FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

Green Circle Bio Energy, Inc.
2500 Green Circle Parkway
Cottondale, Florida 32431

Authorized Representative:
Greg Martin, VP of Manufacturing

Air Permit No. 0790025-002-AC
Permit Expires: xx/xx/xxxx

Madison Site
Air Construction Permit
Wood Pelleting Plant

This is the final air construction permit, which authorizes the initial construction of a Wood Pelleting Plant which will consist of a dust burner/ dryer, hammer mills, storage bins, pellet mills, pellet cooler, pellet sieve, pellet load-out, fire pump and two emergency generators. The proposed work will be conducted at the Green Circle Bio Energy, Inc., which is a Wood Pelleting Plant (Standard Industrial Classification No. 2499). The facility will be located in Madison County at the Eastside of SR 53, approximately 0.5 miles south of Harvey Green Drive in Madison, Florida. The UTM coordinates are Zone 17, 269.5 km East, and 3370.8 km North. As noted in the Final Determination provided with this final permit.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

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Executed in Jacksonville, Florida

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Richard S. Rachal III, P.G.
Program Administrator
Waste and Air Resource Management Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on DRAFT to the persons listed below.

Greg Martin, VP of Manufacturing, Green Circle Bio Energy, Inc. (gmartin@greencirclebio.com)
Scott McCann, Golder and Associates (scott_mccann@golder.com)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

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_____ _____
(Clerk) (Date)

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FACILITY AND PROJECT DESCRIPTION

This proposed wood pellet plant will comprise a dust burner/dryer, hammer mills, silos, storage bins, pellet mills, pellet cooler, pellet sieve, pellet load-out, fire pump and two emergency generators.

The facility will receive chipped green chipped hardwood, green chipped softwood, saw mill chips, saw dust and dry wood shavings via trucks and produce wood pellets using a dryer, hammer mills and pellet mills. The finished pellets are loaded into trucks and/ or railcars for shipment to customers.

Exhaust from the Dust Burner will be used to directly heat the dryer and dry the green wood chips. The exhaust will then vent to the WESP then to the RTO.

EU001 Wood Receiving, Storage, Transfer and Processing:

Green Circle will receive green chipped hardwood, green chipped softwood, saw mill chips, saw dust, and dried wood shavings via truck delivery. Truck dumps will be used to empty trucks of these raw materials. Radial conveyor slackers will be used to transfer chipped wood from the truck dump to separate hardwood and softwood storage piles. Dried shavings will be conveyed to a separate storage silo.

Chipped hardwood and softwood will be reclaimed from their respective storage piles by front-end loaders and placed in designated reclaim hoppers. The reclaim hoppers feed chip conveyors with variable speed drives so that the proper mix of hardwood and softwood can be metered together. Ferrous metals will be removed from the chip mix before it is further processed by a thickness screen. Oversized materials from the thickness screen will be sent to a re-chipper. Wood chips passing through the thickness screen will be transferred to a small silo which will serve as buffer storage and the metering device for the dryer. Dried shavings will be introduced into the process after the dryer, but before the hammer mill area of the facility.

EU002 Dust Burner/ Dryer

Green Circle will feed metered amounts of hardwood and softwood into the dryer. Typically, hardwood contains approximately 30 percent of the voc found in softwood. Green Circle will employ this characteristic of hardwood to limit voc emissions from the dryer. Under normal operations, Green Circle plans to feed equal weights of hardwood and softwood into the dryer. To limit voc emissions from the dryer and other downstream process equipment (e.g., hammer mills and pellet mills, pellet mill coolers}, the amount of softwood fed into the dryer will be metered to maintain voc compliance throughout the facility. Wood chips will be dried to a moisture content of approximately 6.5 percent weight.

