Totals:				
Pollutant	Emission Factor	Reference	Emission Rates[3,4] PTE (lb/hr)	Annual (tons/yr)
Criteria Pollutants				
CO	0.60 lb/MMBtu	AP-42; Table 1.6-2	19.80	0.50
VOC Total	0.017 lb/MMBtu	AP-42; Table 1.6-3	0.56	0.01
Hazardous/Toxic Air Pollutants				
Acetaldehyde	0.00083 lb/MMBtu	AP-42; Table 1.6-3	*0.03*	0.0007
Acrolein	0.004 lb/MMBtu	AP-42; Table 1.6-3	*0.13*	0.0033
Benzene	0.0042 lb/MMBtu	AP-42; Table 1.6-3	*0.14*	0.0035
Carbon tetrachloride	0.000045 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Chlorine	0.00079 lb/MMBtu	AP-42; Table 1.6-3	*0.03*	0.0007
Chlorobenzene	0.000033 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Chloroform	0.000028 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Chloromethane	0.000023 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
1,2-Dibromoethane	0.000055 lb/MMBtu	AP-42; Table 1.6-3	*0.002*	0.0000
1,2-Dichloroethane	0.000029 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Dichloromethane	0.00029 lb/MMBtu	AP-42; Table 1.6-3	*0.01*	0.0002
1,2-Dichloropropane	0.000033 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Ethylbenzene	0.000031 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Formaldehyde	0.0044 lb/MMBtu	AP-42; Table 1.6-3	*0.15*	0.0036
Hydrochloric acid*	0.019 lb/MMBtu	AP-42; Table 1.6-3	*0.63*	0.0157
Mercury (and compounds)	0.0000035 lb/MMBtu	AP-42; Table 1.6-4	*1.16E-04*	0.0000
Naphthalene	0.000097 lb/MMBtu	AP-42; Table 1.6-3	*0.003*	0.0001
Phenol	0.000051 lb/MMBtu	AP-42; Table 1.6-3	*0.002*	0.0000
Polynuclear Aromatic Hydrocarbons	See Below	See Below	*9.23E-04*	0.0000
Propionaldehyde	0.000061 lb/MMBtu	AP-42; Table 1.6-3	*0.002*	0.0001
Styrene	0.0019 lb/MMBtu	AP-42; Table 1.6-3	*0.06*	0.0016
Tetrachloroethane	0.000038 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Toluene	0.00092 lb/MMBtu	AP-42; Table 1.6-3	*0.03*	0.0008
1,1,1-Trichloroethane	0.000031 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Trichloroethylene	0.00003 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Trichlorofluoromethane	0.00041 lb/MMBtu	AP-42; Table 1.6-3	*0.01*	0.0003
Xylene	0.000025 lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0000
Arsenic	0.000022 lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0000
Barium	0.00017 lb/MMBtu	AP-42; Table 1.6-4	*0.01*	0.0001
Copper	0.000049 lb/MMBtu	AP-42; Table 1.6-4	*0.002*	0.0000
Lead	0.000048 lb/MMBtu	AP-42; Table 1.6-4	*0.002*	0.0000
Manganese	0.0016 lb/MMBtu	AP-42; Table 1.6-4	*0.05*	0.0013
Nickel	0.000033 lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0000
Phosphorus	0.000027 lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0000
Zinc (and compounds)	0.00042 lb/MMBtu	AP-42; Table 1.6-4	*0.01*	0.0003

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	Emissions Point ID
By-pass During Furnace Startup/Shutdown	Furnace SUSD Bypass Stack	AA-203b

Operating Data		
Furnace capacity[1]	33.0	MMBtu/hr
RTO control efficiency[2]	0.0	%
Operating hours[1]	50	hrs/yr

Polynuclear Aromatic Hydrocarbons Emissions:

Pollutant	Emission Factor		Reference	Emission Rates[3,4] PTE (lb/hr)	Emission Rates[3,4] Annual (tons/yr)
Acenaphthene	9.1E-07	lb/MMBtu	AP-42; Table 1.6-1	*3.00E-05*	7.51E-07
Acenaphthylene	5.0E-06	lb/MMBtu	AP-42; Table 1.6-1	*1.65E-04*	4.13E-06
Acetophenone	3.2E-09	lb/MMBtu	AP-42; Table 1.6-2	*1.06E-07*	2.64E-09
Anthracene	3.0E-06	lb/MMBtu	AP-42; Table 1.6-2	*9.90E-05*	2.48E-06
Benzo(a)anthracene	6.5E-08	lb/MMBtu	AP-42; Table 1.6-2	*2.15E-06*	5.36E-08
Benzo(a)pyrene	2.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*8.58E-05*	2.15E-06
Benzo(b)fluoranthene	1.0E-07	lb/MMBtu	AP-42; Table 1.6-3	*3.30E-06*	8.25E-08
Benzo(e)pyrene	2.6E-09	lb/MMBtu	AP-42; Table 1.6-3	*8.58E-08*	2.15E-09
Benzo(g,h,i)perylene	9.3E-08	lb/MMBtu	AP-42; Table 1.6-3	*3.07E-06*	7.67E-08
Benzo(j,k)fluoranthene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*5.28E-06*	1.32E-07
Benzo(k)fluoranthene	3.6E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.19E-06*	2.97E-08
2-Chloronaphthalene	2.4E-09	lb/MMBtu	AP-42; Table 1.6-3	*7.92E-08*	1.98E-09
Chrysene	3.8E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.25E-06*	3.14E-08
Dibenzo(a,h)anthracene	9.1E-09	lb/MMBtu	AP-42; Table 1.6-3	*3.00E-07*	7.51E-09
Fluoranthene	1.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*5.28E-05*	1.32E-06
Fluorene	3.4E-06	lb/MMBtu	AP-42; Table 1.6-3	*1.12E-04*	2.81E-06
Indeno(1,2,3,c,d)pyrene	8.7E-08	lb/MMBtu	AP-42; Table 1.6-3	*2.87E-06*	7.18E-08
2-Methylnaphthalene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*5.28E-06*	1.32E-07
Perylene	5.2E-10	lb/MMBtu	AP-42; Table 1.6-3	*1.72E-08*	4.29E-10
Phenanthrene	7.0E-06	lb/MMBtu	AP-42; Table 1.6-3	*2.31E-04*	5.78E-06
Pyrene	3.7E-06	lb/MMBtu	AP-42; Table 1.6-3	*1.22E-04*	3.05E-06
Total				*0.0009*	2.31E-05

REFERENCE/NOTES

1. Conservative assumption. Furnace capacity during startup-shutdown operations is estimated to be no more than 20% (33 MMbtu/hr) of furnace max firing rate while also being no less than 10% (16.5 MMBtu/hr) of furnace max firing rate (165 MMBtu/hr).

2. RTO is assumed to be down for maintenance.

3. $ER_{avg/max}$ (lb/hr) = Furnace capacity (MMBtu/hr) x EF (lb/MMBtu) x((100-Control factor)/100)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton

4. CO, and VOC, and HAP emissions are included because these two pollutants are specifically controlled by the RTO. GHG pollutants are expected to have higher emissions during normal operations due to higher furnace capacity, and those emissions have already been included under the RTO emissions point ID (AA-201).

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	Emissions Point ID
By-pass During Furnace Idling	Furnace Idling Bypass Stack	AA-203c

Operating Data		
Furnace capacity[1]	16.5	MMBtu/hr
RTO control efficiency[2]	0.0	%
Operating hours[1]	500	hrs/yr

Emission Totals:					
Pollutant	Emission Factor		Reference	Emission Rates[3,4] PTE (lb/hr)	Annual (tons/yr)
Criteria Pollutants					
CO	0.60	lb/MMBtu	AP-42; Table 1.6-2	9.90	2.48
VOC Total	0.017	lb/MMBtu	AP-42; Table 1.6-3	0.28	0.07
Hazardous/Toxic Air Pollutants					
Acetaldehyde	0.00083	lb/MMBtu	AP-42; Table 1.6-3	*0.01*	0.0034
Acrolein	0.004	lb/MMBtu	AP-42; Table 1.6-3	*0.07*	0.0165
Benzene	0.0042	lb/MMBtu	AP-42; Table 1.6-3	*0.07*	0.0173
Carbon tetrachloride	0.000045	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0002
Chlorine	0.00079	lb/MMBtu	AP-42; Table 1.6-3	*0.01*	0.0033
Chlorobenzene	0.000033	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0001
Chloroform	0.000028	lb/MMBtu	AP-42; Table 1.6-3	*0.000*	0.0001
Chloromethane	0.000023	lb/MMBtu	AP-42; Table 1.6-3	*0.000*	0.0001
1,2-Dibromoethane	0.000055	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0002
1,2-Dichloroethane	0.000029	lb/MMBtu	AP-42; Table 1.6-3	*0.000*	0.0001
Dichloromethane	0.00029	lb/MMBtu	AP-42; Table 1.6-3	*0.00*	0.0012
1,2-Dichloropropane	0.000033	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0001
Ethylbenzene	0.000031	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0001
Formaldehyde	0.0044	lb/MMBtu	AP-42; Table 1.6-3	*0.07*	0.0182
Hydrochloric acid*	0.019	lb/MMBtu	AP-42; Table 1.6-3	*0.31*	0.0784
Mercury (and compounds)	0.0000035	lb/MMBtu	AP-42; Table 1.6-4	*5.78E-05*	0.0000
Naphthalene	0.000097	lb/MMBtu	AP-42; Table 1.6-3	*0.002*	0.0004
Phenol	0.000051	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0002
Polynuclear Aromatic Hydrocarbons	See Below		See Below	*4.61E-04*	0.0001
Propionaldehyde	0.000061	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0003
Styrene	0.0019	lb/MMBtu	AP-42; Table 1.6-3	*0.03*	0.0078
Tetrachloroethane	0.000038	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0002
Toluene	0.00092	lb/MMBtu	AP-42; Table 1.6-3	*0.02*	0.0038
1,1,1-Trichloroethane	0.000031	lb/MMBtu	AP-42; Table 1.6-3	*0.001*	0.0001
Trichloroethylene	0.00003	lb/MMBtu	AP-42; Table 1.6-3	*0.000*	0.0001
Trichlorofluoromethane	0.00041	lb/MMBtu	AP-42; Table 1.6-3	*0.01*	0.0017
Xylene	0.000025	lb/MMBtu	AP-42; Table 1.6-3	*0.000*	0.0001
Arsenic	0.000022	lb/MMBtu	AP-42; Table 1.6-4	*0.000*	0.0001
Barium	0.00017	lb/MMBtu	AP-42; Table 1.6-4	*0.00*	0.0007
Copper	0.000049	lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0002
Lead	0.000048	lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0002
Manganese	0.0016	lb/MMBtu	AP-42; Table 1.6-4	*0.03*	0.0066
Nickel	0.000033	lb/MMBtu	AP-42; Table 1.6-4	*0.001*	0.0001
Phosphorus	0.000027	lb/MMBtu	AP-42; Table 1.6-4	*0.000*	0.0001
Zinc (and compounds)	0.00042	lb/MMBtu	AP-42; Table 1.6-4	*0.01*	0.0017

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	Emissions Point ID
By-pass During Furnace Idling	Furnace Idling Bypass Stack	AA-203c

Operating Data		
Furnace capacity[1]	16.5	MMBtu/hr
RTO control efficiency[2]	0.0	%
Operating hours[1]	500	hrs/yr

Polynuclear Aromatic Hydrocarbons Emissions:

