Florida Department of Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

PERMITTEE

Southern Fuelwood, Inc.
28826 Newberry Road
Newberry, FL 32669

Authorized Representative:
Pat Post, Owner

Air Permit No. 0010126-006-AC
Permit Expires: April 7, 2018
Minor Air Construction Permit

Southern Fuelwood
Minor Air Construction Permit

PROJECT

This is the final air construction permit, which authorizes the after-the-fact construction of five indirect fired wood-drying kilns, three direct fired wood-drying kilns, the construction of five, new indirect fired wood-drying kilns, and the modification of the Direct Fired Kilns to add the capability to burn natural gas and wood.

The proposed work will be conducted at the Southern Fuelwood, Inc., which is a wood processing facility which manufactures wood shavings for the equestrian, commercial poultry and pet bedding trade, air curtain incinerator for the destruction of clean wood waste, and drying kilns for the drying of split wood to be sold as firewood (Standard Industrial Classification No. 2499). The existing facility is located in Alachua County at 28826 W. Newberry Road in Newberry, Florida. The UTM coordinates are Zone 17, 340.74 km East; and 3280.56 km N.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and 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.

STATEMENT OF BASIS

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.

Executed in Jacksonville, Florida
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Julie R. Hudson

Julie R. Hudson
Environmental Manager
Permitting Program

JRH/mlp

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Pat Post, Southern Fuelwood, Inc., pat@southernfuelwood.com
Pradeep Raval, Koogler and Associates, Inc, praval@kooglerassociates.com
Veronica N. Sgro, P.E., Koogler and Associates, Inc, vsgro@kooglerassociates.com

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Merilee L. Palcic _____ April 7, 2017_____

Clerk **Date**

FACILITY DESCRIPTION

This is a wood processing facility which manufactures wood shavings for the equestrian, commercial poultry and pet bedding trade, air curtain incinerator for the destruction of clean wood waste, and drying kilns for the drying of split wood to be sold as firewood. The manufacturing facility consists of (EU001) Wood-fired Shavings Dryer, (EU002) Non-relocatable Air Curtain Incinerator (ACI), (EU003) Indirect Fired Drying Kilns, and (EU004) Direct Fired Drying Kilns.

The Fire Wood Shavings drying operation burns sawdust as fuel consist of a shaving dryer, shavings mill, a 12.5 MMBtu sawdust burner, screen, storage bins and a cyclone for the control of emissions. Shavings produced at the facility are fed through a dryer to reduce the moisture. The sawdust is separated from the dried shavings by a screen, then stored in a bin, and feed to the combustion zone by an auger. The dryer temperature typically varies between 400 °F and 600 °F. This is a continuous drying process and the residence time of the shavings in the dryer is approximately one minute. The dryer is fired using sawdust as fuel. The typical production rate of dry shavings is approximately 2.5 tons/hour. The production rate is determined on a monthly basis based upon inventory records. The maximum heat input rate for the burner is estimated to be 12.5 MMBtu/hr, based on 2500 lbs of sawdust burned per hour with a heat value of 5000 Btu/lb.

The Non-relocatable Air Curtain Incinerator manufactured by Air Burners, LLC, Model: S-327 is an above ground refractory lined firebox which is approximately 27 feet long, 8.5 feet wide and 8 feet deep; is powered by an 85 HP Kubota Industrial Diesel Engine (Model No: V3600-TE). The ACI is authorized to burn only untreated fuelwood waste, from the fuelwood making operation at the facility. Wastes include end cuts and defective pieces.

A major product from the facility is firewood that has been air dried to mitigate the distribution of wood pests and pathogens by drying the wood in hot air at a minimum of 160° F for 75 minutes in accordance to Rule 5B-65, F.A.C.: Firewood and unprocessed wood products. Air is blown through the kilns using an air to air heat exchange system and vented off the top with small vent attachments. The emissions from the kilns are not controlled. All of the Drying Kilns are batch operated and each batch is estimated to take an average of 96 hours. However, due to the time required between batches to load and unload the wood, and perform required cleaning and maintenance, the maximum practical number of batches per year for each unit would be 67. This reflects a maximum of 268 active batch days per year.