Heat for the dryer, which is direct-fired, will be provided by a wood dust burner with a projected maximum heat input rate of 240 million British thermal units per hour (MMBtu/hr). Fuel for the dust burner will be collected from the hammer mill and pellet mill dust collection systems, cooler cyclones, and the vibrating screen pellet sieve. Prior to introduction into the dust burner, this material will be further processed though a hammer mill with a dust collector. The exhaust from this dust collector will be vented directly to the dust burner. Natural gas will be used as a supplemental fuel for initial start-up of the dust burner.

The exhaust gases from the dryer will be vented to a wet electrostatic precipitator (WESP) for PM control and then to a regenerative thermal oxidizer (RTO) for VOC, CO, and HAP control. Dried wood chips from the dryer will be conveyed to the hammer mills for further processing.

EU003 Pellet Lines.

Wood chips from the dryer will be conveyed to the Grinding Building. Additionally, dried wood shavings may be introduced to the process between the dryer and Grinding Building. In the Grinding Building, hammer mills will be used to grind the wood chips and shavings into a form suitable for further processing in the pellet mills. A dust collection system will be used to remove fines from the grinding process. Consequently, this system may remove moisture and VOC. Any moisture, PM, or VOC removed by the hammer mill dust collection system will be vented to the fuel system for the dust burner where it will be thermally treated in the dust burner itself and eventually exhausted from the dryer to the WESP and RTO. Ground wood from the hammer mills will be stored in a storage silo before it is transferred to the Pelleting Building.
Ground wood from the storage silo will be conveyed to the Pelleting Building. Pellet mills will be used to process the ground wood into wood pellets. The pellet mills force ground wood through forged alloy dies. The heat of friction during the pelletizing process is sufficient to liquefy the lignin in the wood and bind the ground wood into a pellet without the addition of other binders. A dust collection system, similar to that used for the hammer mills, will be used to remove PM, moisture, and VOC from the pelletizing process. In a manner similar to the hammer mill dust collection system, moisture, PM, and VOC (captured by the pellet mill dust collection system) will be vented to the fuel system for the dust burner and similarly processed by the dust burner itself, WESP, and RTO.

Four counter-current air coolers will be used to reduce the temperature of the wood pellets produced by the pellet mills. Cyclones will be used to separate dust and fines from the wood pellets in the air stream. The exhaust from the coolers cyclones may contain PM and VOC which will be vented to the atmosphere. Any wood dust collected by the cyclones will be transferred to the fuel system for the dust burner.
From the coolers, the wood pellets will proceed to pellet sieves consisting of vibrating screens. Reject material from the vibrating screens will be transferred to the fuel system for the dust burner. Pellets leaving the sieves will be conveyed to the Bulk Load-Out System.

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EU004 Bulk Load-Out System.

The Bulk Load-Out System will directly load trucks and/or railcars for transport of wood pellets to the port. As this loading will occur inside a structure and wood pellets will be transferred to an enclosed railcar or truck, no significant PM emissions are expected from the Bulk Load-Out System.

EU005 Fire Pump and 006 Emergency Generators 1 and 2

Green Circle is proposing to install two 300 kilowatt-electric (KWe) emergency generators and a fire pump at the Madison facility (see Appendix B). The emergency generators will be manufactured by Blue Star Power Systems (Model No. NG300-01) or the equivalent and will be natural gas-fired. The fire pump will be a diesel fuel-fired unit manufactured by John Deere (Model No. JUAH-UF58) or an equivalent unit. The selected fire pump will be certified by the National Fire Protection Association which requires that it meet U.S. Environmental Protection Agency (EPA) requirements.

Proposed Project

Initial Air construction permit, which authorizes the construction of a Wood Pelleting Plant which will consist of a dust burner/dryer, hammer mills, silos, storage bins, pellet mills, pellet cooler, pellet sieve, pellet load-out, fire pump and two emergency generators. This project will include the following emissions units.