Pollutant	Emission Factor		Reference	Emission Rates[3,4] Avg (lb/hr)	Annual (tons/yr)
Acenaphthene	9.1E-07	lb/MMBtu	AP-42; Table 1.6-1	*1.50E-05*	3.75E-06
Acenaphthylene	5.0E-06	lb/MMBtu	AP-42; Table 1.6-1	*8.25E-05*	2.06E-05
Acetophenone	3.2E-09	lb/MMBtu	AP-42; Table 1.6-2	*5.28E-08*	1.32E-08
Anthracene	3.0E-06	lb/MMBtu	AP-42; Table 1.6-2	*4.95E-05*	1.24E-05
Benzo(a)anthracene	6.5E-08	lb/MMBtu	AP-42; Table 1.6-2	*1.07E-06*	2.68E-07
Benzo(a)pyrene	2.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*4.29E-05*	1.07E-05
Benzo(b)fluoranthene	1.0E-07	lb/MMBtu	AP-42; Table 1.6-3	*1.65E-06*	4.13E-07
Benzo(e)pyrene	2.6E-09	lb/MMBtu	AP-42; Table 1.6-3	*4.29E-08*	1.07E-08
Benzo(g,h,i)perylene	9.3E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.53E-06*	3.84E-07
Benzo(j,k)fluoranthene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-06*	6.60E-07
Benzo(k)fluoranthene	3.6E-08	lb/MMBtu	AP-42; Table 1.6-3	*5.94E-07*	1.49E-07
2-Chloronaphthalene	2.4E-09	lb/MMBtu	AP-42; Table 1.6-3	*3.96E-08*	9.90E-09
Chrysene	3.8E-08	lb/MMBtu	AP-42; Table 1.6-3	*6.27E-07*	1.57E-07
Dibenzo(a,h)anthracene	9.1E-09	lb/MMBtu	AP-42; Table 1.6-3	*1.50E-07*	3.75E-08
Fluoranthene	1.6E-06	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-05*	6.60E-06
Fluorene	3.4E-06	lb/MMBtu	AP-42; Table 1.6-3	*5.61E-05*	1.40E-05
Indeno(1,2,3,c,d)pyrene	8.7E-08	lb/MMBtu	AP-42; Table 1.6-3	*1.44E-06*	3.59E-07
2-Methylnaphthalene	1.6E-07	lb/MMBtu	AP-42; Table 1.6-3	*2.64E-06*	6.60E-07
Perylene	5.2E-10	lb/MMBtu	AP-42; Table 1.6-3	*8.58E-09*	2.15E-09
Phenanthrene	7.0E-06	lb/MMBtu	AP-42; Table 1.6-3	*1.16E-04*	2.89E-05
Pyrene	3.7E-06	lb/MMBtu	AP-42; Table 1.6-3	*6.11E-05*	1.53E-05
Total				*0.0005*	1.15E-04

REFERENCE/NOTES

1. Conservative assumption. Furnace capacity during idling was previously permitted for 5 MMbtu/hr. Drax is requesting that this capacity be updated to be no more than 10% (16.5 MMBtu/hr) of furnace max firing rate (165 MMBtu/hr).

2. RTO is assumed to be down for maintenance.

3. $ER_{avg/max}$ (lb/hr) = Furnace capacity (MMBtu/hr) x EF (lb/MMBtu) x((100-Control factor)/100)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton

4. CO, and VOC, and HAP emissions are included because these two pollutants are specifically controlled by the RTO. GHG pollutants are expected to have higher emissions during normal operations due to higher furnace capacity, and those emissions have already been included under the RTO emissions point ID (AA-201).

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
By-pass During Dryer Startup/Shutdown	Dryer SUSD Bypass Stack	AA-204b

The RTO stack exhausts controlled process VOC and PM emissions from the chip dryer as well as controlled combustion emissions from the biomass furnace. PM emissions are controlled with a wet electrostatic precipitator (WESP). VOC emissions from these sources are controlled by the RTO. Combustion emissions from the RTO's gas burner also exhaust out of the stack.

Operating Data	
Dryer Capacity[1]	23 ODT*/hr
Operating hours[1]	50 hrs/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates Hourly (lb/hr)	Emission Rates Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	2.20 lb/ODT	See Note 2	50.91	1.27
PM	2.20 lb/ODT	See Note 2	50.91	1.27
SO	0.15 lb/ODT	See Note 3	3.47	0.09
NOx	2.70 lb/ODT	See Note 2	62.48	1.56
CO	3.50 lb/ODT	See Note 2	81.00	2.02
VOC Total	4.70 lb/ODT	See Note 2	108.77	2.72
Hazardous/Toxic Air Pollutants				
Acetaldehyde	0.08 lb/ODT	See Note 4	1.74	0.04
Acrolein	2.30E-02 lb/ODT	See Note 4	0.53	0.01
Benzene	7.60E-03 lb/ODT	See Note 4	0.18	0.00
Cumene	2.00E-03 lb/ODT	See Note 4	0.05	0.00
Formaldehyde	0.140 lb/ODT	See Note 4	3.24	0.08
Methylene Chloride	1.80E-03 lb/ODT	See Note 4	0.04	0.001
Methanol	0.110 lb/ODT	See Note 4	2.55	0.06
Methyl Isobutyl Ketone	6.90E-03 lb/ODT	See Note 4	0.16	0.004
Phenol	2.80E-02 lb/ODT	See Note 4	0.65	0.02
Proprionaldehyde	1.30E-02 lb/ODT	See Note 4	0.30	0.01
Styrene	3.60E-04 lb/ODT	See Note 4	0.01	0.00
Toluene	1.30E-02 lb/ODT	See Note 4	0.30	0.01
Xylene	4.80E-04 lb/ODT	See Note 4	0.01	0.00
		Total HAP Emissions	**9.75**	**0.24**

REFERENCE/NOTES

1. Based on dryer feed rate information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on December 14, 2021. At 25% feed rate, the capacity is 16.53 ODT/hr. therefore, at 35% feed rate, the capacity is calaculated as 23 ODT/hr.

2. Emission factors for PM, CO, VOC, and NOx are based on AP-42 Chapter 10.6. Emissions have been conserv atively estimated based on SCC 3-07-006-25 assuming inlet moisture content > 50%, dry basis.

3. SO_2 emission rates are based on the results of February 2016 stack testing at a sister facility (Drax Morehouse BioEnergy). Note that due to high variance in the three tests conducted for SO_2, Drax has chosen the highest reported hourly emissions as a conservative estimate. These emissions have also been scaled up to account for a 25% safety factor. Therefore, the new lb/ODT for these pollutants has been calculated based on the annual PTE after scaling up.

4. HAP emissions are based on AP-42 Chapter 10.6, Table 10.6.2-3. Emissions have been conservatively estimated based on SCC 3-07-006-25 assuming inlet moisture content > 50%, dry basis. GHG pollutants are expected to have higher emissions during normal operations due to higher furnace capacity, and those emissions have already been included under the RTO emissions point ID (AA-201).

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Natural Gas RTO Burner ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RTO)***	RTO	AA-201

Operating Data		
Burner capacity[1]	24	MMBtu/hr
Natural gas HHV[2]	1,020	Btu/scf
Operating hours[1]	8,760	hrs/yr

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[3,7] PTE (lb/hr)	Emission Rates[3,7] Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	7.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.18*	*0.78*
PM	7.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.18*	*0.78*
SO	0.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.01*	*0.06*
NOx	100 lb/10^6 scf	AP 42; Table 1.4-1	*2.35*	*10.31*
CO	84 lb/10^6 scf	AP 42; Table 1.4-1	*1.98*	*8.66*
VOC Total	5.5 lb/10^6 scf	AP 42; Table 1.4-2	*0.13*	*0.57*
Hazardous/Toxic Air Pollutants				
Formaldehyde	0.075 lb/10^6 scf	AP 42; Table 1.4-3	*0.002*	*0.01*
n-Hexane	1.8 lb/10^6 scf	AP 42; Table 1.4-3	*0.04*	*0.19*

Greenhouse Gases

Pollutant	Emission Factor[4]	GHG Mass Emission Rates[5] Annual (tons/yr)	GWP[6]	CO_2e Emission Rates[6] Annual (tons/yr)
CO_2	53.06 kg/MMBtu	12298.76	1	*12,299*
CH_4	0.001 kg/MMBtu	0.23	25	*5.790*
N_2O	0.0001 kg/MMBtu	0.02	298	*6.91*
CO e				*12,312*

REFERENCE/NOTES

1. Provided by facility.
2. AP-42; Chapter 1.4 - Natural Gas Combustion.
3. $ER_{avg/max}$ (lb/hr) = Furnace capacity (MMBtu/hr) x (EF (lb/10^6 scf)/HHV (Btu/scf))
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
4. Emission factor based on 40 CFR 98, Tables C-1 and C-2, for Petroleum (Natural Gas).
5. Emission rates (ER) calculated as specified in 40 CFR 98.33(a)(1)(iii) and 40 CFR 98.33(c)(1)(ii) and in accordance with 98.33(b)(1)(v) as follows:

   GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) x (Emission Factor (kg/10^6 Btu) x 1000 g/kg / 453.59 g/lb) x Operating Hours (hr/yr)/ 2000 lbs/ton

   CO_2e: ER (tons/yr) = GHG Mass Emission Rate x GWP
6. GWPs based on 40 CFR 98, Table A-1.
7. PM10/2.5, CO, SO2, NOx, and VOC emissions are included for representativeness. The total emissions out of the RTO stack have been accounted for in the overall RTO emissions estimate (AA-201).

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Primary Hammermill Feed Silo with bin vent	HFS	AA-302

Operating Data		
Exhaust flow[1]	1,500	acfm
Annual throughput[1]	624,700	ODT*/yr
Potential maximum hourly throughput[1]	71.31	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.19	0.84
PM	0.015 gr/scf	Vendor guarantee	0.19	0.84
VOC Total	0.021 lb/ODT	Based on scaled-up stack test results[2]	1.48	6.50
Methanol	0.0010 lb/ODT	Based on scaled-up stack test results[2]	0.07	0.33
Formaldehyde	0.0020 lb/ODT	Based on scaled-up stack test results[2]	0.14	0.62
Acetaldehyde	0.0010 lb/ODT	Based on scaled-up stack test results[2]	0.07	0.33

REFERENCE/NOTES

1. Based on production information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) on February 16, 2022 via email.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM Emission rates (ER) calculated as follows:
   PM $ER_{avg/max}$ (lb/hr) = ((EF (gr/scf) x Exhaust Flow (acfm)) x (60 min/hr) x (1 lb/7000 gr) x (Standard Temp (°R)/Actual Temp (°R))
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Primary Hammermill Pneumatic System Vents 1 through 6 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	HPS1-HPS6	AA-303

Operating Data		
Exhaust flow per vent[1]	9,000	acfm
Annual throughput per vent[1]	104,117	ODT*/yr
Maximum hourly throughput per vent[1]	11.89	ODT*/hr
Number of Vents	6	
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.005 lb/ODT	Based on scaled-up stack test results[3]	*0.38*	*1.68*
PM	0.007 lb/ODT	Based on scaled-up stack test results[3]	*0.52*	*2.27*
VOC Total	0.43 lb/ODT	Based on scaled-up stack test results[4]	*30.37*	*133.04*
Methanol	0.0027 lb/ODT	Based on scaled-up stack test results[2]	*0.19*	*0.84*
Formaldehyde	0.0056 lb/ODT	Based on scaled-up stack test results[2]	*0.40*	*1.75*
Acetaldehyde	0.0027 lb/ODT	Based on scaled-up stack test results[2]	*0.19*	*0.84*

REFERENCE/NOTES

1. Based on production information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) on February 16, 2022 via email.
2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.
3. PM emission rates calculated based on March 2019 engineering testing of the hammermills at a sister facility (Drax Morehouse BioEnergy) with an additional 25% safety factor.

