



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: April 6, 2006  
RE: Woodwright Door & Trim, Inc / 039-22554-00292  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FN-REGIS.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
*We make Indiana a cleaner, healthier place to live.*

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Mitchell E. Daniels, Jr.  
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Indianapolis, Indiana 46204-2251  
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April 6, 2006

Bruce Shoup  
Woodwright Door & Trim, Inc.  
P.O. Box 1943  
Elkhart, Indiana 46515-1943

Re: Registered Operation Status,  
039-22554-00292

Dear Mr. Shoup:

The application from Woodwright Door & Trim, Inc., received on January 20, 2006, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following wood door/trim manufacturing, and surface coating operations, located at 808 South Ninth Street, Elkhart, Indiana, are classified as registered:

The following equipment exhausts outside the workspace:

- (a) One (1) Fifteen Inch Planer with a maximum throughput of one hundred (100) pounds per hour, installed in 1994. The Fifteen Inch Planer is connected to the following baghouse:
  - (i) One (1) North State OFO-102B (Baghouse P1), total filter area: 527.79 square feet, air to cloth ratio: 3.8:1 acfm per square feet, stack height: five (5) feet, diameter: two (2) feet, gas flow rate: 2005 scf/min.
- (b) One (1) Table Saw, with a maximum throughput of thirty (30) board feet per hour, installed in 1994. The Table Saw is connected to the following baghouse:
  - (i) One (1) Northwood NW21DC (Baghouse P2), total filter area: 263.89 square feet, air to cloth ratio: 5.7:1 acfm per square feet, stack height: six (5) feet, diameter: two (2) feet, gas flow rate: 1504 scf/min.
- (c) One (1) natural gas fired Space Heater, capacity: 0.231 MMBtu per hour, installed in 1960;
- (d) One (1) natural gas fired Space Heater, capacity: 0.150 MMBtu per hour, installed in 1960;
- (e) One (1) natural gas fired Space Heater, capacity: 0.250 MMBtu per hour, installed in 1960;
- (f) One (1) natural gas fired Hot Water Heater, capacity: 0.028 MMBtu per hour, installed in 1960;

- (g) Two (2) natural gas fired Updraft Furnaces for space heating, capacity: 0.090 MMBtu per hour each, both installed in 1960. The furnaces vent to the stacks identified below:
  - (i) Stack identification: F1 and F2, stack height: thirty (30) feet for each, diameter: (0.33) feet, gas flow rate: 500 acfm.
- (h) One (1) Paint Booth, capacity: 100 pounds of wood products per hour with the following methods of application: One (1) Airless/Air Assist Spray Gun, installed in 1994. The booth vents to the stack identified below:
  - (i) Stack identification: E1, type of control: dry filter, stack height: twenty-eight (28) feet, diameter: two (2) feet, gas flow rate: 8890 acfm.

The following equipment exhausts into the workspace:

- (i) One (1) Radial Arm Saw, throughput: thirty (30) board feet per hour, installed in 1994;
- (j) One (1) Chop Saw, throughput: thirty (30) board feet per hour, installed in 1994;
- (k) One (1) Drill Press, throughput: thirty (30) board feet per hour, installed in 1994;
- (l) One (1) Jointer, throughput: thirty (30) board feet per hour, installed in 1994;
- (m) One (1) Drum Sander, throughput: thirty (30) board feet per hour, installed in 1994;
- (n) One (1) Buffer, throughput: thirty (30) board feet per hour, installed in 1994; and
- (o) One (1) Compressor, throughput: thirty (30) board feet per hour, installed in 1994.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the Fifteen Inch Planer and the Table Saw shall be limited to less than 0.551 pounds per hour or less.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouses controlling PM emissions from the Fifteen Inch Planer (P1) and the Table Saw (P2) shall be in operation at all times the Fifteen Inch Planer or the Table Saw are in operation, in order to comply with this limit.