Facility ID No. 0790025	
ID No.	**Emission Unit Description**
001	Wood fiber receiving and storage area
002	Dust burner/ dryer
003	Pellet Lines
004	Load-Out Area (enclosed structure). Load to enclosed trucks and/or railcars
005	Fire Pump
006	Emergency Generators 1 and 2

FACILITY REGULATORY CLASSIFICATION

- The facility **is not** a major source of hazardous air pollutants (HAP).
- The facility **has no** units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility **is** a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility **is not** a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

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1. Permitting Authority: The permitting authority for this project is the Northeast District, Waste and Air Resource Management Program, Florida Department of Environmental Protection (Department). The Northeast District's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, 904) 256-1700. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office, Compliance Assurance. The mailing address and phone number of the Northeast District Office is: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, 904) 256-1700.

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;

   b. Appendix B. General Conditions;

   c. Appendix C. Common Conditions; and

   d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

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8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

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A. EU001 Wood Receiving and Storage

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	Wood Receiving and Storage area

{This EU is subject to Rule 62-296.320(4)(b)1., F.A.C.}

EQUIPMENT

A.1. **Equipment Name**. The permittee is authorized to construct the Wood fiber receiving and storage area equipment such as conveyors, reclaim hoppers, screens, metering devices, storage bins, silos, re-chipper and any ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Application No. 0790025-001-AC]

A.2. **Hours of Operation**. The hours of operation for this emissions unit shall is allowed to operate continuously 8760 hours/year (8784 in any Leap Year).

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

A.3. **Visible Emissions**. This emissions unit is subject to the 20% opacity General Visible Emissions Standards.

[Rule 62-296.320(4)(b)1., F.A.C.]

TESTING REQUIREMENTS

A.4. **Visible Emissions**. The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.

[Rules 62-296.320(4)(b)1., F.A.C.]

A.5. Visible Emissions testing shall be performed upon request by the Department.

[Rule 62-296.320(4)(b)4., F.A.C.]

A.6. This EU is subject to Subsection G. Common Conditions.

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B. EU002 Dust Burner/Dryer

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
002	Dust Burner/ Dryer The emission point for the dust burner/dryer will be the RTO stack (EP01). Control equipment: vent to a wet ESP for PM and then to a RTO for PM, VOC, CO and HAP control.

{This EU is subject to Rule 62-296.410, F.A.C. - Carbonaceous Fuel Burning Equipment.}

EQUIPMENT

B.1. <u>Equipment</u>. The permittee is authorized to install a Dust Burner/ Dryer, wet ESP (WESP), RTO, ductwork and any ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Application No. 0790025-001-AC]

PERFORMANCE RESTRICTIONS

B.2. <u>Permitted Capacity</u>. The maximum operation capacity for the Dust Burner shall not exceed 240 MMBtu per hour heat input[1] averaged over a 24-hour period.

[1] Based on estimated wood dust heat capacity of 8,365 Btu/lb.

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C., and Permit Application No. 0790025-002-AC]

B.3. <u>Authorized Fuel</u>. The combustor for the dryer shall be fired with carbonaceous fuel.

- Natural gas at initial startup only.

[Application No. 0790025-002-AC and Rule 62-210.200(PTE), F.A.C.]

B.4. <u>Hours of Operation</u>. The hours of operation for this emissions unit shall is allowed to operate continuously 8760 hours/year (8784 in any Leap Year).

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

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EMISSIONS STANDARDS

B.5. Visible Emissions. Visible emissions from the **RTO stack (EP01)** shall not exceed 30 percent opacity except 40 percent opacity is permissible for not more than two minutes in any one hour.

[Rule 62-296.410(2)(b)1., F.A.C.]

B.6. Particulate Matter. Particulate matter emissions from the **RTO stack (EP01)** shall not exceed 0.2 pounds per million Btu of heat input of carbonaceous fuel.

[Rule 62-296.410(2)(b)2., F.A.C.]