   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)
4. VOC emission rates calculated based on November 2018 engineering testing of the hammermills at the site with an additional 25% safety factor. As the hammermills are permitted under a single emission point ID (AA-004), the hourly emissions have been estimated as the sum of the 3-hr average hourly stack tested emissions for each vent.

   VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)
5. TAP ER calculated as follows:

   TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

   TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Truck Dump	DSTD	AA-304

Operating Data		
Potential maximum hourly throughput[1]	150	MTPH
Annual throughput through source[1]	467,316	ODT*/yr
Potential average hourly throughput[1]	53.35	ODT*/hr
Moisture Content[2]	8	%
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
PM_{10}	1.61E-04 lb/ODT	AP-42, Section 13.2.4	0.01	0.04
$PM_{2.5}$	2.44E-05 lb/ODT	AP-42, Section 13.2.4	0.001	0.006

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email.
2. Moisture Content is based on similar information for pine and hardwood dry shavings at other pellet mills in Mississippi.
3. PM emission rates calculated based on AP-42, Section 13.2.4 - Aggregate Handling and Storage Piles, Equation 13.2.1, (11/06). Wind speed assumed to be no more than 5 mph for the area assuming calm winds.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Secondary Hammermill Silo 1 with Bin Vent	SHFS1	AA-305

Operating Data		
Exhaust flow[1]	1,500	acfm
Annual throughput through source[1]	416,467	ODT*/yr
Potential maximum hourly throughput[1]	47.54	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.19	0.84
PM	0.015 gr/scf	Vendor guarantee	0.19	0.84
VOC Total	0.0278 lb/ODT	Based on scaled up stack test results[2]	1.32	5.79
Methanol	0.0014 lb/ODT	Based on scaled up stack test results[2]	0.07	0.30
Formaldehyde	0.0027 lb/ODT	Based on scaled up stack test results[2]	0.13	0.55
Acetaldehyde	0.0014 lb/ODT	Based on scaled up stack test results[2]	0.07	0.30

REFERENCE/NOTES

1. Provided by facility. It is assumed that the No.1 feed silo bin vent will store up to 66.6% of the total feed throughput.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM Emission rates (ER) calculated as follows:
   PM $ER_{avg/max}$ (lb/hr) = ((EF (gr/scf) x Exhaust Flow (acfm)) x (60 min/hr) x (1 lb/7000 gr) x (Standard Temp (°R)/Actual Temp (°R))
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Secondary Hammermill Silo 2 with Bin Vent	SHFS2	AA-306

Operating Data		
Exhaust flow[1]	1,500	acfm
Annual throughput through source[1]	208,233	ODT*/yr
Potential maximum hourly throughput[1]	23.77	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.19	0.84
PM	0.015 gr/scf	Vendor guarantee	0.19	0.84
VOC Total	0.0278 lb/ODT	Based on scaled up stack test results[2]	0.74	3.23
Methanol	0.0014 lb/ODT	Based on scaled up stack test results[2]	0.03	0.15
Formaldehyde	0.0027 lb/ODT	Based on scaled up stack test results[2]	0.06	0.28
Acetaldehyde	0.0014 lb/ODT	Based on scaled up stack test results[2]	0.03	0.15

REFERENCE/NOTES

1. Provided by facility. It is assumed that the No.2 feed silo bin vent will store up to 33.3% of the total feed throughput.
2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.
3. PM Emission rates (ER) calculated as follows:
   PM $ER_{avg/max}$ (lb/hr) = ((EF (gr/scf) x Exhaust Flow (acfm)) x (60 min/hr) x (1 lb/7000 gr) x (Standard Temp (°R)/Actual Temp (°R))
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)
4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Secondary Hammermill Pneumatic System No. 1 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	SHPS1	AA-307A

Operating Data		
Exhaust flow[1]	9,000	acfm
Average Annual throughput[1]	64,228	ODT/yr
Maximum Annual throughput[1]	208,233	ODT*/yr
Maximum hourly throughput[1]	23.77	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.005 lb/ODT	Based on stack test results[3]	0.11	0.50
PM	0.006 lb/ODT	Based on stack test results[3]	0.13	0.58
VOC Total	0.35 lb/ODT	Based on stack test results[4]	8.84	38.72
Methanol	0.0017 lb/ODT	Based on stack test results[2]	0.04	0.186
Formaldehyde	0.0032 lb/ODT	Based on stack test results[2]	0.08	0.358
Acetaldehyde	0.0017 lb/ODT	Based on stack test results[2]	0.04	0.186

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) on February 16, 2022 via email.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016.

3. PM emission rates calculated based on March 2019 engineering testing of the hammermills at a sister facility (Drax Morehouse BioEnergy) with an additional 25% safety factor.

   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the secondary hammermills at the site with an additional 25% safety factor.

   VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:
   TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Secondary Hammermill Pneumatic System No. 2 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	SHPS2	AA-307B

Operating Data		
Exhaust flow[1]	9,000	acfm
Average Annual throughput[1]	64,228	ODT/yr
Maximum Annual throughput[1]	208,233	ODT*/yr
Maximum hourly throughput[1]	23.77	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.005 lb/ODT	Based on stack test results[3]	0.11	0.50
PM	0.006 lb/ODT	Based on stack test results[3]	0.13	0.58
VOC Total	0.35 lb/ODT	Based on stack test results[4]	8.84	38.72
Methanol	0.0017 lb/ODT	Based on stack test results[2]	0.04	0.186
Formaldehyde	0.0032 lb/ODT	Based on stack test results[2]	0.08	0.358
Acetaldehyde	0.0017 lb/ODT	Based on stack test results[2]	*0.04*	*0.186*

REFERENCE/NOTES

1. Based on production information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) on February 16, 2022 via email.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016.

3. PM emission rates calculated based on March 2019 engineering testing of the hammermills at a sister facility (Drax Morehouse BioEnergy) with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the secondary hammermills at the site with an additional 25% safety factor.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Secondary Hammermill Pneumatic Sysem No. 3 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	SHPS3	AA-307c

Operating Data		
Exhaust flow[1]	9,000	acfm
Average Annual throughput[1]	64,228	ODT/yr
Maximum Annual throughput[1]	208,233	ODT*/yr
Maximum hourly throughput[1]	23.77	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.005 lb/ODT	Based on stack test results[3]	0.11	0.50
PM	0.006 lb/ODT	Based on stack test results[3]	0.13	0.58
VOC Total	0.35 lb/ODT	Based on stack test results[4]	8.84	38.72
Methanol	0.0017 lb/ODT	Based on stack test results[2]	0.04	0.186
Formaldehyde	0.0032 lb/ODT	Based on stack test results[2]	0.08	0.358
Acetaldehyde	0.0017 lb/ODT	Based on stack test results[2]	*0.04*	*0.186*

REFERENCE/NOTES

1. Based on production information provided Josh Jones (Drax Biomass) to Sharon Killian (Trinity) on February 16, 2022 via email.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016.

3. PM emission rates calculated based on March 2019 engineering testing of the hammermills at a sister facility (Drax Morehouse BioEnergy) with an additional 25% safety factor.

$PM\ ER_{ann}$ (tons/yr) = ($PM\ ER_{avg}$ (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the secondary hammermills at the site with an additional 25% safety factor.

$VOC\ ER_{ann}$ (tons/yr) = ($VOC\ ER_{avg}$ (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.1 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC1	AA-308A

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	0.20	0.88
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	0.25	1.11
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.2 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC2	AA-308B

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	*0.20*	*0.88*
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	*0.25*	*1.11*
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.3 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC3	AA-308C

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	*0.20*	*0.88*
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	*0.25*	*1.11*
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

$PM\ ER_{ann}$ (tons/yr) = ($PM\ ER_{avg}$ (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

$VOC\ ER_{ann}$ (tons/yr) = ($VOC\ ER_{avg}$ (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.4 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC4	AA-308D

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	*0.20*	*0.88*
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	*0.25*	*1.11*
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.5 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC5	AA-308E

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	*0.20*	*0.88*
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	*0.25*	*1.11*
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Cooler Pneumatic System No.6 ***(INCLUDED FOR COMPLETENESS ONLY, EMISSIONS ACCOUNTED UNDER RCO)***	PC6	AA-308F

Operating Data		
Exhaust flow[1]	17,887	acfm
Annual throughput through source[1]	104,117	ODT*/yr
Potential maximum hourly throughput[1]	11.89	ODT*/hr
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[5] PTE (lb/hr)	Emission Rates[5] Annual (tons/yr)
$PM_{2.5}$	0.016 lb/ODT	Based on scaled up stack test results[3]	*0.20*	*0.88*
PM	0.02 lb/ODT	Based on scaled up stack test results[3]	*0.25*	*1.11*
VOC Total	1.79 lb/ODT	Based on scaled up stack test results[4]	21.26	93.13
Methanol	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10
Formaldehyde	0.0040 lb/ODT	Based on scaled up stack test results[2]	0.05	0.21
Acetaldehyde	0.0020 lb/ODT	Based on scaled up stack test results[2]	0.02	0.10

REFERENCE/NOTES

1. Based on production information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021. It is assumed that there will be equal distribution of throughput to the 6 exisitng pellet coolers (1 for every 2 pellet mills).

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing of the pellet coolers at a sister facility (Drax Morehouse BioEnergy) adjusted for the change in production and number of pellet coolers with an additional 25% safety factor.

PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC emission rates calculated based on November 2018 engineering testing of the pellet coolers at the site adjusted for the change in production and number of pellet coolers with an additional 25% safety factor. The average of the stack test results for each cooler was used to estimate the emissions.

VOC ER_{ann} (tons/yr) = (VOC ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

5. TAP ER calculated as follows:

TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)

TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emission Point ID
Pellet Coolers, Pellet Mills, Secondary Hammermills, and RCO Burner	RCO	AA-301

1. The RCO stack will exhaust controlled process VOC emissions from the 6 dry hammermills, 3 secondary hammermills, and 6 pellet coolers.

2. Combustion emissions from the RCO's gas burner will also exhaust out of the RCO stack.

3. Individual emissions from the hammermills and pellet coolers have been included in later spreadsheet tabs for completeness only.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emission Point ID
Pellet Coolers, Pellet Mills, Secondary Hammermills, and RCO Burner	RCO	AA-301

The RCO stack will exhaust controlled process VOC emissions from the dry primary hammermills, secondary hammermills, and pellet coolers Combustion emissions from the RCO's gas burner will also exhaust out of the RCO stack.

