FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

Pure Pine, LLC
Post Office Box No. 128
Williston, Florida 32696

Authorized Representative:
Mr. Eddie Hodge, President

Air Permit No. 0750086-004-AC
Permit Expires: xx/xx/xx

Pure Pine
Minor Source Air Construction Permit
Heat Input rate Increase

This is the final air construction permit, which authorizes the facility to increase heat input rate of the wood-fired burner and rotary dryer rate from 8.0 MMBtu/hr to 16.0 MMBtu/hr, the construction of 2 or 3 electric shaving mills and an electric pelletizer. The proposed work will be conducted at the Pure Pine, which is a Wood Processing Plant (Standard Industrial Classification No. 2426). The facility is located in Levy County at approximately 3 miles E of SR 41 in Williston, Florida. The UTM coordinates are Zone 17, 361.00 km East, and 3244.00 km North. As noted in the Final Determination provided with this final permit, 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, 62-296 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

(DRAFT)

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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.

Eddie Hodge, Pure Pine, LLC- (purpine1@aol.com)
Will Irby, Pure Pine, LLC- (www4w@aol.com)
Pradeep Raval, Koogler & Associates- (praval@kooglerassociates.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.

DRAFT
(Clerk)

_____
(Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The facility operates an 8.0 MMBtu/hr, Wood-Fired, Triple-Pass, Rotary Dryer. This facility produces both wet and dried wood shavings for use in animal bedding.

Wet logs are processed through one of three shaving machines and cut into the desired size. Each of the shaving machines has a maximum capacity of about 40 yards of shavings per hour. Wet shavings are fed through the rotary dryer to reduce moisture. From the rotary dryer, the shavings are routed to a cyclone and through a screen system in order to separate the wood shavings from the smaller wood particles (fines and sawdust). The separated fines and sawdust are routed to a storage bin before being feed, by auger, to the combustion zone of the rotary dryer as the fuel source.

The drying process is equipped with computer controls. The dryer temperature typically varies between 400 °F and 600 °F. The dryer generally operates up to two shifts per day and the dryer startup time is approximately 30 minutes. The maximum heat input rate for the burner is estimated to be 8 MMBtu/hr, based on 1000 lbs of sawdust burned per hour with a heat value of 8000 Btu/lb.

Particulate Matter emissions from the dryer are controlled by the cyclone. The cyclone is about 10 ft in diameter and about 35 ft tall. The air volumetric flow is approximately 500 cfm.

The dry shavings are sold as product. The production rate is approximately 500 lbs/hour. The production rate is determined on a daily basis as the product is packaged. In order to get a conservative estimate, the production rate is assumed to be 1000 lbs/hour. The hour of operation is assumed to be 8760 hours/year even though the facility only operates seasonally. Therefore, the facility has the potential to produce up to 4,380 tons of dried shavings per year.

Facility ID No. 0750086

ID No.	Emission Unit Description
001	8.0 MMBtu/hr wood-fired burner & rotary dryer. Air Pollution Control Equipment: One (1) Heil Cyclone. Gas Volume.....…500 ACFM Gas Temperature.....150 °F Removal efficiency …….estimated to be 99% (for shavings)

PROPOSED PROJECT

Facility ID No. 0750086	
ID No.	**Emission Unit Description**
001	**16.0** MMBtu/hr wood-fired burner & rotary dryer. Air Pollution Control Equipment: One (1) Heil Cyclone. Gas Volume.....…500 ACFM Gas Temperature.....150 °F Removal efficiency …….estimated to be 99% (for shavings)

The proposed project will increase the heat input rate of the wood-fired burner and rotary dryer from 8.0 MMBtu/hr to 16.0 MMBtu/hr. The facility will also add 2 or 3 additional electric shaving mills and an electric pelletizer.

Wet logs are processed through one of **five** shaving machines and cut into the desired size. Each of the shaving machines has a maximum capacity of about 40 yards of shavings per hour. Wet shavings are fed through the rotary dryer to reduce moisture. From the rotary dryer, the shavings are routed to a cyclone and through a screen system in order to separate the wood shavings from the smaller wood particles (fines and sawdust). The separated fines and sawdust are routed to a storage bin before being feed, by auger, to the combustion zone of the rotary dryer as the fuel source. Some of the wet shavings are shipped directly to the customers.

The drying process is equipped with computer controls. The dryer temperature typically varies between 400 °F and 600 °F. The dryer is allowed to operate continuously and the dryer startup time is approximately 30 minutes. The maximum heat input rate for the burner is estimated to be 16 MMBtu/hr, based on 2000 lbs of sawdust burned per hour with a heat value of 8000 Btu/lb.

Particulate Matter emissions from the dryer are controlled by the cyclone. The cyclone is about 10 ft in diameter and about 35 ft tall. The air volumetric flow is approximately 500 cfm.

The **dry and wet** shavings are sold as product. The production rate of dry shavings is approximately 1 ton/hour. The production rate of dry shavings is determined on a daily basis as the product is packaged. Based on continuous operation, the facility has the potential to produce up to 8,760 tons of dried shavings per year.