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate matter from the paint booth shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

- (a) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (b) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

This registration is a revised registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,  
Original signed by

Nisha Sizemore, Chief  
Permit Branch  
Office of Air Quality

TW/EVP

cc: File - Elkhart County  
Elkhart County Health Department  
Air Compliance - Tony Pelath  
Northern Regional Office  
Permit Tracking  
Compliance Data Section

<b>Registration Annual Notification</b>
---

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

<b>Company Name:</b>	Woodwright Door & Trim, Inc.
<b>Address:</b>	808 South Ninth Street
<b>City:</b>	P.O. Box 1943, Elkhart, Indiana 46515-1943
<b>Authorized individual:</b>	Bruce Shoup
<b>Phone #:</b>	(574) 522-1667
<b>Registration #:</b>	039-22554-00292

I hereby certify that Woodwright Door & Trim, Inc. is still in operation and is in compliance with the requirements of Registration 039-22554-00292.

<b>Name:</b>	Bruce Shoup
<b>Title:</b>	President
<b>Signature:</b>	
<b>Date:</b>	

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Registration

#### Source Background and Description

<b>Source Name:</b>	Woodwright Door & Trim, Inc.
<b>Source Location:</b>	808 South Ninth Street, Elkhart, Indiana 46515
<b>County:</b>	Elkhart
<b>SIC Code:</b>	2499
<b>Registration No.:</b>	039-22554-00292
<b>Registration Issuance Date:</b>	January 18, 1995
<b>Registration Renewal No.:</b>	039-22554-00292
<b>Permit Reviewer:</b>	Tanya White / EVP

The Office of Air Quality (OAQ) has reviewed an application from Woodwright Door & Trim, Inc., relating to the operation of a wood door and trim manufacturing and surface coating plant.

The source was originally permitted in 1995 under registration no. 039-4199. This review serves as the re-registration for this source's existing registered emission units. The Permittee did not re-register its source in a timely manner by December 25, 2000 as required pursuant to 326 IAC 2-5.5.2.

#### Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices, which exhaust outside the workspace:

- (a) One (1) Fifteen Inch Planer with a maximum throughput of one hundred (100) pounds per hour, installed in 1994. The Fifteen Inch Planer is connected to the following baghouse:
  - (i) One (1) North State OFO-102B (Baghouse P1), total filter area: 527.79 square feet, air to cloth ratio: 3.8:1 acfm per square feet, stack height: five (5) feet, diameter: two (2) feet, gas flow rate: 2005 scf/min.
- (b) One (1) Table Saw, with a maximum throughput of thirty (30) board feet per hour, installed in 1994. The Table Saw is connected to the following baghouse:
  - (i) One (1) Northwood NW21DC (Baghouse P2), total filter area: 263.89 square feet, air to cloth ratio: 5.7:1 acfm per square feet, stack height: six (5) feet, diameter: two (2) feet, gas flow rate: 1504 scf/min.
- (c) One (1) natural gas fired Space Heater, capacity: 0.231 MMBtu per hour, installed in 1960;
- (d) One (1) natural gas fired Space Heater, capacity: 0.150 MMBtu per hour, installed in 1960;
- (e) One (1) natural gas fired Space Heater, capacity: 0.250 MMBtu per hour, installed in 1960;

- (f) One (1) natural gas fired Hot Water Heater, capacity: 0.028 MMBtu per hour, installed in 1960;
- (g) Two (2) natural gas fired Updraft Furnaces for space heating, capacity: 0.090 MMBtu per hour each, both installed in 1960. The furnaces vent to the stacks identified below:
  - (i) Stack identification: F1 and F2, stack height: thirty (30) feet for each, diameter: (0.33) feet, gas flow rate: 500 acfm.
- (h) One (1) Paint Booth, capacity: 100 pounds of wood products per hour with the following methods of application: One (1) Airless/Air Assist Spray Gun, installed in 1994. The booth vents to the stack identified below:
  - (i) Stack identification: E1, type of control: dry filter, stack height: twenty-eight (28) feet, diameter: two (2) feet, gas flow rate: 8890 acfm.

The following equipment exhausts into the workspace:

- (i) One (1) Radial Arm Saw, throughput: thirty (30) board feet per hour, installed in 1994;
- (j) One (1) Chop Saw, throughput: thirty (30) board feet per hour, installed in 1994;
- (k) One (1) Drill Press, throughput: thirty (30) board feet per hour, installed in 1994;
- (l) One (1) Jointer, throughput: thirty (30) board feet per hour, installed in 1994;
- (m) One (1) Drum Sander, throughput: thirty (30) board feet per hour, installed in 1994;
- (n) One (1) Buffer, throughput: thirty (30) board feet per hour, installed in 1994; and
- (o) One (1) Compressor, throughput: thirty (30) board feet per hour, installed in 1994.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted emission units operating at this source during this review process.