Operating Data		
Facility Capacity[1]	624,700	ODT*/yr
Hourly Throughput	71.31	ODT*/hr
RCO VOC Control Efficiency	95	%
RCO HAP Control Efficiency	50	%
Operating hours[1]	8,760	hrs/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	0.0132 lb/ODT	July 2021 Performance Test Data	0.94	4.12
PM	0.0213 lb/ODT	July 2021 Performance Test Data	1.52	6.65
SO	0.0001 lb/ODT		0.01	0.031
NOx	0.0130 lb/ODT	July 2021 Performance Test Data	0.93	4.06
CO	0.1728 lb/ODT	July 2021 Performance Test Data	12.32	53.97
VOC Total	0.1203 lb/ODT	July 2021 Performance Test Data	8.58	37.58
Hazardous/Toxic Air Pollutants				
Methanol	0.0410 lb/ODT	July 2021 Performance Test Data	2.924	12.806
Formaldehyde	0.0035 lb/ODT	July 2021 Performance Test Data	0.250	1.093
Acetaldehyde	0.0037 lb/ODT	July 2021 Performance Test Data	0.264	1.156
2-Methylnaphthalene	2.40E-05 $lb/10^6$ scf	See Note 4	1.65E-07	7.21E-07
3-Methylchloranthene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
7,12-Dimethylbenz(a)anthracene	1.60E-05 $lb/10^6$ scf	See Note 4	1.10E-07	4.81E-07
Acenaphthene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Acenaphthylene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Acrolein	0.0014 lb/ODT	July 2021 Performance Test Data	0.100	0.437
Anthracene	2.40E-06 $lb/10^6$ scf	See Note 4	1.65E-08	7.21E-08
Arsenic	2.00E-04 $lb/10^6$ scf	See Note 4	2.75E-06	1.20E-05
Benz(a)anthracene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Benzene	2.10E-03 $lb/10^6$ scf	See Note 4	1.44E-05	6.31E-05
Benzo(a)pyrene	1.20E-06 $lb/10^6$ scf	See Note 4	8.24E-09	3.61E-08
Benzo(b)fluoranthene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Benzo(g,h,i)perylene	1.20E-06 $lb/10^6$ scf	See Note 4	8.24E-09	3.61E-08
Benzo(k)fluoranthene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Beryllium	1.20E-05 $lb/10^6$ scf	See Note 4	1.65E-07	7.21E-07
Cadmium	1.10E-03 $lb/10^6$ scf	See Note 4	1.51E-05	6.61E-05
Chromium VI	1.40E-03 $lb/10^6$ scf	See Note 4	1.92E-05	8.42E-05
Chrysene	1.80E-06 $lb/10^6$ scf	See Note 4	1.24E-08	5.41E-08
Cobalt	8.40E-05 $lb/10^6$ scf	See Note 4	1.15E-06	5.05E-06
Dibenzo(a,h)anthracene	1.20E-06 $lb/10^6$ scf	See Note 4	8.24E-09	3.61E-08
Dichlorobenzene	1.20E-03 $lb/10^6$ scf	See Note 4	8.24E-06	3.61E-05
Fluoranthene	3.00E-06 $lb/10^6$ scf	See Note 4	2.06E-08	9.02E-08
Indeno(1,2,3-cd)pyrene	2.80E-06 $lb/10^6$ scf	See Note 4	1.92E-08	8.42E-08
Lead	1.80E-06 $lb/10^6$ scf	See Note 4	2.47E-08	1.08E-07
Manganese	3.80E-04 $lb/10^6$ scf	See Note 4	5.22E-06	2.28E-05
Mercury	2.60E-04 $lb/10^6$ scf	See Note 4	3.57E-06	1.56E-05
Naphthalene	6.10E-04 $lb/10^6$ scf	See Note 4	4.19E-06	1.83E-05
Nickel	2.10E-03 $lb/10^6$ scf	See Note 4	2.88E-05	1.26E-04

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emission Point ID
Pellet Coolers, Pellet Mills, Secondary Hammermills, and RCO Burner	RCO	AA-301

The RCO stack will exhaust controlled process VOC emissions from the dry primary hammermills, secondary hammermills, and pellet coolers Combustion emissions from the RCO's gas burner will also exhaust out of the RCO stack.

Operating Data		
Facility Capacity[1]	624,700	ODT*/yr
Hourly Throughput	71.31	ODT*/hr
RCO VOC Control Efficiency	95	%
RCO HAP Control Efficiency	50	%
Operating hours[1]	8,760	hrs/yr

*ODT = oven dried ton (U.S.) of chips

Hazardous/Toxic Air Pollutants					
Phenanathrene	1.70E-05	lb/10^6 scf	See Note 4	1.17E-07	5.11E-07
Pyrene	5.00E-06	lb/10^6 scf	See Note 4	3.43E-08	1.50E-07
Selenium	2.40E-05	lb/10^6 scf	See Note 4	3.29E-07	1.44E-06
Toluene	3.40E-03	lb/10^6 scf	See Note 4	2.33E-05	1.02E-04
n-Hexane	1.80	lb/10^6 scf	See Note 4	1.24E-02	5.41E-02
Propionaldehyde	0.0034	lb/ODT	July 2021 Performance Test Data	0.242	1.062
Hydrogen Chloride	0.0008	lb/ODT	July 2021 Performance Test Data	0.057	0.250
Phenol	0.0222	lb/ODT	July 2021 Performance Test Data	1.583	6.934
			Total HAP Emissions (RCO Stack)	**3.55**	**15.55**
Greenhouse Gas Emissions					
CO e	-		See Note 4	-	7182

REFERENCE/NOTES

1. Based on information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2022.

2. $PM_{10/2.5}$, VOC, and Formaldehyde lb/hr emissions are the sum of the following individual components: 6 Primary Hammermills, 6 Pellet Coolers, 3 Seconadry Hammermills, and RCO Burner. For the tpy emissions, the combination of the primary hammermills and secondary hammermills is such that the total will not exceed production of 660,000 U.S. tons. VOC emissions also include 95% RCO control efficiency, and HAP emissions include 50% RCO control efficiency. The effective emission factor (lb/ODT) is based on the the overall stream from various sources to the RCO post-control.

3. Methanol and Acetaldehyde lb/hr emissions are the sum of the following individual components: 6 Primary Hammermills, 6 Pellet Coolers, and 3Secondary Hammermills. For the tpy emissions, the combination of the primary hammermills and secondary hammermills is such that the total will not exceed production of 660,000 U.S. tons. HAP emissions include 50% RCO control efficiency.

4. SO_2, NO_x, CO, GHG emissions and all other HAP emissions are only associated with the RCO burner emissions.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	TEMPO ID
RCO Burner Emissions ***(INCLUDED FOR COMPLETENESS ONLY)***	RCO	AA-301

Operating Data		
RCO burner capacity[1]	14	MMBtu/hr
Natural gas HHV[2]	1,020	Btu/scf
Operating hours[1]	8,760	hrs/yr

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[3] PTE (lb/hr)	Emission Rates[3] Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	7.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.10*	*0.46*
PM	7.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.10*	*0.46*
SO	0.6 lb/10^6 scf	AP 42; Table 1.4-2	*0.01*	*0.04*
NOx	100 lb/10^6 scf	AP 42; Table 1.4-1	*1.37*	*6.01*
CO	84 lb/10^6 scf	AP 42; Table 1.4-1	*1.15*	*5.05*
VOC Total	5.5 lb/10^6 scf	AP 42; Table 1.4-2	*0.08*	*0.33*
Hazardous/Toxic Air Pollutants				
Formaldehyde	0.075 lb/10^6 scf	AP 42; Table 1.4-3	*0.001*	*0.005*
2-Methylnaphthalene	2.40E-05 lb/10^6 scf	AP 42; Table 1.4-3	*3.29E-07*	*1.44E-06*
3-Methylchloranthene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
7,12-Dimethylbenz(a)anthracene	1.60E-05 lb/10^6 scf	AP 42; Table 1.4-3	*2.20E-07*	*9.62E-07*
Acenaphthene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Acenaphthylene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Acrolein	1.80E-05 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-07*	*1.08E-06*
Anthracene	2.40E-06 lb/10^6 scf	AP 42; Table 1.4-3	*3.29E-08*	*1.44E-07*
Arsenic	2.00E-04 lb/10^6 scf	AP 42; Table 1.4-3	*2.75E-06*	*1.20E-05*
Benz(a)anthracene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Benzene	2.10E-03 lb/10^6 scf	AP 42; Table 1.4-3	*2.88E-05*	*1.26E-04*
Benzo(a)pyrene	1.20E-06 lb/10^6 scf	AP 42; Table 1.4-3	*1.65E-08*	*7.21E-08*
Benzo(b)fluoranthene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Benzo(g,h,i)perylene	1.20E-06 lb/10^6 scf	AP 42; Table 1.4-3	*1.65E-08*	*7.21E-08*
Benzo(k)fluoranthene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Beryllium	1.20E-05 lb/10^6 scf	AP 42; Table 1.4-3	*1.65E-07*	*7.21E-07*
Cadmium	1.10E-03 lb/10^6 scf	AP 42; Table 1.4-3	*1.51E-05*	*6.61E-05*
Chromium VI	1.40E-03 lb/10^6 scf	AP 42; Table 1.4-3	*1.92E-05*	*8.42E-05*
Chrysene	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Cobalt	8.40E-05 lb/10^6 scf	AP 42; Table 1.4-3	*1.15E-06*	*5.05E-06*
Dibenzo(a,h)anthracene	1.20E-06 lb/10^6 scf	AP 42; Table 1.4-3	*1.65E-08*	*7.21E-08*
Dichlorobenzene	1.20E-03 lb/10^6 scf	AP 42; Table 1.4-3	*1.65E-05*	*7.21E-05*
Fluoranthene	3.00E-06 lb/10^6 scf	AP 42; Table 1.4-3	*4.12E-08*	*1.80E-07*
Indeno(1,2,3-cd)pyrene	2.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*3.84E-08*	*1.68E-07*
Lead	1.80E-06 lb/10^6 scf	AP 42; Table 1.4-3	*2.47E-08*	*1.08E-07*
Manganese	3.80E-04 lb/10^6 scf	AP 42; Table 1.4-3	*5.22E-06*	*2.28E-05*
Mercury	2.60E-04 lb/10^6 scf	AP 42; Table 1.4-3	*3.57E-06*	*1.56E-05*
Naphthalene	6.10E-04 lb/10^6 scf	AP 42; Table 1.4-3	*8.37E-06*	*3.67E-05*
Nickel	2.10E-03 lb/10^6 scf	AP 42; Table 1.4-3	*2.88E-05*	*1.26E-04*
Phenanathrene	1.70E-05 lb/10^6 scf	AP 42; Table 1.4-3	*2.33E-07*	*1.02E-06*
Pyrene	5.00E-06 lb/10^6 scf	AP 42; Table 1.4-3	*6.86E-08*	*3.01E-07*
Selenium	2.40E-05 lb/10^6 scf	AP 42; Table 1.4-3	*3.29E-07*	*1.44E-06*
Toluene	3.40E-03 lb/10^6 scf	AP 42; Table 1.4-3	*4.67E-05*	*2.04E-04*
n-Hexane	1.8 lb/10^6 scf	AP 42; Table 1.4-3	*0.02*	*0.11*
		Total HAP Emissions (NG Combustion)	***0.03***	***0.11***

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	TEMPO ID
RCO Burner Emissions ***(INCLUDED FOR COMPLETENESS ONLY)***	RCO	AA-301

Operating Data		
RCO burner capacity[1]	14	MMBtu/hr
Natural gas HHV[2]	1,020	Btu/scf
Operating hours[1]	8,760	hrs/yr

Greenhouse Gases

Pollutant	Emission Factor[4]	GHG Mass Emission Rates[5] Annual (tons/yr)	GWP[6]	CO_2e Annual (tons/yr)
CO_2	53.06 kg/MMBtu	7174.27	1	*7,174*
CH_4	0.001 kg/MMBtu	0.14	25	*3.380*
N_2O	0.0001 kg/MMBtu	0.01	298	*4.03*
CO e				*7,182*

REFERENCE/NOTES

1. Based on information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2022.
2. AP-42; Chapter 1.4 - Natural Gas Combustion.
3. $ER_{avg/max}$ (lb/hr) = Furnace capacity (MMBtu/hr) x (EF (lb/10^6 scf)/HHV (Btu/scf))
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
4. Emission factor based on 40 CFR 98, Tables C-1 and C-2, for Petroleum (Natural Gas).
5. Emission rates (ER) calculated as specified in 40 CFR 98.33(a)(1)(iii) and 40 CFR 98.33(c)(1)(ii) and in accordance with 98.33(b)(1)(v) as follows:
   GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) x (Emission Factor (kg/10^6 Btu) x 1000 g/kg / 453.59 g/lb) x Operating Hours (hr/yr) / 2000 lbs/ton
   CO_2e: ER (tons/yr) = GHG Mass Emission Rate x GWP
6. GWPs based on 40 CFR 98, Table A-1.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Starch Storage Silo, Bin Vent	SS	AA-309