TESTING REQUIREMENTS

B.7. Initial and Annual Compliance Tests RTO stack (EP01). Initial and Annual Compliance tests shall be in accordance **Subsection G.6. – G.12.**

[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

RECORDKEEPING

B.8. RTO Combustion Chamber Temperature. The burner chamber temperature of the RTO must operate no less than 1,550^{o} F, averaged over three hours.

[Rules 62-4.070(3), F.A.C.]

B.9. Regenerative Thermal Oxidizers (RTO). The Permittee shall operate and maintain the RTO during all periods in which the Dust Burner/ Dryer, Hammer mills, and Pellet systems are in operation.

[Rules 62-4.070(3), F.A.C. and 62-210.200(PTE), F.A.C.]

B.10. Records. Records of the combustion temperature of the RTO and Dust Burner/ Dryer shall be maintained hourly and in a form suitable for inspection or submittal to the Northeast District Office, Compliance Assurance and shall be maintained for a period of five (5) years from date of entry.

[Rules 62-4.070(3), F.A.C.]

B.11. Records. The facility shall maintain records of Natural Gas usage monthly and twelve-month rolling totals. These records shall be made available for the Department during inspection.

[Rule 62-4.070(3), F.A.C.]

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B.12. Within ten (10) days after construction the facility owner must submit the exact WESP and RTO Model No(s). and Manufacture name(s).

[Rules 62-4.070(3), F.A.C.]

B.13. This EU is subject to Subsection G. Common Conditions as stated.

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C. EU003 Pellet Lines

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
003	Pellet Lines Cyclones Model No. 3H43 HI-TECH Manufactured by LMM or equivalent on each pelletizing line. Pellet Cooler Stacks (EP02)

{This EU is subject to Rule 62-296.320(4)(b)1}

Control equipment: dust collectors to remove PM, moisture, VOC vent to a wet ESP and then to a RTO for VOC, CO and HAP control. Four (4) counter current Air Coolers to reduce the temperature of the wood pellets. Cyclones will separate dust and fines from the wood pellets in the air stream. Exhaust from the cooler cyclones vent to the air. Wood dust collected vents to the fuel system for the dryer. From the Cooler the pellets go to sieves, then to Load-Out area.

{Permitting Note: For testing purposes only, the hourly pellet production for this EU is 128 tons per hour, on a 4-hour average basis calculated during testing.}

EQUIPMENT

C.1. <u>Equipment Name</u>. The permittee is authorized to construct the pellet mills, conveyors, sieves, air coolers, cyclones, and ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Application No. 0790025-002-AC]

C.2. <u>Hours of Operation</u>. The hours of operation for this emissions unit shall is allowed to operate continuously 8760 hours/year (8784 in any Leap Year).

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

C.3. <u>Visible Emissions (Pellet Cooler Stacks (EP02)</u>. This emissions unit is subject to the 20% opacity General Visible Emissions Standards.

[Rule 62-296.320(4)(b)1., F.A.C.]

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C. EU003 Pellet Lines

TESTING REQUIREMENTS

C.4. <u>Visible Emissions -Pellet Cooler Stacks (EP02) Only upon request</u>. Visible Emissions testing shall be performed upon request by the Department.

Pollutant	Test Method
VE	EPA Method 9

[Rule 62-4.070(3), F.A.C. and Rule 62-296.320(4)(b)4.a., F.A.C.]

RECORDKEEPING

C.5. <u>Pellet Production Rates Recordkeeping</u>. Verification of hourly production rates and annual production for emissions estimates for the Pelletizing Line(s) shall be demonstrated with records from the bulk load-out area for process rate measured in tons of pellets per hour averaged on a 24-hour basis, calculated daily, and monthly and twelve-month rolling totals of tons of pellets per year.

[Rule 62-4.070(3), F.A.C.]

C.6. Within ten (10) days after construction the facility owner must submit the exact Cyclones Model No(s). and Manufacture name.

[Rules 62-4.070(3), F.A.C.]