The facility is subject to the following regulations: Florida Administrative Code Chapters 62-4; 62-103; 62-204; 62-210; 62-212, 62-296, and 62-297. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations.

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 not** 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.

Potential to Emit: Emissions factors from stack tests conducted at a similar facility are used to estimate potential emissions of the dryer. These emissions factors are considered more conservative since the tested unit has a higher heat input rate (20MMBtu/hr) and higher temperature (1400 °F), which is likely to emit more VOCs and HAPs from the drying process. The estimated emissions factors and the potential emissions are as shown below.

Pollutant (s)	Emissions Factor (lb/tons of shavings produced)	Emissions Rate (lb/hr)	Emissions Rate (ton/yr)
PM/PM10	1.33	1.3	5.8
SO2	0.03	0.03	0.1
NOx	0.3	0.3	1.3
CO	2.8	2.8	12.3
VOC	8.7	8.7	38.1
Methanol	0.047	0.05	0.2
Formaldehyde	0.038	0.04	0.2

Emissions based on: 8760 hours per year, 2000 lb per hour fuel rate, 8000 btu/lb HHV wood, 16 MMBtu/ hour heat rate and 1 ton per hour production rate.

All PM emissions from the electrical shavers and electrical pelletizer are fugitive and there is no control equipment.

Objectionable Odor: No odor problems are expected at this facility.

Compliance: The stack atop the burner is not an exhaust point to the atmosphere; it is an opening for ambient air intake. If “blue haze” emissions occur through cyclone’s stack (exhaust), it means that the gases are too hot and the wood’s resin is being cooked out. During the winter there may be a white, condensed water vapor plume visible from the cyclone’s stack (exhaust). It is preferable that VE test be conducted during warm weather. It is expected that only small amounts of PM (ashes and/or sawdust) will escape as emissions from the cyclone. If a significant amount of PM emissions are observed, it may be an indication of improper operation, malfunction, or the potential PM emissions were underestimated.

REGULATED EMISSION UNITS:

EU No.	EU Description	Control Device
001	16.0 MMBtu/hr Wood-Fired Burner & Rotary Dryer	Heil Cyclone

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Waste and Air Resource Management Program. The Northeast District Office's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. 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 and Phone Number 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. This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A completed **Application for Non-Title V Air Source-** DEP Form No. 62-210.900(3), F.A.C.), shall be submitted to the Department at least 60 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit. [Rules 62-4.090, F.A.C.]

B. EU001 Wood-Fired Burner & Rotary Dryer

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	16.0 MMBtu/hr wood-fired burner & rotary dryer. Air Pollution Control Equipment: One (1) Heil Cyclone. Gas Volume.....…500 ACFM Gas Temperature.....150 °F Removal efficiency ……estimated to be 99% (for shavings)

{This facility is subject to the requirements of Rule 62.296.410, F.A.C}

0. **Relation to Other Permits.** The conditions of this permit supplements all other previously issued air construction and operation permits for these emissions units. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The Permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, and the like.

[Rules 62-4.210, 62-4.030, and 62-210.300(1)(b), F.A.C.]

1. **Equipment.** The permittee is authorized to construct, install and operate (for purposes of testing and unit shakedown) 2 or 3 electric shaving mills and an electric pelletizer. After construction is completed, the facility must notify the Department on the exact number of electric shaving mills constructed.

OPERATIONAL PARAMETERS

2. **Hours of Operation**. This project **does not** change the hours of operation. The hours of operation are not restricted: 24 hours/day; 7 days/week; 52 weeks/year (8760 hours/year and 8784 during a Leap Year).
[Rules 62-4.160(2) & (14)(b), 62-210.200(PTE), F.A.C.]

3. **Maximum Operation Rate**. The maximum heat input rate shall not exceed 16 MMBtu/hour.
[Air Construction Permit Application 10/1/13, Rules 62-4.160(2) & (14)(b), 62-210.200(PTE), F.A.C.]

4. **Method of Operation- Fuels**. This project does not change the methods of operation. The burner is carbonaceous (wood waste) fired.
[Rule 62-210.200(PTE), F.A.C.]

5. **Wood-Fired Burner & Rotary Dryer -Visible Emissions**. The facility shall continue to comply with the visible emissions standard as stated in the current operating permit. The Visible emissions from this emissions unit shall not exceed 20 percent opacity except for 40 percent opacity for not more than 2 minutes in any one hour.

[Rule 62.296.410(2)(a), F.A.C.]

6. This facility is subject to the requirements of SECTION 2. ADMINISTRATIVE REQUIREMENTS.

7. This facility is subject to the attached Combined Appendices requirements.

8. **Control Device**. The cyclone shall be maintained in good operating condition and shall remain in place at all times during operation. If there is a malfunction on the control unit, the owner or operator shall immediately take corrective actions to minimize emissions.

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