Operating Data		
Exhaust flow[1]	50	m^3/hr
Particulate Content[1]	0.5	mg/m^3
Operating hours[1]	8,760	hr/yr

Emission Totals:		
Pollutant	Emission Rates PTE (lb/hr)	Annual (tons/yr)
$PM_{2.5}$	0.0001	0.0002
PM	0.0001	0.0002

REFERENCE/NOTES

1. Estimated based on sizing at a sister facility (Drax Morehouse BioEnergy).
2. PM Emission rates (ER) calculated as follows:

   PM $ER_{avg/max}$ (lb/hr) = (Exhaust Flow (m^3/hr) x Particulate Content (mg/m^3)) / (1000 (mg/g) / 453.59 (g/lb))

   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Storage Silo No. 1 with Bin Vent	PS1	AA-401A

Operating Data		
Exhaust flow[1]	300	acfm
Annual throughput through source[1]	312,350	ODT*/yr
Potential maximum hourly throughput[1]	35.66	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.04	0.17
PM	0.015 gr/scf	Vendor guarantee	0.04	0.17
VOC Total	0.0279 lb/ODT	Based on stack test results[2]	1.00	4.36
Methanol	0.0014 lb/ODT	Based on stack test results[2]	0.05	0.22
Formaldehyde	0.0027 lb/ODT	Based on stack test results[2]	0.09	0.41
Acetaldehyde	0.0014 lb/ODT	Based on stack test results[2]	0.05	0.22

REFERENCE/NOTES

1. Based on information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM Emission rates (ER) calculated as follows:
   PM $ER_{avg/max}$ (lb/hr) = ((EF (gr/scf) x Exhaust Flow (acfm)) x (60 min/hr) x (1 lb/7000 gr) x (Standard Temp (°R)/Actual Temp (°R))
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Storage Silo No. 2 with Bin Vent	PS2	AA-401B

Operating Data		
Exhaust flow[1]	300	acfm
Annual throughput through source[1]	312,350	ODT*/yr
Potential maximum hourly throughput[1]	35.66	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.04	0.17
PM	0.015 gr/scf	Vendor guarantee	0.04	0.17
VOC Total	0.0279 lb/ODT	Based on stack test results[2]	1.00	4.36
Methanol	0.0014 lb/ODT	Based on stack test results[2]	0.05	0.22
Formaldehyde	0.0027 lb/ODT	Based on stack test results[2]	0.09	0.41
Acetaldehyde	0.0014 lb/ODT	Based on stack test results[2]	0.05	0.22

REFERENCE/NOTES

1. Based on information provided by Jamaria Warren (Drax Biomass) to Sharon Killian (Trinity) via email on August 23,2021.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM Emission rates (ER) calculated as follows:
   PM $ER_{avg/max}$ (lb/hr) = ((EF (gr/scf) x Exhaust Flow (acfm)) x (60 min/hr) x (1 lb/7000 gr) x (Standard Temp (°R)/Actual Temp (°R))
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Screened Materials Return Systen	SMS	AA-401D

Operating Data		
Exhaust flow[1]	7,452	acfm
Annual throughput through source[1]	62,470	ODT*/yr
Potential maximum hourly throughput[1]	7.13	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.015 gr/scf	Vendor guarantee	0.96	4.20
PM	0.015 gr/scf	Vendor guarantee	0.96	4.20
VOC Total	0.0279 lb/ODT	Based on stack test results[2]	0.20	0.87
Methanol	0.0014 lb/ODT	Based on stack test results[2]	0.01	0.04
Formaldehyde	0.0027 lb/ODT	Based on stack test results[2]	0.02	0.08
Acetaldehyde	0.0014 lb/ODT	Based on stack test results[2]	0.01	0.04

REFERENCE/NOTES

1. It is assumed that 10% of material may be screened and returned to the process.Based on information provided by Jamaria Warren (Drax Biomass) to Sharon Killian (Trinity) via email on August 23,2021, it is assumed production capacity is 624,700 ODT/year based on an email from Josh Jones (Drax Biomass) to Sharon Killian on February 16, 2022.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM Emission rates (ER) calculated as follows:
   PM ER_{ann} (tons/yr) = (PM ER_{avg} (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:
   VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/yr) x EF (lb/ODT))/(1 ton/2000 lbs)
   VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)
   VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Pellet Truck Loadout System	PLS	AA-401E

Operating Data		
Exhaust flow[1]	13,000	acfm
Annual throughput through source[1]	624,700	ODT*/yr
Potential maximum hourly throughput[1]	71.31	ODT*/hr
Exhaust temperature[1]	77	°F
Operating hours[1]	8,760	hr/yr

*ODT = oven dried ton (U.S.) of chips

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates PTE (lb/hr)	Emission Rates Annual (tons/yr)
$PM_{2.5}$	0.0018 lb/ODT	Based on stack test results[3]	0.13	0.55
PM	0.0024 lb/ODT	Based on stack test results[3]	0.17	0.74
VOC Total	0.029 lb/ODT	Based on stack test results[5]	2.21	9.67
Methanol	0.0014 lb/ODT	Based on stack test results[2]	0.10	0.43
Formaldehyde	0.0027 lb/ODT	Based on stack test results[2]	0.19	0.83
Acetaldehyde	0.0014 lb/ODT	Based on stack test results[2]	0.10	0.43

REFERENCE/NOTES

1. Based on information provided by Josh Jones (Drax Biomass) to Sharon Killian (Trinity) via email on February 16, 2021.

2. Stack testing conducted at a sister facility (Drax Morehouse BioEnergy) on February 10-16, 2016. These emissions have been scaled up to account for a 25% safety factor.

3. PM emission rates calculated based on March 2019 engineering testing at a sister facility (Drax Morehouse BioEnergy) with scaled up operations and an additional 25% safety factor.

$PM\ ER_{ann}$ (tons/yr) = ($PM\ ER_{avg}$ (lbs/hr) x Operating hours) x (1 ton/2000 lbs)

4. VOC/TAP ER calculated as follows:

VOC/TAP_{ann} (tons/yr) = (Annual throughput (ODT/hr) x EF (lb/ODT))/(1 ton/2000 lbs)

VOC/TAP_{avg} (lb/hr) = (VOC/TAP_{ann} (tons/yr) x (2000 lbs/ton))/Operating hours (hr/yr)

VOC/TAP_{max} (lb/hr) = Potential max hourly throughput (ODT/hr) x EF (lb/ODT)

5. VOC emission rates calculated based on November 2018 engineering testing at the site. These emissions have been scaled up to account for a 25% safety factor. These emissions have been scaled up to account for the new production capacity (771,392 U.S. tons), and a 25% safety factor.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Fire Pump Engine	FIR1	AA-501

Operating Data		
Engine rating[1]	250	hp
Brake-Specific Fuel Consumption	7,000	Btu/hp-hr
Firing rate[2]	1.75	MMBtu/hr
Primary fuel[1]	#2 Diesel	
Operating hours[1]	100	hours

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[3, 4, 5, 6] PTE (lb/hr)	Emission Rates[3, 4, 5, 6] Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	0.15 g/BHP-hr	40 CFR 60 Subpart IIII: Table 4	0.08	0.004
PM	0.15 g/BHP-hr	40 CFR 60 Subpart IIII: Table 4	0.08	0.004
SO	0.00205 lb/hp-hr	AP-42, Table 3.3-1 (10/96)	0.51	0.026
NOx	3.00 g/BHP-hr[4]	40 CFR 60 Subpart IIII: Table 4	1.65	0.083
CO	0.00668 lb/hp-hr	AP-42, Table 3.3-1 (10/96)	1.67	0.084
VOC Total	3.00 g/BHP-hr[4]	40 CFR 60 Subpart IIII: Table 4	1.65	0.083
Hazardous/Toxic Air Pollutants				
Benzene	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.002	0.0001
Toluene	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.001	0.00004
Xylenes	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0005	0.00002
1,3 - Butadiene	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0001	0.000003
Formaldehyde	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.002	0.0001
Acetaldehyde	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.001	0.0001
Acrolein	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0002	0.00001
Total PAH	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0003	0.00001
Naphthalene	8.48E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0001	0.00001

Greenhouse Gases

Pollutant	Emission Factor[7]	GHG Mass Emission Rates[8] Annual (tons/yr)	GWP[9]	CO_2e Emission Annual (tons/yr)
CO_2	73.96 kg/MMBtu	14.27	1	14
CH_4	0.003 kg/MMBtu	0.001	25	0.014
N_2O	0.0006 kg/MMBtu	0.0001	298	0.03
CO e				15

REFERENCE/NOTES

1. Provided by facility.
2. Firing rate (MMBtu/hr) = (Heat Conversion Factor (Btu/hp-hr) x Operating Rate (hp))/1000000
3. Emission calculation for $PM_{2.5}$, PM_{10}, NOx, VOC.
   $ER_{avg/max}$ (lb/hr) = Engine rating (HP) x EF (g/hp-hr) x (1 lb/453.5924 g)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
4. Per 40 CFR Subpart IIII, Table 4, NMHC + NOX emission standard is 3.0 g/hp-hr. For purposes of determining potential emissions of NOx and VOC, the combined emission standard for NMHC + NOx is used for each pollutant in the absence of separate emission standards for NOx and VOC. However, for purposes of demonstrating compliance with the applicable standard, the total emissions of NOx and VOC will be compared against the combined emission standard for HC + NOx.
5. Emission calculation for SO_2 and CO.
   ERavg/max (lbs/hr) = Engine rating (hp) x EFavg/max (lbs/hp-hr)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
6. Emission calculation for HAPs.
   ERavg/max (lbs/hr) = Firing rate (MMBtu/hr) x EFavg/max (lb/MMBtu)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
7. Emission factor based on 40 CFR 98, Tables C-1 and C-2, for Petroleum (Distillate Fuel Oil No.2).
8. Emission rates (ER) calculated as specified in 40 CFR 98.33(a)(1)(iii) and 40 CFR 98.33(c)(1)(ii) and in accordance with
   GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) x (Emission Factor (kg/106 Btu) x 1000 g/kg / 453.59 g/lb) x Operating Hours (h
   CO_2e: ER (tons/yr) = GHG Mass Emission Rate * GWP
9. GWPs based on 40 CFR 98, Table A-1.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emissions Point ID
Emergency Generator	EGN1	AA-502

Operating Data		
Engine rating[1]	402	hp
Brake-Specific Fuel Consumption[2]	7,000	Btu/hp-hr
Firing rate	2.81	MMBtu/hr
Primary fuel[1]	#2 Diesel	
Operating hours[1]	100	hours

Emission Totals:

