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PERMITTEE

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

Authorized Representative:
Mr. Greg Martin, Plant Manager

Air Permit No. 0630058-010-AC
Permit Expires: 2-year permit

Cottondale Wood Pellet Plant
Title V Source Air Construction Permit
Pellet Production Increase

This is the final air construction permit, which authorizes an increase wood pellet production from 554,304 tons per year to 610,000 tons per year; removal of aspiration systems on the hammer mill and pelletizing infeed conveyors for Pelletizing Lines 1, 2 and 3; redefines several compliance demonstration measures; and, removes the never-constructed green wood chip grinding system (EU 009) from the permit. The proposed work will be conducted at the Cottondale Wood Pellet Plant, which is a wood fuel pellet manufacturing facility (Standard Industrial Classification No. 2499, Wood Products Facility, Not Otherwise Classified). The facility is located in Jackson County at 2500 Green Circle Parkway in Cottondale, Florida. The UTM coordinates are Zone 16, 653.89 km East, and 3401.68 km North. As noted in the Final Determination provided with this final permit, (no changes / only minor changes and clarifications) were made to the draft 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, 62-213, 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.

Executed in Pensacola, Florida

(DRAFT)

_____ _____

Rick Bradburn, Air Program Administrator (Date)

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 _____ to the persons listed below.

Mr. Greg Martin, Green Circle Bio Energy: gmartin@greencirclebio.com
Mr. Scott A. McCann, P.E.; Golder Associates: scottmccann@golder.com
Ms. Kathleen Forney, EPA Region 4: forney.kathleen@epa.gov
DEP Northwest District Branch Office, Panama City

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.

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This is a wood fuel pellet plant, comprised of a wood fiber receiving and storage area, two dryer lines, three pelletizing lines, and a pellet load-out area.

Logs are debarked and milled into chips. The chips are dried, ground and screened to a more consistent size. The ground wood is compressed to make wood pellets to be used as fuel. The finished pellets are loaded into railcars for shipment to customers.

Facility ID No. 0630058

ID No.	Emissions Unit Description
001	Wood Fiber Receiving and Storage Area
002	Dryer Line 1
003	Dryer Line 2
004	Pelletizing Line 1
005	Pelletizing Line 2
006	Pelletizing Line 3
007	Bulk Load-out Area

Proposed Project

This project is to increase wood pellet production from 554,304 tons per year to 610,000 tons per year. Existing production equipment can achieve the requested rate without new construction. Potential emissions of VOC increase by 17.8 tons per year in the Pelletizing Lines.

For the wood fiber receiving and storage area, this permit removes the never-constructed green wood chip grinding system (EU 009).

For Dryer Lines 1 and 2, the current compliance determinations are for a maximum production rate and a maximum heat input rate. The monitored parameters are wood chip feed screw sets revolutions per hour and combustor hydraulic ram feeder strokes per hour, respectively. This permit removes the maximum production rate requirements and retains the maximum heat input rate requirements.

Individual Pelletizing Line pellet production rates cannot be accurately measured long-term. This permit authorizes the Permittee to measure an overall (all three Pelletizing Lines) pellet production rate at Bulk Load-Out in tons of pellets produced on a 24-hour average, calculated daily.

Aspiration systems on the hammer mill and pelletizing infeed conveyors for Pelletizing Lines 1, 2 and 3 are no longer needed due to improved dryer line moisture control. This permit removes these aspiration systems.

A table in the Compliance Monitoring Plan (CMP), which includes the CAM Plan, will be revised.

This project will modify the following emissions units:

Facility ID No. 0630058	
ID No.	**Emissions Unit Description**
001	Wood Fiber Receiving and Storage Area
002	Dryer Line 1
003	Dryer Line 2
004	Pelletizing Line 1
005	Pelletizing Line 2
006	Pelletizing Line 3
007	Bulk Load-out Area

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.

1. Permitting Authority: The permitting authority for this project is the Northwest District Air Resource Management Program, Florida Department of Environmental Protection (Department). The District's mailing address is 160 W. Government Street, Suite 308, Pensacola, Florida 32502-5740. All documents related to applications for permits to operate an emissions unit shall be submitted to the District Office.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the District Office at the above address or nwdair@dep.state.fl.us.

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. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source. [40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

6. 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.]

7. 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.]

8. 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.]

9. 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.]

