

February 19, 2002

Mr. Larry Dooley  
Ridgewood Dimensions, Inc.  
N.E. 3<sup>rd</sup> Street  
Paoli, IN 47545

Re: Source Specific Operation Status  
S 117-15046-00024

Dear Mr. Dooley:

Your application for Permit By Rule Status was received on November 8, 2001 and has been reviewed. Based on the data submitted and the provisions in 326 IAC 2, it has been determined that your emission source, a stationary woodworking facility located at N.E. 3<sup>rd</sup> Street, Paoli, Indiana, 47545, does not meet the criteria for a Permit By Rule but does meet the criteria required to obtain a Source Specific Operating Agreement.

This source was issued a Federally Enforceable State Operating Permit No.F117-12769-00024 on September 10, 2001 that provided for the operation of a woodworking facility. Ridgewood Dimensions, Inc. must continue to operate under this existing FESOP until the effective date of this Source Specific Operating Agreement at which time the existing FESOP will be revoked.

Pursuant to IC 4-21.5-3-5(a) and (b), approval of this Source Specific Operating Agreement shall not be effective until fifteen (15) days from the date of this letter.

The facilities and processes of this source are hereby granted the Source Specific Operating Agreement provided that the following requirements of 326 IAC 2-9 are satisfied:

**Section A: Woodworking Operation: [326 IAC 2-9-4]**

1. The particulate matter with a diameter less than ten (10) microns (PM10) from the woodworking operation shall not exceed one-hundredth (0.01) grain per actual cubic foot of outlet air.
2. No visible emissions shall be discharged to the outside air from the woodworking operation.
3. The baghouse shall not at any time, exhaust to the atmosphere, greater than forty thousand (40,000) actual cubic feet of outlet air per minute.
4. The source shall maintain records of the types of air pollution control devices utilized at the source, and the operation and maintenance manuals for those devices.
5. Compliance with the limitations of this Source Specific Operating Agreement (SSOA) shall be determined utilizing the test methods specified in 40 CFR 60, Appendix A, Methods 1-4 and 201A.
6. The baghouse is in operation at all times that the woodworking equipment is in use.

**Section B: External Combustion Sources: [326 IAC 2-9-13]**

1. Any external combustion source may elect to comply with this section by complying with the requirements of 326 IAC 2-9-1 of this rule and the following conditions:
  - (A) Visible emissions from the source shall not exceed twenty percent (20%) opacity in twenty-four (24) consecutive readings in a six (6) minute period.
  - (B) Limiting fuel usage for every twelve month (12) period to less than the limits found in 326 IAC 2-9-13(f) Table 1, which equals 7352 tons per year of wood.
  - (C) A source electing to comply with (1) (B) must be able to demonstrate compliance no later than (30) days after receipt of a written request by the department or U.S. EPA.

**Section C: General Requirements: [326 IAC 2-9-1]**

1. The source shall provide an annual notice to the commissioner, stating that the source is in operation, and certifying that its operations are in compliance with the requirements of this Source Specific Operating Agreement. The above annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than January 30 of each year, with the annual notice being submitted in the format attached.

2. Any exceedance of any requirement contained in this operating agreement shall be reported, in writing, within one (1) week of its occurrence. Said report shall include information on the actions taken to correct the exceedance, including measures to reduce emissions, in order to comply with the established limits. If an exceedance is the result of a malfunction, then the provisions of 326 IAC 1-6 apply.
3. Pursuant to 326 IAC 2-9-1(i), the owner or operator is hereby notified that this operating agreement does not relieve the permittee of the responsibility to comply with the provisions of any applicable federal, state, or local rules, or any New Source Performance Standards (NSPS), 40 CFR Part 60, or National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61.

Any change or modification which will alter operations in such a way that it will no longer comply with the applicable restrictions and conditions of this operating agreement, must obtain the appropriate approval from the Office of Air Management (OAM) under 326 IAC 2-5.1, 326 IAC 2-5.5, 326 IAC 2-6.1, 326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-7, and 326 IAC 2-8, before such change may occur.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permit Branch  
Office of Air Management

cc: File - Orange County  
Air Compliance Section -Gene Kelso  
Administrative and Development - Sara Cloe  
Technical Support & Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

<b>Source Specific Operating Agreement Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-9.