C.7. This EU is subject to Subsection G. Common Conditions as stated.

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D. EU004 Load-Out Area

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
004	Load-Out Area This unit is inside of a structure and will directly load wood pellets to enclosed trucks and/ or railcars for transport to the port.

{This EU is subject to Rule 62-296.320(4)(b)1., F.A.C.}

D.1. **Equipment Name**. The permittee is authorized to construct the Load-Out Area and ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Application No. 0790025-001-AC]

D.2. **Hours of Operation**. The hours of operation for this emissions unit shall is allowed to operate continuously 8760 hours/year (8784 in any Leap Year).

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

D.3. Permittee shall maintain records of the bulk load-out process rate measured in tons of pellets per hour averaged on a 24-hour basis, calculated daily, monthly and twelve-month rolling totals. These records shall be made available for the Department during inspection.

[Rule 62-4.070(3), F.A.C.]

D.4. **Visible Emissions**. This emissions unit is subject to the 20% opacity General Visible Emissions Standards.

[Rule 62-296.320(4)(b)1., F.A.C.]

TESTING REQUIREMENTS

D.5. **Visible Emissions**. The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.

[Rules 62-296.320(4)(b)4., F.A.C.]

D.6. This EU is subject to Subsection G. Common Conditions as stated.

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E. EU005 Fire Pump

This section of the permit addresses the following emissions unit.

EU	Engine Identification	Engine Brake HP	Fuel	Model Year	Displacement liters per cylinder (l/c)	Engine Manufacturer	Model No. / Serial No.
005	Fire Pump	110	Diesel	New	1.125	John Deere	JUAH-UF58 *or equivalent*

{This EU is subject to NESHAP Subpart ZZZZ Applicability. This diesel engine is a new, stationary Compression Ignition Reciprocating Internal Combustion Engine (RICE) and shall comply with applicable provisions of 40 CFR 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c), the engine may meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII. No further requirements of Subpart ZZZZ apply for such engines.}

EQUIPMENT

E.1. **Equipment Name**. The permittee is authorized to install a diesel Fire Pump and any ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Application No. 0790025-002-AC]

E.2. Within ten (10) days after construction the facility owner must submit the exact engine Model No. and Manufacture name.

[Rules 62-4.070(3), F.A.C.]

EMISSION STANDARDS FOR OWNERS AND OPERATORS

E.3. Owner or operator of a CI fire pump engine must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph 40 CFR 60.4211(g).

[40 CFR 60.4211(c); Application No. 0790025-002-AC]

E.4. **Authorized Fuel** Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

[40 CFR 60.4207(b) and Application No. 0790025-002-AC]

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E.5. Operation and Maintenance. The owner or operator must operate and maintain the stationary CI internal combustion engines according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. This engine must be maintained and operated to meet the emissions standards over the entire life of the engine.

[40 CFR 60.4206, and Application No. 0790025-002-AC]

EMISSION STANDARDS

E.6. Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

a. NO_X + NMHC Emissions. Emissions of NO_X plus non-methane hydrocarbons shall not exceed 3.0 g/hp-hr.
b. CO Emissions. Carbon monoxide (CO) emissions shall not exceed 0.87 g/hp-hr.
c. PM Emissions. Particulate matter (PM) emissions shall not exceed 0.22 g/hp-hr.

[40 CFR 60.4205(c), & Table 4 of Subpart IIII; and, Application No. 0790025-002-AC]

E.7. Maintenance Records. To demonstrate compliance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to *Compliance Requirements Due to Loss of Certification*, the owner or operator must keep the following records:

a. Engine manufacturer data indicating compliance with the standards.
b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

[Rule 62-213.440(1), F.A.C.]

E.8. Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	

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E.8. continued:

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

E.9. This EU is subject to Subsection G. Common Conditions as stated.

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F. Emergency Generators 1 and 2

This section of the permit addresses the following emissions unit.