There are five existing Indirect Fired Drying Kilns, and, three Direct Fired Drying Kilns. All of the Direct Fired and Indirect Fired Kilns are custom built. Each direct fired drying kiln has a fixed burner, fan and temperature indicator. Currently, the Direct Fired Kilns have the capability to only burn liquid petroleum gas (LPG) and are used as a back-up to the Indirect Fired Kilns. Each Direct Fired Kiln (Nos. 7, 8, and 9) has a process rate of 486 cubic feet of wood per batch (178 MBF/year). Each indirect fired drying kiln has a custom design burner, similar to a suspension burner, fans for warm air circulation and temperature indicator. Currently, the Indirect Fired Kilns have the capability to burn LPG, natural gas, or wood. The burners on the Indirect Fired Kilns have the capability to burn LPG or natural gas and each Indirect Fired Kiln has a firebox on the outside that is fed mostly by oak fire logs. The process rate for each Indirect Kiln are as follows: No. 5 has a process rate of 972 cubic feet of wood per batch (356 MBF/year), No. 6 has a process rate of 1,944 cubic feet of wood per batch (712 MBF/year), No. 10 has a process rate of 1,296 cubic feet of wood per batch (474MBF/year), and Nos. 11 and 12 has a process rate of 3,645 cubic feet of wood per batch (1,335MBF/year).

Facility ID No. 0010126	
ID No.	**Emission Unit Description**
001	Wood Fired Shavings Dryer Operation with cyclone
002	Non-relocatable Air Curtain Incinerator (ACI)

PROPOSED PROJECT

The facility requests to add five Indirect Fired Drying Kilns, identical to the existing Kilns Nos. 11 and 12, which will be custom built over the next 3 years depending on market demands and to modify the Direct Fired Kilns to add the capability to burn natural gas and wood.

This project will add the following emissions unit.

Facility ID No. 0010126	
ID No.	**Emission Unit Description**
003	Five existing Indirect Fired Drying Kilns Nos. 5, 6, 10, 11 and 12. Five proposed Indirect Fired Drying Kilns Nos. 13, 14, 15, 16, and 17.
004	Three existing Direct Fired Drying Kilns Nos. 7, 8, and 9.

FACILITY REGULATORY CLASSIFICATION

- The facility **is not** a major source of hazardous air pollutants (HAP).
- The facility **does not operate** units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility **is not** a Title V major source of air pollution in accordance with Chapter 62-213, 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 Northeast District Office of the Department of Environmental Protection (Department). The Northeast District Office mailing address is 8800 Baymeadows Way, Suite 100, Jacksonville, Florida 32256.

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 Section) mailing address is 8800 Baymeadows Way, Suite 100, Jacksonville, Florida 32256.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and 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. Construction and Expiration: The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   a. Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

   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 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.

   c. 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 Air Operating Permit: Subsequent to any construction, reconstruction or modification of a facility or emissions unit authorized by an air construction permit, and demonstration of compliance with the conditions of such air construction permit, the owner or operator of such facility or emissions unit shall obtain an initial air operation permit or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of this chapter and Chapter 62-4, F.A.C. [Rule 62-210.300(2), F.A.C.]

A. EU 003 & EU004 – Wood Drying Kilns

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
003	Ten Indirect Fired Drying Kilns. Five future Wood Drying Kilns Nos. 13, 14, 15, 16, and 17. Five existing Wood Drying Kilns Nos. 5, 6, 10, 11 and 12.
004	Three Direct Fired Drying Kilns**.** Existing Nos. 7, 8 and 9

{The Wood Drying Kilns are used in rotation for drying wood and for maintenance. The kilns have different dimensions and each is custom built.*}*

{These EUs are subject to Rules 62-296.410, F.A.C. Carbonaceous Fuel Burning equipment*}*

EQUIPMENT

1. a. Existing (After-the-Fact) Indirect Fired Drying Kilns: There are five existing indirect fired kilns (Nos. 5, 6, 10, 11, and 12). The Indirect Fired Kilns have the capability to burn LPG, natural gas, or wood. The burners on the Indirect Fired Kilns have the capability to burn LPG or natural gas and each Indirect Fired Kiln has a firebox on the outside that is fed mostly by oak fire logs. The process rate and heat input for each Indirect Fired Kiln are as follows: No. 5 has a process rate of 972 cubic feet of wood per batch (356 MBF/year) and a heat input of 0.31 MMBtu/hr, No. 6 has a process rate of 1,944 cubic feet of wood per batch (712 MBF/year) and a heat input of 0.31 MMBtu/hr, No. 10 has a process rate of 1,296 cubic feet of wood per batch (474MBF/year) and a heat input of 0.31 MMBtu/hr, and Nos. 11 and 12 have a process rate of 3,645 cubic feet of wood per batch (1,335MBF/year) and a heat input of 0.0.75 MMBtu/hr.