A. Woodyard

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	Wood Fiber Receiving and Storage Area

Wood fiber (pulpwood logs or sawmill residuals) is unloaded and stored. Logs are debarked, milled into chips and stored; bark is hammer-milled, screened and stored. All stored piles are conveyed for raw material and/or fuel. A Dry Wood Truck Dump allows "as-delivered" dry wood chips to be fed directly into the existing Grinding Storage Bin, bypassing the Dryer Lines and allowing for production flexibility.

The following specific conditions apply to the emissions unit listed above:

A.1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. The unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

EQUIPMENT

A.2. Removal of Green Wood Chip Grinding System from Permit: A green wood chip grinding system (EU 009) was to be used to chip the logs to very uniform sizes under 3/8" dimensions but was never constructed. This permit rescinds the authorization for constructing the green wood chip grinding system.
[Rules 62-4.070(3) and 62-210.300(1), F.A.C., and permit application 0630058-010-AC]

B. Dryer Lines 1 and 2

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
002	Dryer Line 1
003	Dryer Line 2

Each Dryer Line consists of a bark fuel combustor which exhausts into a rotary drum dryer, which dries wood chips. The dryer exhaust flows through a fan induced drafted cyclone, a wet electrostatic precipitator and a regenerative thermal oxidizer, then out stacks D1-3 and D2-3 for Dryer Lines No. 1 and No. 2, respectively.

This permit authorizes a change in the method of compliance determination. The current compliance determinations are for a maximum production rate and a maximum heat input rate as required in Permit 0630058-005-AV, Specific Conditions B.1.a and B.2.a, respectively. The monitored parameters are wood chip feed screw sets revolutions per hour and combustor hydraulic ram feeder strokes per hour as required in Permit 0630058-005-AV, Specific Conditions B.1.b and B.2.b, respectively. This permit removes the maximum production rate requirements in Permit 0630058-005-AV, Specific Conditions B.1.a and B.1.b, and retains the maximum heat input rate requirements of Specific Conditions B.2.a and B.2.b. In addition, this permit removes the recordkeeping requirement of wood chip feed system revolutions per hour for each dryer from Permit 0630058-005-AV, Specific Condition B.18.

The following specific conditions apply to the emissions units listed above:

B.1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

PERFORMANCE RESTRICTIONS

B.2. This permit removes the following Specific Conditions from Permit 0630058-005-AV:

B.1.a. Dryer Lines Capacity

B.1.b. Dryer Lines 1 and 2 Wood Chip Production Factor

[Rules 62-4.070(3) and 62-210.300(1), F.A.C., and permit application 0630058-010-AC]

RECORDS AND REPORTS

B.3. Records of the date, time, hours, total running hours, hydraulic ram feed strokes per hour on a daily average basis for each combustor, hourly WESP gas stream inlet and outlet quench temperatures, and hourly RTO combustion chamber temperatures shall be kept and available for Department inspection. [Rules 62-4.070(3) and 62-213.440(1), F.A.C., and permit application 0630058-010-AC]

C. Pelletizing Lines No. 1, No. 2, and No. 3

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
004	Pelletizing Line No. 1
005	Pelletizing Line No.2
006	Pelletizing Line No. 3

Operation of Pelletizing Lines 1, 2, and 3, having maximum process rates of 29.6, 29.6, and 29.6 tons of pellets per hour, respectively. The hammermills accurately grind the dry wood chips to under 4 mm (0.16”). The ground wood fiber is conveyed to three sealed storage and metering bins each with a capacity of approximately 40 tons. A ventilation system in the grinding and pellet storage bins helps minimize condensation. Steam is carefully applied to soften the wood fiber as it is drawn into the Pelletizer. The wood fiber is compressed by the Pelletizer rotating press rolls, exiting through the sizing die. The resultant heat of friction activates the wood lignin as the wood is compressed, effectively bonding the wood fiber into a durable pellet. Pellets exiting the Pelletizer mills are conveyed via sealed chain conveyor to a counter flow pellet cooler. Each Pelletizing Line has a Pellet Cooler, twin cyclones, single ID fan and an exhaust stack (stacks P1-2, P2-2, and P3-2, each with two cyclones, for Pelletizing Line 1, 2, and 3, respectively). Fabric filers control emissions from stacks P1-1 and P1-3 for Pelletizing Line 1, stacks P2-1 and P2-3 for Pelletizing Line 2 and stacks P3-1 and P3-3 for Pelletizing Line 3.

This permit increases pellet production from 554,304 tons per year to 610,000 tons per year. VOC emissions are based on an emission factor derived from stack test using EPA Method 25A. For the pellet production increase, VOC potential emissions increase from 177.1 to 194.9 tons per year. Existing production equipment can achieve the requested rate without new construction.