EU	Engine Identification	Engine (MW)	Fuel	Model Year	Displacement liters per cylinder (l/c)	Engine Manufacturer	Model No. / Serial No.
006	Emergency Generators 1 and 2	0.342 each	Natural Gas	New	1.825 each	Blue Star Power Systems or equivalent	NG300-01 *or equivalent*

{This EU is subject to NESHAP Subpart ZZZZ Applicability. This Natural Gas engine is a new, Stationary Spark Ignition Internal Combustion Engines and shall comply with applicable provisions of 40 CFR 63 Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c), the engine may meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, 40 CFR 60, Subpart JJJJ- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart A- General Provisions. No further requirements of Subpart ZZZZ apply for such engines}

F.1. <u>Equipment Name</u>. The permittee is authorized to install two natural gas Emergency Generators 1 and 2 and any ancillary equipment as necessary.

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

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F.2. Within ten (10) days after construction the facility owner must submit the exact engine Model No. and Manufacture name.

[Rules 62-4.070(3), F.A.C.]

F.3. Operators that complied by purchasing an engine certified by the Environmental Protection Agency (EPA) to comply with NSPS 40 CFR Subpart 60 for stationary spark-ignited emissions and must maintain the engine per the manufacturer's instruction, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

[40 CFR 60.4243]

F.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

[40 CFR 60.4234]

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F.5. <u>General Compliance</u>. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this **Specific Condition**. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this **Specific Condition**, is prohibited. If you do not operate the engine according to the requirements in paragraphs (1) through (3) of this **Specific Condition**, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) through (iii) of this **Specific Condition** for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this **Specific Condition** counts as part of the 100 hours per calendar year allowed by this paragraph (2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (3)(i) of this **Specific Condition**, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

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F.5. continued:

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

[40 CFR 60.4243(d)]

F.6. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

[40 CFR 60.4243(e)]

NOTIFICATION, REPORTING, AND RECORDKEEPING REQUIREMENTS

F.7. Owners and operators of all stationary SI ICE must keep records of the information in (1) through (4) of this **Specific Condition:**

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[40 CFR 4245(a)]

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F.8. Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

[40 CFR 4246 and Table 3]

F.9. This EU is subject to Subsection G. Common Conditions as stated.

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G. COMMON CONDITIONS

Facility ID No. 0790025	
ID No.	**Emission Unit Description**
001	Wood fiber receiving and storage area
002	Dust burner/ dryer
003	Pellet Lines
004	Load-Out Area (enclosed structure). Load to enclosed trucks and/or railcars
005	Fire Pump
006	Emergency Generators 1 and 2

G.1. <u>Commencement of Construction and Operation (EUs 001-006)</u>. The permittee shall submit to the Air Compliance Authority of this Office written notification of the date of commencement of construction and operation of **EUs 001-006**. This notification shall be submitted or postmarked within as many days prior to the date of construction and operation commencement as practical, but no later than one (1) business day following commencement of construction and operation.

[Rule 62-4.070(3), F.A.C.]

G.2. In accordance to the Preliminary Process Flow Diagram, the Permittee shall exhaust all the gases from the hammer mills and the pellet mills, pellet mill coolers, wet ESP (WESP), RTO to the Dust Burner/ Dryer at all times these equipment operate. The Permittee shall not operate these equipment if the Dust Burner/ Dryer is not operating.

[Rules 62-4.070(3), F.A.C.]

G.3. <u>Facility-Wide NOx (EUs 001-006)</u>. The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain Nitrogen Oxides (NOx) in excess of 250 tons.

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C., and Permit Application No. 0790025-002-AC (Avoidance of PSD)]

G.4. <u>Facility-Wide VOC (EUs 001-006)</u>. The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility, any emissions which contain Volatile Organic Compounds (VOC) in excess of 250 TPY.