<b>Company Name:</b>	<b>Ridgewood Dimensions, Inc.</b>
<b>Address:</b>	<b>N.E.3rd Street</b>
<b>City:</b>	<b>Paoli, IN 47545</b>
<b>Contact Person:</b>	
<b>Phone #:</b>	
<b>SSOA #:</b>	<b>S 117-15046-00024</b>

I hereby certify that Ridgewood Dimensions, Inc. is still in operation and is in compliance with the requirements of Source Specific Operating Agreement (SSOA) S 117-15046-00024.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**Appendix A: Emissions Calculations  
External Combustion Boiler  
Wood Waste Combustion (uncontrolled)  
Wet Wood**

**Company Name:** Ridgewood Dimensions, Inc.  
**Address City IN Zip:** Paoli, IN  
**CP:** R117-15046  
**Plt ID:** P-00024  
**Reviewer:** Walter Habeeb  
**Date:** Nov. 29, 2001

Capacity (MMBtu/hr)   
Capacity (tons/hr)   
Higher Heating Value of Fuel (Btu/lb)   
Converted Capacity in MMBtu/hr

Note: Per Ridgewood emission statement the % moisture in their wood is 25%

Emission Factor in lb/MMBtu	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO**
	0.33	0.307	0.267	0.025	0.22	0.038	0.6
Potential Emissions in tons/yr	3.6135	3.36165	2.92365	0.27375	2.409	0.4161	6.57

Wet wood is considered to be greater than or equal to 20% moisture content. Dry wood is considered to be less than 20% moisture content.  
\*The PM10 and PM2.5 emission factors include the condensible PM emission factor of 0.017 lb/MMBtu, measured by EPA Method 202 (or equivalent) and the appropriate filterable PM emission factor, measured by EPA Method 5 (or equivalent). The PM emission factor is filterable PM measured by EPA Method 5 (or equivalent).  
\*\*The CO emission factor is for stokers and dutch ovens/fuel cells. Change the emission factor to 0.17 lb/MMBtu if the calculations are for a fluidized bed combustor.

**Methodology**

To convert from tons/hr capacity to MMBtu/hr capacity:  
Heat Input Capacity (MMBtu/hr) = Capacity (tons/hr) x Higher Heating Value of wood fuel (Btu/lb) x (1 MMBtu/10<sup>6</sup> Btu/) x 2000 lbs/1 ton

Emission Factors are from AP-42 Chapter 1.6 (Supplement G, 7/01), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

Emissions (tons/yr) = Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760hrs/yr x 1ton/2000lbs

**Appendix A: HAPs Emissions Calculations  
External Combustion Boiler  
Wood Waste Combustion (uncontrolled)  
All Wood Waste Fuel Types**

**Company Name:** Ridgewood Dimensions, Inc.  
**Address City IN Zip:** Paoli, IN  
**CP:** R117-15046  
**Plt ID:** P-00024  
**Reviewer:** Walter Habeeb  
**Date:** Nov. 29, 2001

Capacity (MMBtu/hr) 2.5

Capacity (tons/hr)  

Higher Heating Value of Fuel (Btu/lb)  

Converted Capacity in MMBtu/hr 0

Note: Per Ridgewood emission statement the % moisture in their wood is 25%

	Selected Hazardous Air Pollutants				
	Acrolein	Benzene	Formaldehyde	Hydrogen Chloride	Styrene
Emission Factor in lb/MMBtu	4.0E-03	4.2E-03	4.4E-03	1.9E-02	1.9E-03
Potential Emissions in tons/yr	4.4E-02	4.6E-02	4.8E-02	2.1E-01	2.1E-02

**Methodology**

To convert from tons/hr capacity to MMBtu/hr capacity:

$$\text{Heat Input Capacity (MMBtu/hr)} = \text{Capacity (tons/hr)} \times \text{Higher Heating Value of wood fuel (Btu/lb)} \times (1 \text{ MMBtu}/10^6 \text{ Btu}) \times 2000 \text{ lbs}/1 \text{ ton}$$

Emission Factors are from AP-42 Chapter 1.6 (Supplement G, 7/01), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

$$\text{Emissions (tons/yr)} = \text{Capacity (MMBtu/hr)} \times \text{Emission Factor (lb/MMBtu)} \times 8760\text{hrs/yr} \times 1\text{ton}/2000\text{lbs}$$

These factors include the five HAPs with the highest AP-42 emission factors.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Small Industrial Boiler**

**Company Name: Ridgewood Dimensions, Inc.**

**Address City IN Zip: Paoli, IN**

**CP: F-117-15046**

**Pit ID: P-00024**

**Reviewer: Walter Habeeb**

**Date: Nov. 29, 2001**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.0

17.5

**Pollutant**

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.1	0.0	0.9	0.0	0.7

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Small Industrial Boiler**

**HAPs Emissions**

**Company Name: Ridgewood Dimensions, Inc.**

**Address City IN Zip: Paoli, IN**

**CP: F-117-15046**

**Plt ID: P-00024**

**Reviewer: Walter Habeeb**

**Date: Nov. 29, 2001**

**HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.840E-05	1.051E-05	6.570E-04	1.577E-02	2.978E-05

**HAPs - Metals**

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.380E-06	9.636E-06	1.226E-05	3.329E-06	1.840E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Process Particulate Emissions**