b. Proposed Indirect Fired Drying Kilns: The permittee is authorized to install five indirect fired kilns (Nos. 13, 14, 15, 16, and 17. Each new, indirect fired kiln will be identical to existing Indirect Fired Kilns Nos. 11 and 12.

c. Existing (After-the-Fact) Direct Fired Drying Kilns: There are three existing direct fired kilns (Nos. 7, 8 and 9). Each direct fired drying kiln has a fixed burner, fan and temperature indicator. Currently, the Direct Fired Kilns are used as a back-up to the Indirect Fired Kilns and have the capability to only burn liquid petroleum gas (LPG) but may be modified to add the capability to burn natural gas and wood. Each Direct Fired Kiln (Nos. 7, 8, and 9) has a process rate of 486 cubic feet of wood per batch (178 MBF/year) and a heat input of 0.12 MMBtu/hr.

[Application No. 0010126-006-AC]

PERFORMANCE RESTRICTIONS

2. The Maximum Heat Input Rate for each kiln:

- **a.** The Maximum design heat input rate in each Proposed Indirect Fired Kilns (Nos. 13, 14, 15, 16, and 17) is 0.75 MMBtu/hour (hr).
- **b.** The Maximum design heat input rate in each Indirect Fired Kilns (Nos. 11 and 12) is 0.75 MMBtu/hr.

c. The Maximum design heat input rate in each Indirect Fired Kilns (Nos. 5, 6, and 10) is 0.31 MMBtu/hr.
d. The maximum design heat input rate of each burner in the Direct Fired Kilns (Nos. 7, 8, and 9) is 0.12 MMBtu/hr.

[Rules 62-4.160(1) and 62-210.200(PTE), F.A.C.; Application No. 0010126-006-AC]

3. Maximum Kiln Throughput Rate. The maximum throughput rate of the proposed and existing kilns combined shall not exceed 11,417 Thousand Board Feet (Mbf) per year.

[Rules 62-4.160(1), 62-210.200(PTE), F.A.C.; Application No. 0010126-006-AC]

4. Authorized Fuel:

a. The proposed new Indirect Fired Drying Kilns are allowed to only burn wood, liquid petroleum gas (LPG), or natural gas.
b. The existing Indirect Fired Drying Kilns are allowed to only burn wood, LPG, or natural gas.
c. The existing Direct Fired Drying Kilns are allowed to only burn wood, LPG, or natural gas.

[Application No. 0010126-006-AC and Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The hours of operation are not limited (8760 hours per year).

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

EMISSIONS STANDARDS

6. Emissions Standards:

a. Existing Kilns. Visible emissions shall not exceed 20 percent opacity except that 27 percent opacity is permissible for not more than 6 minutes in any one hour.

[Application No. 0010126-006-AC and Rule 62-296.410(2)(a), F.A.C.]

TESTING REQUIREMENTS

7. Initial Compliance Tests: The emissions unit shall be tested to demonstrate initial compliance with the emissions standards for Pollutants. 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(8)(b)1, F.A.C.]

8. Annual Compliance Tests: During each calendar year (January 1st to December 31st), each kiln shall be tested to demonstrate compliance with the emissions standards for VE.

[Rule 62-297.310(8)(a)1, F.A.C.]

9. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(9), F.A.C.]

10. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources

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, F.A.C.; and Appendix A of 40 CFR 60]

A. EU 003 & EU004 – Wood Drying Kilns

NOTIFICATON REQUIREMENTS

11. The Department shall be notified within 30 days of modification of the Direct Fired Kilns to add capability to burn natural gas and wood. Information of the modification will include detailed descriptions of burners added and pictures of the modification.

RECORDS AND REPORTS

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(10), F.A.C.]

13. The *owner* or operator shall maintain the following records and retain them on site for five years:

a. The throughput rate in Mbf per month for 12-consecutive month.

[Rule 62-4.070(3), F.A.C.; [Rule 62-4.070(1), F.A.C. and [Application No. 0010126-006-AC]

14. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.