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C. and Application No. 0790025-002-AC (Avoidance of PSD)]

G.5. <u>Maximum Annual Production (EUs 001-004)</u>. The maximum annual production rate of wood pellets shall not exceed 743,000 TPY as determined for each consecutive 12-month period on a rolling monthly basis. **The Pellet Mill will have a softwood chip limit to no more than 50% of total wood usage to reduce VOC emissions.**

Green Hardwood Chips- 660,592 TPY,
Green Softwood Chips- 660,592 TPY, and
Dried shavings- 145,000 TPY.[1]

G.5. continued:

[1]These limits are reflective of the wood needed for the 743,000 TPY maximum production rate of wood pellets.

[Rules 62-4.070(3), and 62-210.200(PTE), F.A.C., and Application No. 0790025-002-AC to escape PSD]

TESTING AND NOTIFICATIONS

G.6. All emissions testing shall be conducted while the dryers, hammer mills and pelletizer, pellet mill coolers, pellet load-out, wet ESP (WESP), RTO to the Dust Burner/ Dryer are operating at maximum capacity.

[Rules 62-4.070(3), F.A.C.]

G.7. During testing, the permittee shall document the amount of raw material usage for the day in tons/day for green softwood chips, green hardwood chips, and hardwood/softwood shavings.

[Rule 62-4.070(3), F.A.C.]

G.8. **Initial Compliance Tests**. Emissions tests are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. The **RTO (EP01)** shall be tested to demonstrate initial compliance with the emissions standards for VOC, HAPs (specifically methanol, formaldehyde and acetaldehyde), NO_x, VE and PM. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit.

[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

G.9. **Annual Compliance Tests**. During each federal fiscal year (October 1st to September 30th), the **RTO (EP01)** shall be tested to demonstrate compliance with the emissions standards for VOC, HAPs (specifically methanol, formaldehyde and acetaldehyde), NO_x, VE and PM.

[Rule 62-297.310(7)(a)4, F.A.C.]

G.10. **Test Requirements and Notification**. Tests and notification shall be conducted in accordance with the applicable requirements specified in Combined Appendices -Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(7), F.A.C.]

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G.11. Test Methods. Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Method for Determining Particulate Matter Emissions
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
320	Vapor Phase Organic and Inorganic Emissions by Extractive FTIR, Methanol, Formaldehyde, Acetaldehyde)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297, F.A.C.; Appendix A of 40 CFR 60]

[Rules 62-4.070(3), F.A.C., 62-297.310(7), and 62-297, F.A.C.]

G.12. Compliance Test Report Submittals. Test result reports shall be prepared and submitted in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(8)(b), F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

G.13. Baghouse Maintenance and Operation Records. All baghouses for the facility shall be inspected and maintained in accordance with the recommendations developed for the equipment by the vendor. Inspection and maintenance documentation shall be retained at the facility for at least 5 years and made readily available for inspection by the Department. Documentation shall include, but is not limited to the following:

A. Inspection and maintenance of the baghouse cleaning system to minimize particulate buildup or caking on the filter bags;
B. Inspection and replacement, as needed, of the baghouse bags. Bags should be checked for any tears, holes, abrasions, and scuffs;
D. Date observations and maintenance were performed;
E. What maintenance and observations were performed;
F. Name and title of the personnel performing the maintenance/inspections/observations.

[Rule 62-4.070(3), F.A.C.]

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G. COMMON CONDITIONS

G.14. The production rate of wood pellets shall be documented and retained at the facility for at least 5 years and made readily available for inspection by the Department as per **Specific Condition G.5.** Documentation shall include, but is not limited to the following:

- Date.
- Green Hardwood Chips production for the day in tons/day.
- Green Softwood Chips production for the day in tons/day.
- VOC emissions in tons/day.

[Rules 62-4.070(3), and 62-210.200(PTE), F.A.C.

G.15. This Facility is subject to SECTION 2. Administrative Requirements of this permit and also, the attached Combined Appendices.

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