Pollutant	Emission Factor	Reference	Emission Rates[3, 4, 5, 6] PTE (lb/hr)	Annual (tons/yr)
Criteria Pollutants				
$PM_{2.5}$	0.20 g/KW-hr	40 CFR 60 Subpart IIII	0.13	0.01
PM	0.20 g/KW-hr	40 CFR 60 Subpart IIII	0.13	0.01
SO	0.00205 lb/hp-hr	AP-42, Table 3.3-1 (10/96)	0.82	0.041
NOx	4.00 g/KW-hr[4]	40 CFR 60 Subpart IIII	2.64	0.132
CO	3.50 g/KW-hr[4]	40 CFR 60 Subpart IIII	2.31	0.116
VOC Total	4.00 g/KW-hr[4]	40 CFR 60 Subpart IIII	2.64	0.132
Hazardous/Toxic Air Pollutants				
Benzene	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.003	0.0001
Toluene	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.001	0.0001
Xylenes	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.001	0.00004
1,3 - Butadiene	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0001	0.00001
Formaldehyde	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.003	0.0002
Acetaldehyde	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.002	0.0001
Acrolein	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0003	0.00001
Total PAH	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.000	0.00002
Naphthalene	8.48E-05 lb/MMBtu	AP-42, Table 3.3-2 (10/96)	0.0002	0.00001

Greenhouse Gases

Pollutant	Emission Factor[7]	GHG Mass Emission Rates[8] Annual (tons/yr)	GWP[9]	
CO_2	73.96 kg/MMBtu	22.95	1	
CH_4	0.003 kg/MMBtu	0.001	25	
N_2O	0.0006 kg/MMBtu	0.0002	298	
CO e				

REFERENCE/NOTES

1. Provided by facility.
2. Firing rate (MMBtu/hr) = (Heat Conversion Factor (Btu/hp-hr) x Operating Rate (hp))/1000000
3. Emission calculation for $PM_{2.5}$, PM_{10}, NOx, CO, VOC.
   $ER_{avg/max}$ (lb/hr) = Engine rating (HP) x EF (g/KW-hr) x (1 lb/hp-hr/608.277 g/kw-hr)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
4. Per 40 CFR 60 Subpart III (which directs to 40 CFR 89.112), NMHC + NOX emission standard is 4.0 g/hp-hr. For purposes of determining potential emissions of NOx and VOC, the combined emission standard for NMHC + NOx is used for each pollutant in the absence of separate emission standards for NOx and VOC. However, for purposes of demonstrating compliance with the applicable standard, the total emissions of NOx and VOC will be compared against the combined emission standard for HC + NOx.
5. Emission calculation for SO_2.
   ERavg/max (lbs/hr) = Engine rating (hp) x EFavg/max (lbs/hp-hr)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
6. Emission calculation for HAPs.
   ERavg/max (lbs/hr) = Firing rate (MMBtu/hr) x EFavg/max (lb/MMBtu)
   ER_{ann} (tons/yr) = (ER_{avg} (lbs/hr) x Operating Time (hrs))/2000 lbs/ton
7. Emission factor based on 40 CFR 98, Tables C-1 and C-2, for Petroleum (Distillate Fuel Oil No.2).
8. Emission rates (ER) calculated as specified in 40 CFR 98.33(a)(1)(iii) and 40 CFR 98.33(c)(1)(ii) and in accordance with GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) x (Emission Factor (kg/106 Btu) x 1000 g/kg / 453.59 g/lb) x Operating Hours (hr

CO_2e: ER (tons/yr) = GHG Mass Emission Rate * GWP

9. GWPs based on 40 CFR 98, Table A-1.

COMPANY		FACILITY NAME
Amite BioEnergy LLC		Wood Pellet Manufacturing Facility
DESCRIPTIVE NAME OF EMISSION POINT	Short Name	Emission Point ID
Paved Roads (Fugitives)	PVRD	NA

Operating Data		
Feedstock delivery[1]	178	vehicles/day
Miscellaneous [1]	90	vehicles/day
Distance traveled[1]	0.85	miles/vehicle
Road surface silt loading (sL)[2]	1.1	g/m^2
Average weight of vehicle (W)[1]	29	tons
Days rainfall >0.01" (P)[3]	105	days
PM_{10} particle size multiplier (k)[4]	0.0022	
$PM_{2.5}$ particle size multiplier (k)[4]	0.00054	
Days in average period (N)[1]	365	days
Operating hours[1]	8760	hrs/yr

Vehicle Traffic	Vehicles/Day	Miles/Vehicle	VMT/Day[5]	VMT/Year[6]
Feedstock Delivery	178	0.85	151.53	55,307
Miscellaneous	90	0.85	76.33	27,862
				83,169

Emission Totals:			
Pollutant	Emission Factor[7]	Emission Rates[8] PTE (lb/hr)	Annual (tons/yr)
$PM_{2.5}^{10}$	0.0170 lbs $PM_{2.5}$/VMT	0.16	0.71
PM	0.0691 lbs PM_{10}/VMT	0.66	2.87

REFERENCE/NOTES

1. Based on information provided by Jamaria Warren (Drax Biomass) to Sharon Killian (Trinity) via email on August 23, 2021.
2. AP-42; Table 13.2.1-3.
3. AP-42; Figure 13.2.1-2
4. AP-42; Table 13.2.1-1
5. VMT/day = vehicles/day x miles/vehicle
6. VMT/year = VMT/day x 365 days/hyr
7. Emission factor based on EPA's AP-42 Section 13.2.1 - Equation 1 (01/2011).

   $E\ (lb/VMT) = [k * (sL)^{0.91} * (W)^{1.02}] \times [1-(P/4N)]$
8. Emission Rates (ER) were calcuated as follows:

   ER_{Avg} (lb/hr) = ER_{Annual} (tons/yr) * 2000 lb/ton / Operating Hours (hrs/yr)

   ER_{Max} (lb/hr) = ER_{Avg} (lb/hr)

   ER_{Annual} (tons/yr) = EF (lbs $PM_{10/2.5}$/VMT) x VMT/year / 2000 (lbs/ton)

Summary of Volatile Organic Compound (VOC) and Formaldehyde Emissions Test Results
Drax Biomass
November 26-30, 2018

Equipment	Test Run	Start Time (Military)	Stop Time (Military)	Stack Gas Flow Rate (standard wet ft^3/minute)	Water Vapor in Stack Gas (percent)	Volatile Organic Compound Emissions (as propane, ppm-wet)	Volatile Organic Compound Emissions (lbs/hr)	Volatile Organic Compound Emissions (tons/yr)
Primary Hammermill 1A (AA-004)	RUN 1	14:20	15:20	8,809	-	42.8	2.59	11.36
	RUN 2	15:28	16:28	8,901	-	38.7	2.37	10.37
	RUN 3	16:37	17:37	8,716	-	45.3	2.72	11.90
Average				**8,809**	**-**	**42.3**	**2.56**	**11.21**
Primary Hammermill 1B (AA-004)	RUN 1	14:20	15:20	9,529	-	62.0	4.06	17.79
	RUN 2	15:28	16:28	9,507	-	61.9	4.04	17.72
	RUN 3	16:37	17:37	9,416	-	73.0	4.72	20.70
Average				**9,484**	**-**	**65.6**	**4.28**	**18.73**
Primary Hammermill 2A (AA-004)	RUN 1	9:35	10:35	8,929	-	140.0	8.59	37.63
	RUN 2	11:00	12:00	9,233	-	131.4	8.34	36.51
	RUN 3	12:19	13:19	9,593	-	122.6	8.08	35.39
Average				**9,252**	**-**	**131.3**	**8.34**	**36.51**
Primary Hammermill 2B (AA-004)	RUN 1	9:35	10:35	6,766	-	123.0	5.72	25.06
	RUN 2	11:00	12:00	6,820	-	113.3	5.31	23.26
	RUN 3	12:19	13:19	6,758	-	104.2	4.84	21.20
Average				**6,781**	**-**	**113.5**	**5.29**	**23.17**
Primary Hammermill 3A (AA-004)	RUN 1	14:13	15:13	8,455	-	64.9	3.77	16.52
	RUN 2	15:40	16:40	8,445	-	65.8	3.82	16.72
	RUN 3	17:00	18:00	8,538	-	61.3	3.60	15.76
Average				**8,479**	**-**	**64.0**	**3.73**	**16.33**
Primary Hammermill 3B (AA-004)	RUN 1	14:13	15:13	8,733	-	43.5	2.61	11.43
	RUN 2	15:40	16:40	8,604	-	47.2	2.79	12.23
	RUN 3	17:00	18:00	8,636	-	46.9	2.78	12.19
Average				**8,658**	**-**	**45.9**	**2.73**	**11.95**
Secondary Hammermill 1 (AA-007)	RUN 1	9:20	10:20	7,317	-	131.5	6.6	29.0
	RUN 2	10:32	11:32	7,291	-	141.6	7.1	31.1
	RUN 3	11:48	12:48	7,241	-	150.9	7.5	32.9
Average				**7,283**	**-**	**141.3**	**7.07**	**31.0**
Secondary Hammermill 2 (AA-007)	RUN 1	9:20	10:20	8,824	-	115.5	7.0	30.7
	RUN 2	10:32	11:32	8,565	-	114.1	6.7	29.4
	RUN 3	11:48	12:48	8,362	-	113.1	6.5	28.5
Average				**8,584**	**-**	**114.2**	**6.74**	**29.5**
Secondary Hammermill 3 (AA-007)	RUN 1	9:20	10:20	10,121	-	87.2	6.1	26.6
	RUN 2	10:32	11:32	10,076	-	109.8	7.6	33.3
	RUN 3	11:48	12:48	10,182	-	107.2	7.5	32.9
Average				**10,126**	**-**	**101.4**	**7.06**	**30.9**

Summary of Volatile Organic Compound (VOC) and Formaldehyde Emissions Test Results
Drax Biomass
November 26-30, 2018

Equipment	Test Run	Start Time (Military)	Stop Time (Military)	Stack Gas Flow Rate (standard wet ft^3/minute)	Water Vapor in Stack Gas (percent)	Volatile Organic Compound Emissions (as propane, ppm-wet)	Volatile Organic Compound Emissions (lbs/hr)	Volatile Organic Compound Emissions (tons/yr)
Cooler 1AB	RUN 1	7:05	8:05	21,075	-	142.8	20.7	90.6
	RUN 2	8:12	9:12	21,138	-	143.7	20.9	91.5
	RUN 3	9:21	10:21	21,048	-	143.5	20.8	90.9
Average				**21,087**	**-**	**143.4**	**20.78**	**91.0**
Cooler 1CD	RUN 1	11:35	12:57	17,644	-	156.8	19.0	83.3
	RUN 2	13:06	14:06	17,683	-	137.5	16.7	73.2
	RUN 3	14:13	15:13	17,816	-	143.7	17.6	77.1
Average				**17,714**	**-**	**146.0**	**17.78**	**77.9**
Cooler 2AB	RUN 1	14:26	15:26	16,171	-	169.9	18.9	82.7
	RUN 2	15:31	16:31	16,084	-	170.1	18.8	82.4
	RUN 3	16:38	17:38	16,295	-	170.6	19.1	83.7
Average				**16,183**	**-**	**170.2**	**18.93**	**82.9**
Cooler 2CD	RUN 1	7:05	8:05	15,953	-	191.4	21.0	91.9
	RUN 2	8:12	9:12	15,991	-	197.3	21.7	95.0
	RUN 3	9:21	10:21	15,624	-	165.2	17.7	77.7
Average				**15,856**	**-**	**184.6**	**20.14**	**88.2**
Cooler 3AB	RUN 1	10:54	11:55	17,132	-	176.3	20.8	90.9
	RUN 2	12:38	13:38	17,319	-	168.5	20.1	87.9
	RUN 3	17:57	18:57	17,452	-	143.1	17.2	75.2
Average				**17,301**	**-**	**162.6**	**19.33**	**84.7**
Cooler 3CD	RUN 1	15:25	17:35	17,262	-	142.9	17.0	74.3
	RUN 2	17:40	18:40	17,177	-	140.5	16.6	72.7
	RUN 3	18:45	19:45	17,158	-	145.4	17.2	75.1
Average				**17,199**	**-**	**143.0**	**16.90**	**74.0**
Loadout Silo	RUN 1	10:37	11:37	45,788	-	4.68	1.47	6.45
	RUN 2	11:41	12:41	46,377	-	5.43	1.73	7.58
	RUN 3	12:45	13:45	46,583	-	6.55	2.10	9.18
Average				**46,249**	**-**	**5.55**	**1.77**	**7.74**
RTO	RUN 1	16:24	17:24	137,942	42.7	26.0	24.6	107.9
	RUN 2	17:50	18:50	137,936	42.7	20.4	19.3	84.5
	RUN 3	19:16	20:16	139,995	41.8	11.2	10.8	47.2
Average				**138,624**	**42.4**	**19.18**	**18.24**	**79.87**