**Company Name:** Ridgewood Dimensions, Inc.  
**Address City IN Zip:** N.E. 3rd Street, Paoli, IN 47545  
**FESOP:** F117-15046-00024  
**Reviewer:** Walter Habeeb  
**Date:** Nov. 29, 2001

<b>Uncontrolled Potential to Emit (tons/year)</b>						
<b>A. Baghouses</b>						
Process	No. of Units	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Total (tons/yr)
BH1	1	0.00700	10	3,433	99.90%	9021.92
Total Emissions Based on Rated Capacity at 8,760 Hours/Year						<b>9021.92</b>
<b>Controlled Potential to Emit (tons/year)</b>						
<b>A. Baghouses</b>						
Process	No. of Units	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Total (tons/yr)
BH1	1	0.00700	10	3,433	99.90%	9.02
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls						<b>9.02</b>

**Methodology:**State Potential (uncontrolled):

Baghouse (tons/yr) = No. Units \* Loading (grains/acf) \* Air/Cloth Ratio (acfm/ft<sup>2</sup>) \* Filter Area (ft<sup>2</sup>) \* 1 lb/7,000 grains \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

ESP (tons/yr) = No. Units \* Loading (grains/acf) \* Face Velocity (ft/sec) \* Surface Area (ft<sup>2</sup>) \* 1 lb/7,000 grains \* 60 sec/min \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

Scrubber (tons/yr) = No. Units \* Loading (grains/acf) \* Flow Rate (gpm) \* 1/Liquid to Air Ratio (gpm/1,000 acfm) \* 1 lb/7,000 grains \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

Federal Potential (controlled):

Baghouse (tons/yr) = No. Units \* Loading (grains/acf) \* Air/Cloth Ratio (acfm/ft<sup>2</sup>) \* Filter Area (ft<sup>2</sup>) \* 1 lb/7,000 grains \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

ESP (tons/yr) = No. Units \* Loading (grains/acf) \* Face Velocity (ft/sec) \* Surface Area (ft<sup>2</sup>) \* 1 lb/7,000 grains \* 60 sec/min \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

Scrubber (tons/yr) = No. Units \* Loading (grains/acf) \* Flow Rate (gpm) \* 1/Liquid to Air Ratio (gpm/1,000 acfm) \* 1 lb/7,000 grains \* 60 min/hr \* 8760 hr/yr \* 1 ton/2,000 lbs \* 1/(1-Control Efficiency)

## Appendix A: Emission Calculations

**Company Name:** Ridgewood Dimensions, Inc.  
**Address City IN Zip:** N.E. 3rd Street, Paoli, IN 47545  
**FESOP:** F 117-15046-00024  
**Reviewer:** Walter Habeeb  
**Date:** Nov. 29, 2001

<b>Uncontrolled Potential Emissions (tons/year)</b>				
Emissions Generating Activity				
Pollutant	Woodworking Operation	Wood Fired Boiler	Natural Gas Fired Heaters	<b>TOTAL</b>
PM	9,021.92	8.76	0.02	9,030.70
PM10	9,021.92	8.76	0.07	9,030.75
SO <sub>2</sub>	0.00	0.07	0.01	0.08
NO <sub>x</sub>	0.00	1.49	0.88	2.37
VOC	0.00	0.22	0.05	0.27
CO	0.00	13.54	0.74	14.28
total HAPs	0.00	negl.	negl.	negl.
worst case single HAP	0.00	negl.	negl.	negl.
Total emissions based on rated capacity at 8,760 hours/year.				
<b>Controlled Potential Emissions (tons/year)</b>				
Emissions Generating Activity				
Pollutant	Woodworking Operation	Wood Fired Boiler	Natural Gas Fired Heaters	<b>TOTAL</b>
PM	9.02	8.76	0.02	17.80
PM10	9.02	8.76	0.07	17.85
SO <sub>2</sub>	0.00	0.07	0.01	0.08
NO <sub>x</sub>	0.00	1.49	0.88	2.37
VOC	0.00	0.22	0.05	0.27
CO	0.00	13.54	0.74	14.28
total HAPs	0.00	negl.	negl.	negl.
worst case single HAP	0.00	negl.	negl.	negl.
Total emissions based on rated capacity at 8,760 hours/year, after control.				