Individual Pelletizing Line pellet production rates cannot be accurately measured long-term. This permit authorizes the Permittee to measure an overall (all three Pelletizing Lines) pellet production rate at Bulk Load-Out in tons of pellets produced on a 24-hour average, calculated daily.

Aspiration systems on the hammer mill and pelletizing infeed conveyors for Pelletizing Lines 1, 2 and 3 are no longer needed due to improved dryer line moisture control. This permit authorizes the removal of the aspiration systems on the hammer mill and pelletizing infeed conveyors for Pelletizing Lines 1, 2 and 3.

The following specific conditions apply to the emissions units listed above:

C.1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

PERFORMANCE RESTRICTIONS

C.2. Hourly Capacity: The maximum pellet production process rate for all three Pelletizing Lines combined is 88.8 tons per hour, on a 24-hour average basis, calculated daily. [Rules 62-4.070(3) and 62-210.200(242) {PTE}, F.A.C., and permit application 0630058-010-AC]

C.3. Annual Capacity: The maximum annual production of wood pellets for all three Pelletizing Lines combined shall be no more than 610,000 tons per year. [Rules 62-4.070(3), and 62-210.200(242) {PTE}, F.A.C., and permit application 0630058-010-AC]

C. Pelletizing Lines No. 1, No. 2, and No. 3

EMISSIONS STANDARDS

C.4. Volatile Organic Compounds: Volatile Organic Compound emissions from all Pelletizing Lines combined shall not exceed 194.90 tons VOC per year, based on a 12-month rolling total. [Rule 62-4.070(3), F.A.C., and permit application 0630058-010-AC]

D. Bulk Load-Out Area

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
007	Bulk Load-out Area

Pellets are transported to two storage bins, each with a capacity of 94 tons, and located above the rail car loading area. The bins provide approximately two hours of pellet storage and uniformly meter out the pellets for rail car loading. All conveyors are sealed with dust aspiration air directed to a Buhler dust filter system.

Construction permit 0630058-009-AC, issued July 15, 2011 authorized the bulk load-out maximum process rate to increase from 77 tons of pellets per hour, averaged over a 24-hour period, to 88.8 tons of pellets per hour, averaged over a 24-hour period. This permit changes the bulk load-out maximum process rate to 88.8 tons of pellets per hour, on a 24-hour basis, calculated daily.

The following specific conditions apply to the emissions unit listed above:

D.1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

PERFORMANCE RESTRICTIONS

D.2. Capacity: The total maximum allowable process rate for bulk load-out is 88.8 tons of pellets per hour, averaged on a 24 hour basis, calculated daily. [Rules 62-4.070(3) and 62-210.200{PTE}, F.A.C.]

RECORDS AND REPORTS

D.3. Permittee shall maintain records of the bulk load-out process rate measured in tons of pellets per hour on a 24-hour basis, calculated daily. Records of the 24-hour basis daily calculations shall be kept and maintained for Department inspection. [Rule 62-4.070(3), F.A.C., and permit application 0630058-010-AC]

E. Common Conditions

This section of the permit addresses Common Conditions for the following emissions units.

ID No.	Emission Unit Description
001	Wood Fiber Receiving and Storage Area
002	Dryer Line 1
003	Dryer Line 2
004	Pelletizing Line 1
005	Pelletizing Line 2
006	Pelletizing Line 3
007	Bulk Load-out Area

The following specific conditions apply to the emissions unit listed above:

E.1. Previous Permits: This permit supplements all previously issued air construction and operation permits for this emissions unit. Except for the change noted below, the unit remains subject to the conditions of all other legally binding air construction and operating permits. [Rules 62-4.070(3) and 62-210.300(1), F.A.C.]

MONITORING REQUIREMENTS

E.2. Permittee shall update the current Department approved compliance monitoring plan (CMP) within 60 days of issuance of this permit or provide a statement that the current CMP remains applicable. The CMP shall contain established operating, monitoring and recordkeeping procedures for determining compliance with permit requirements for each emissions unit. Portions of the CMP approved by the Department shall be included in the operation permit at the Department's discretion. The Department may add parameters and recording frequencies deemed necessary to assure compliance and best management practices. [Rule 62-4.070(3), F.A.C., and permit 0630058-003-AC]
{Permitting Note: The CMP can have the CAM plan included if the CMP specifically indicates that the CAM plan is included in the CMP.}