Equipment	Test Run	Start Time (Military)	Stop Time (Military)	Stack Gas Flow Rate (standard wet ft^3/minute)	Water Vapor in Stack Gas (percent)	Formaldehyde Emissions (ppm-wet)	Formaldehyde Emissions (lbs/hr)	Formaldehyde Emissions (tons/yr)
RTO	RUN 1	16:24	17:24	137,942	42.7	1.28	0.82623	3.62
	RUN 2	17:50	18:50	138,405	42.7	0.84	0.54403	2.38
	RUN 3	19:16	20:16	140,465	41.8	0.46	0.30236	1.32
Average				**138,937**	**42.4**	**0.9**	**0.55754**	**2.44**

DRAX Morehouse
Bastrop, LA

Source	Date	Total PM lbs/hr	PM < 10 um lbs/hr	PM < 2.5 um lbs/hr
Primary Hammermill 1a	3/12/2019	0.063	0.043	0.017
Primary Hammermill 2a	3/12/2019	0.063	0.055	0.035
Primary Hammermill 3a	3/12/2019	0.167	0.109	0.101
Average Primary Hammermills		**0.098**	**0.069**	**0.051**
Cooler 1CD	3/13/2019	0.208	0.228	0.206
Cooler 2 CD	3/13/2019	0.198	0.168	0.133
Cooler 3 AB	3/13/2019	0.306	0.210	0.141
Average Coolers		**0.237**	**0.202**	**0.160**
Secondary Hammermill 1	3/14/2019	0.076	0.008	0.008
Secondary Hammermill 2	3/14/2019	0.218	0.205	0.173
Average Secondary Hammermills		**0.147**	**0.1065**	**0.0905**
Rail Loadout	3/14/2019	0.238	0.136	0.101
Dryer/RTO *	3/15/2019	1.64	1.64	1.64

* RTO was 41% moisture with a 265 degree stack temperature.
There was condensed water in the ports so we were reluctant to attempt a method 201a.
The Filterable fraction of the sample was assumed to be PM < 2.5 um. This made up around 10 percent of the PM and the Condensable fraction was the balance.

Drax Morehouse
February 10-24, 2016 Compliance Test Results

Table 4 RTO Outlet (EQT0003) SO_2 Compliance Test Summary

Run No.		1	2	3	Average
Sulfur Dioxide (SO_2)	ppmv	12.7	12.5	1.6	8.9
	lb/hr	9.09	9.26	1.16	6.50

This is an excerpt from Table 4 RTO Outlet (EQT0003) PM, SO_2, NO_x, and CO Compliance Test Summary directly from Section 1.3 Test Results and Discussions from the April 2016 Emission Compliance Test Report by Providence.

Drax Amite
December 14-29, 2015 Compliance Test Results

Source	Parameter	Test Results	
RTO Outlet (EQPT1)	CO	27.98	lb/hr
	NO_X	39.64	lb/hr

This is an excerpt from Table 2 Compliance Test Results directly from Section 1.3 Test Results and Discussions from the February 2016 Emission Compliance Test Report by Providence.

Morehouse BioEnergy LLC
Beekman, Louisiana
Material Handling and Storage (VOC and HAP)

SOURCE DESCRIPTION

A number of process areas produce VOC and HAP emissions. Emissions are based on the results of a stack test conducted at this facility in February 10-26, 2016 and March 17, 2016. The production rates used to establish emissions are post-dryer production rates at each piece of equipment.

OPERATING PARAMETERS

Finished Pellet Operations

Source ID	Emission Source	Potential Operating Hours	Potential Max Hourly Throughput (ton/hr)	Potential Annual Throughput (ton/yr)	VOC Emission Factor (lb/ton)	Potential VOC Emission Rate (avg lb/hr)	Potential VOC Emission Rate (max lb/hr)	Potential VOC Emission Rate (tpy)	Methanol Emission Factor (lb/ton)	Formaldehyde Emission Factor (lb/ton)	Acetaldehyde Emission Factor (lb/ton)	Potential Methanol Emission Rate (lb/hr)	Potential Formaldehyde Emission Rate (lb/hr)	Potential Acetaldehyde Emission Rate (lb/hr)	Potential Total HAP Emission Rate (lb/hr)	Maximum Methanol Emission Rate (lb/hr)	Maximum Formaldehyde Emission Rate (lb/hr)	Maximum Acetaldehyde Emission Rate (lb/hr)	Potential Methanol Emission Rate (tpy)	Potential Formaldehyde Emission Rate (tpy)	Potential Acetaldehyde Emission Rate (tpy)	Potential Total HAP Emission Rate (tpy)
EQT0004	Primary Hammermill Feed Silo, Bin Vent	8,760	103.6	578,052	0.0201	1.32	2.08	5.80	0.0010	0.0019	0.0010	0.0627	0.1255	0.0627	0.2509	0.0984	0.1969	0.0984	0.2748	0.5495	0.2748	1.0990
EQT0021	Primary Hammermill Pneumatic System 1	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0022	Primary Hammermill Pneumatic System 2	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0023	Primary Hammermill Pneumatic System 3	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0024	Primary Hammermill Pneumatic System 4	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0025	Primary Hammermill Pneumatic System 5	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0026	Primary Hammermill Pneumatic System 6	8,760	17.3	96,342	0.298	3.28	5.14	14.35	0.0025	0.0051	0.0025	0.0279	0.0558	0.0279	0.1115	0.2625	0.5250	0.2625	0.1221	0.2442	0.1221	0.4884
EQT0006	Secondary Hammermill Feed Silo 1, Bin Vent	8,760	69.0	385,368	0.0201	0.88	1.38	3.86	0.0010	0.0019	0.0010	0.0418	0.0836	0.0418	0.1673	0.0984	0.1969	0.0984	0.1832	0.3663	0.1832	0.7327
EQT0007	Secondary Hammermill Feed Silo 2, Bin Vent	8,760	34.5	192,684	0.0201	0.44	0.69	1.93	0.0010	0.0019	0.0010	0.0209	0.0418	0.0209	0.0836	0.0984	0.1969	0.0984	0.0916	0.1832	0.0916	0.3663
EQT0027	Secondary Hammermill Pneumatic System 1	8,760	34.5	192,684	0.255	5.61	8.80	24.55	0.0013	0.0025	0.0013	0.0279	0.0558	0.0279	0.1115	0.1313	0.2625	0.1313	0.1221	0.2442	0.1221	0.4884
EQT0028	Secondary Hammermill Pneumatic System 2	8,760	34.5	192,684	0.255	5.61	8.80	24.55	0.0013	0.0025	0.0013	0.0279	0.0558	0.0279	0.1115	0.1313	0.2625	0.1313	0.1221	0.2442	0.1221	0.4884
EQT0029	Secondary Hammermill Pneumatic System 3	8,760	34.5	192,684	0.255	5.61	8.80	24.55	0.0013	0.0025	0.0013	0.0279	0.0558	0.0279	0.1115	0.1313	0.2625	0.1313	0.1221	0.2442	0.1221	0.4884
EQT0008	Pellet Cooler Pneumatic System 1	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0009	Pellet Cooler Pneumatic System 2	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0010	Pellet Cooler Pneumatic System 3	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0011	Pellet Cooler Pneumatic System 4	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0012	Pellet Cooler Pneumatic System 5	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0030	Pellet Cooler Pneumatic System 6	8,760	17.3	96,342	0.087	0.96	1.50	4.19	0.0019	0.0038	0.0019	0.0209	0.0418	0.0209	0.0836	0.1969	0.3938	0.1969	0.0916	0.1832	0.0916	0.3663
EQT0015	Pellet Storage Silo 1, Bin Vent	8,760	51.8	289,026	0.0201	0.66	1.04	2.90	0.0010	0.0019	0.0010	0.0314	0.0627	0.0314	0.1255	0.0984	0.1969	0.0984	0.1374	0.2748	0.1374	0.5495
EQT0016	Pellet Storage Silo 2, Bin Vent	8,760	51.8	289,026	0.0201	0.66	1.04	2.90	0.0010	0.0019	0.0010	0.0314	0.0627	0.0314	0.1255	0.0984	0.1969	0.0984	0.1374	0.2748	0.1374	0.5495
EQT0017	Screened Materials Return[2]	8,760	10.4	57,805	0.0201	0.13	0.21	0.58	0.0010	0.0019	0.0010	0.0063	0.0125	0.0063	0.0251	0.0984	0.1969	0.0984	0.0275	0.0550	0.0275	0.1099
EQT0031	Pellet Loading System	8,760	103.6	578,052	0.0201	1.32	2.08	5.80	0.0010	0.0019	0.0010	0.0627	0.1255	0.0627	0.2509	0.0984	0.1969	0.0984	0.2748	0.5495	0.2748	1.0990

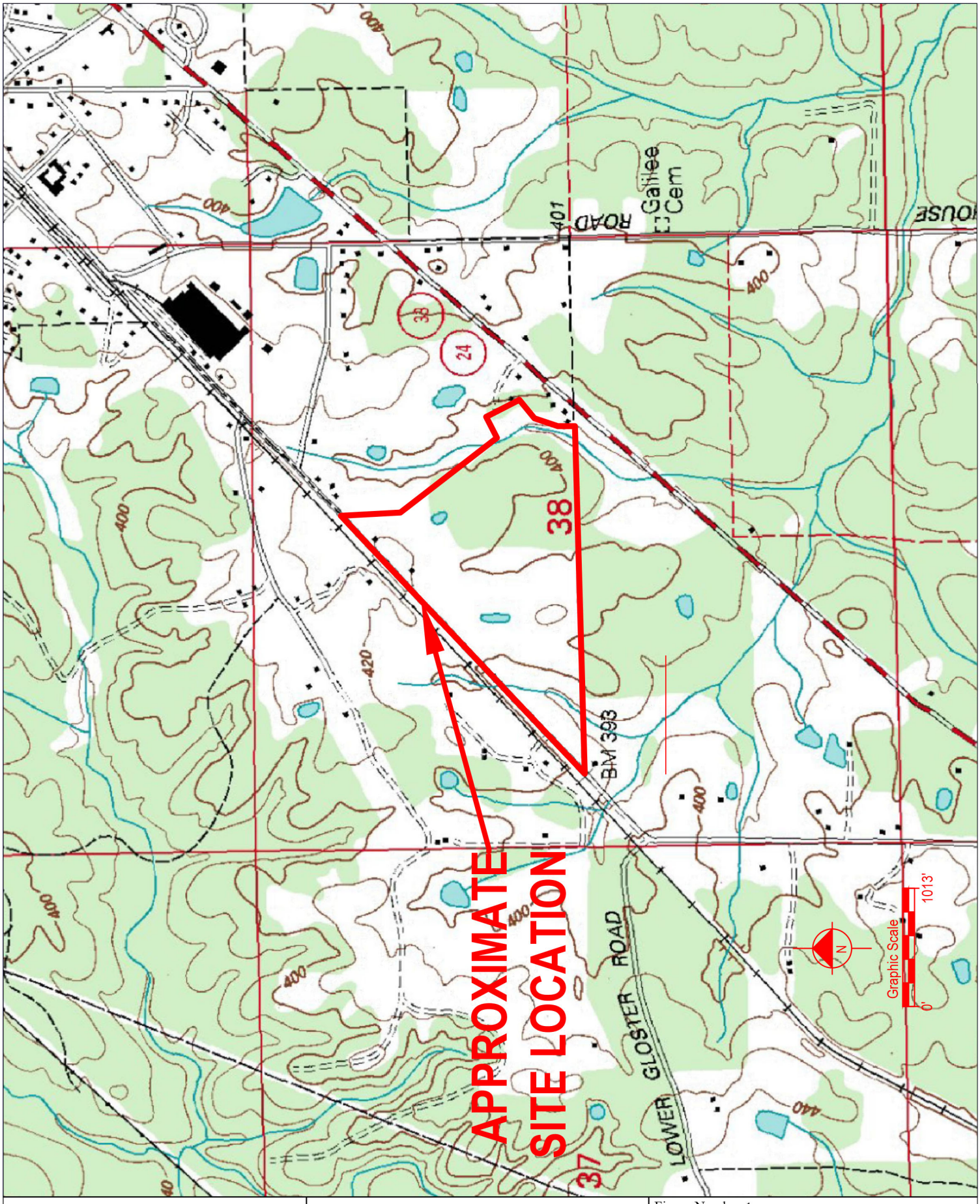
REFERENCES/NOTES

1. Emission rates (ER) calculated as follows:
   ER_{max} (lb/hr) = Maximum Throughput (ton/hr) * Emission Factor (lb/ton) * 1.2 (safety factor)
   ER_{annual} (tons/yr) = Annual Throughput (ton/yr) * Emission Factor (lb/ton)
   ER_{avg} (lb/hr) = ER_{Annual} * 2000 (lb/ton) / Operating Hours (hr/yr)

2. Only a limited amount of material passes through Screened Materials Return. Therefore, it was conservatively assumed that 10% of the materials passes through the screen.

APPENDIX C: SITE MAP


Gloster Arboretum
Georgia Pacific No2
AA-501
AA-401D
AA-304
AA-401B
AA-401A
AA-301
AA-401C
AA-308F
AA-308D
AA-303
AA-201
AA-203b
AA-502
AA-302
AA-101
AA-307A
AA-102
Lewis Timber
Old Hwy 24
S Captain Gloster Dr
S Captain Gloster Dr
Imagery Date: 3/19/2019



AMITE BIOENERGY
GLOSTER
1763 GEORGIA PACIFIC RD #2, GLOSTER, MS 39638

Figure Number: 1
Figure Name: Site Location Topographic Map
Project:
Drawn By: TF

APPENDIX D: CAM PLANS – RTO & RCO

PROPOSED CAM PLAN - RTO

Parameter	Description
RTO (VOCs)	
Indicator	Combustion Chamber Outlet Temperature
Monitoring Approach	Hourly recording of combustion chamber outlet temperature using a thermocouple. Temperature data will be recorded continuously.
Indicator Range	Minimum: * Target range: 1500°F , but will be determined during initial testing. The temperature will be optimized during facility start-up to minimize natural gas usage in the RTO while maintaining the desired destruction efficiency.
Response to Indicators Action Level Range	A combustion chamber outlet that is below the applicable minimum threshold temperature during normal operating conditions value will trigger an audible and/or visible alarm in the control room. Amite BioEnergy will take the following immediate corrective actions: * If the temperature cannot be raised to satisfy the applicable minimum threshold within 30 minutes from the start of the excursion, the furnace/dryer will be shutdown. The cause of the excursion will be conducted with corrective actions implemented and documented prior to re-starting the furnace/dryer. The WESP is equipped with a bypass stack for RTO malfunctions.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representativeness	Maintenance of adequate combustion chamber temperature assures proper destruction of both CO and VOCs; control efficiency is a function of temperature.
Averaging Period	Three-hour average.
Recordkeeping	Combustion chamber temperature is monitoring continuously. The temperature data will be stored in a data acquisition system.
QA/QC Practices and Criteria	Annual calibration or replacement per manufacturer's specifications.

Parameter	Description
RTO (VOC & CO)	
Indicator	Annual inspections of burner assemblies, blowers, fans, dampers, refractory lining, oxidizer shell, fuel lines, and ductwork.
Monitoring Approach	Inspections of burner assemblies, blowers, fans, dampers, refractory lining, oxidizer shell, fuel lines, and ductwork will be conducted annually.
Indicator Range	N/A
Response to Indicators Action Level Range	N/A
Performance Criteria Data Representative	Inspections will ensure proper operation of the burner and RTO.
Averaging Period	Annually.
Recordkeeping	Manual logs of inspections.
QA/QC Practices and Criteria	Review logs monthly.

Parameter	Description
WESP (PM_{10} and $PM_{2.5}$)	
Indicator	Continuous monitoring of secondary current.
Monitoring Approach	Continuously monitor secondary current after each of the three transformer/rectifier sets.
Indicator Range	Change in current (initial proposed ranges): « <250mA for field no. 1; range will be determined during verification of operational status. « <250mA for field no. 2; range will be determined during verification of operational status. « <250mA for field no. 3; range will be determined during verification of operational status. These ranges will be optimized during facility testing and start-up. A secondary current that is below the applicable minimum threshold value during normal operating conditions will trigger an audible and/or visible alarm in the control room.
Response to Indicators Action Level Range	If the ammeter indicates a change in current, Amite BioEnergy will take the following immediate corrective actions: « Review secondary voltage levels for irregularities; « Assess the cause of the change in current; « If review of the other parameters indicates a malfunction, furnace/dryer and WESP will be shutdown. The furnace is equipped with a bypass stack for WESP malfunction.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representative	Current affects the collection efficiency and is typically low and constant. An increase or drop in current indicates a malfunction.
Averaging Period	The secondary current will be averaged over a 3-hour period.
Recordkeeping	Secondary current is recorded continuously in a data acquisition system.
QA/QC Practices and Criteria	Annual calibration or replacement per manufacturer's recommendations.

Parameter	Description
WESP (PM_{10} and $PM_{2.5}$)	
Indicator	Continuous monitoring of secondary voltage.
Monitoring Approach	Monitor secondary voltage after each transformer/rectifier set.
Indicator Range	Change in voltage (initial proposed ranges): « <45 kV for field no. 1; range will be determined during verification of operational status. « <45 kV for field no. 2; range will be determined during verification of operational status. « <45 kV for field no. 3; range will be determined during verification of operational status. These ranges will be optimized during facility testing and start-up. A secondary voltage that is below the applicable minimum threshold value during normal operating conditions will trigger an audible and/or visible alarm in the control room.
Response to Indicators Action Level Range	If the voltmeter indicates a change in voltage, Amite BioEnergy will take the following immediate corrective actions: « Review secondary current levels for irregularities; « Assess the cause of the change in voltage; « If review of the other parameters indicates a malfunction, furnace/dryer and WESP will be shutdown.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representative	Voltage affects the collection efficiency and is typically high. A drop in voltage directly affects the collection efficiency of the WESP (the higher the voltage, the more particles are charged and collected.
Averaging Period	The secondary voltage will be averaged over a 3-hour period.
Recordkeeping	Secondary voltage is recorded continuously in a data acquisition system.
QA/QC Practices and Criteria	Annual calibration or replacement per manufacturer's recommendations.

Parameter	Description
CYCLONE/FABRIC FILTER ((PM_{10} and $PM_{2.5}$)	
Indicator	Opacity
Monitoring Approach	Visual observations
Indicator Range	Observation of visible emissions.
Response to Indicators Action Level Range	If visual emissions are observed, Amite BioEnergy will take the following immediate corrective actions: « Increase frequency of inspections to hourly following notes change until issue resolved; « Inspect cyclone for any damage or leaks; « Inspect hammermill filters.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representative	Indication of performance degradation by increase in visible emissions.
Averaging Period	Daily
Recordkeeping	All visual observations will br recorded in a logbook or database.
QA/QC Practices and Criteria	Quarterly inspection of cyclone and hammermill filters.

Parameter	Description
HAMMERMILL PNEUMATIC SYSTEM FILTERS (Baghouse) (PM_{10} and $PM_{2.5}$)	
Indicator	Continuous pressure drop across filters
Monitoring Approach	Differential pressure gauge
Indicator Range	Pressure drop range of 2" to 6" H2O. The cleaning cycle is on a timer.
Response to Indicators Action Level Range	If a change in pressure drop outside the indicator range is observed, Amite BioEnergy will take the following immediate corrective actions: « Conduct visual observation of Hammermill cyclones; « Inspect filters for any tears or leaks; « Inspect hammermill filters; and « Determine if there is an excursion of visual observations. Differential pressure will be optimized during facility start-up.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representative	Indication of performance degradation by increase or decrease in pressure drop outside the operational ranges.
Averaging Period	3-hour
Recordkeeping	All pressure drop measurements will be recorded in an electronic database.
QA/QC Practices and Criteria	Calibration of differential pressure gauge per manufacturer's specifications and annual inspection of hammermill filters.

PROPOSED CAM PLAN - RCO

Parameter	Description
RCO (VOCs)	
Indicator	Combustion Chamber Outlet Temperature
Monitoring Approach	Hourly recording of combustion chamber outlet temperature using a thermocouple. Temperature data will be recorded continuously.
Indicator Range	Minimum: * Target range: 1500°F (requested range from manufacturer), but will be determined during initial testing. The temperature will be optimized during facility start-up to minimize natural gas usage in the RCO while maintaining the desired destruction efficiency.
Response to Indicators Action Level Range	A combustion chamber outlet that is below the applicable minimum threshold temperature during normal operating conditions value will trigger an audible and/or visible alarm in the control room. Morehouse BioEnergy will take the following immediate corrective actions: * If the temperature cannot be raised to satisfy the applicable minimum threshold within 30 minutes from the start of the excursion, half of the hammermills and pellet coolers will be shut down because the RCO has 2 parallel sides. The cause of the excursion will be conducted with corrective actions implemented and documented prior to re-starting the hammermills and pellet coolers.
Quality Improvement Plan Threshold	Six excursions in a six-month reporting period.
Performance Criteria Data Representativeness	Maintenance of adequate combustion chamber temperature assures proper destruction of VOCs; control efficiency is a function of temperature.
Averaging Period	Three-hour average.
Recordkeeping	Combustion chamber temperature is monitoring continuously. The temperature data will be stored in a data acquisition system.
QA/QC Practices and Criteria	Annual calibration or replacement per manufacturer's specifications.
Parameter	**Description**
RCO (VOCs)	
Indicator	Annual inspections of burner/combustion chamber to ensure that all refractory modules are in good shape and that the ceramic media shows no sign of degradation. Remove the main fan access hatch and examine the wheel for signs of particulate deposition or corrosion. Examine the main fan coupling to ensure proper alignment is being maintained. Examine the combustion burner internals. Verify instrumentation calibration.
Monitoring Approach	Inspections for burner assemblies, blowers, fans, dampers, refractory lining, oxidizer shell, fuel lines, and ductwork will be conducted annually.
Indicator Range	N/A
Response to Indicators Action Level Range	N/A
Performance Criteria Data Representative	Inspections will ensure proper operation of the burners and RCO.
Averaging Period	Annually.
Recordkeeping	Manual logs of inspections.
QA/QC Practices and Criteria	Review logs monthly.

APPENDIX E: CERTIFICATE OF GOOD STANDING