### **Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Registration No. 039-4199, issued on January 18, 1995.

All conditions from previous approvals were incorporated into this permit.

### **Enforcement Issue**

IDEM is aware that the Permittee did not apply for a re-registration in a timely manner. IDEM is reviewing this matter and will take appropriate action.

### Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
P-1	Fifteen Inch Planer (Baghouse)	5.0	2.0	2,005	77.0
P-2	Table Saw (Baghouse)	6.0	2.0	1,504	77.0
E-1	Paint Booth (Dry Filters)	28.0	2.0	8,890	--

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 20, 2006.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 6).

### Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	19.54
PM-10	19.57
SO <sub>2</sub>	0.002
VOC	20.47
CO	0.31
NO <sub>x</sub>	0.37

HAPs	Potential to Emit (tons/yr)
Xylene	6.12
Combined HAPs	13.71

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and PM10 are greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.
- (d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

### County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
PM-2.5	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Elkhart County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.
- (c) Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (d) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

## Source Status

Existing Source (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	6.49
PM-10	6.51
SO <sub>2</sub>	0.002
VOC	20.47
CO	0.31
NO <sub>x</sub>	0.37
Single HAP (Xylene)	6.12
Combination HAPs	6.12

- (a) This existing source is not a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater, no attainment regulated pollutants is emitted at a rate of 250 tons per year or greater, and it is not one of the 28 listed source categories.
- (b) These emissions were based on the information provided in the source permit applications (see Appendix A for emission calculations).

## Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

The total emissions indicated in this Registration R-039-22554-00292, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this review.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this review.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD) are not included for the one (1) hot water heater, with a maximum heat input capacity of 0.028 MMBtu/hr, because the requirements of 40 CFR 63 Subpart DDDDD are not applicable to sources that are minor sources of HAPs as defined in 40 CFR 63.2 or 40 CFR 63.761.

### State Rule Applicability – Entire Source

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is not subject to this rule because potential uncontrolled emissions of all criteria pollutants are less than 250 tons per year. This source is also not one of the 28 listed source categories. Therefore, this source is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

#### 326 IAC 2-3 (Emission Offset)

This source is not subject to the requirements of 326 IAC 2-3 because the source is located in Elkhart County, which is classified as a moderate 8-hour ozone nonattainment area and the source has the potential to emit less than 100 tons per year for each of VOC and NOx.

#### 326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake or Porter counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### State Rule Applicability – Individual Facilities

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate emission rate from the Fifteen Inch Planer and the Table Saw shall be limited to less than 0.551 pounds per hour when operating at a process weight rate of 0.05 tons per hour.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

In this case  $P = 0.05$  tons/hr, therefore:

$$E = 4.10 (0.05)^{0.67} = 0.551 \text{ lbs/hr}$$

The uncontrolled PM emission rate from the Fifteen Inch Planer and the Table Saw are greater than the maximum allowable PM emission rate of 0.551 lbs/hr. Therefore, the baghouses controlling PM emissions from the Fifteen Inch Planer (P1) and the Table Saw (P2) shall be in operation at all times the Fifteen Inch Planer or the Table Saw are in operation, in order to comply with this limit.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The miscellaneous woodworking operations (Radial Arm Saw, Chop Saw, Drill Press, Jointer, Drum Sander, Buffer, and Compressor) have a combined PM potential to emit of 0.5 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), woodworking operations that have a PM potential to emit of less than 0.551 lb/hr are exempt from the requirements of 326 IAC 6-3-2.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Particulate from the paint booth shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

- (a) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (b) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

326 IAC 8-2-10 (Flat Wood Panels; Manufacturing Operations)

Pursuant to 326 IAC 8-2-1(a)(2), the requirements of 326 IAC 8-2-10 are not applicable to the paint booth, because the facility does not manufacture any type of flat wood panels.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-1(a)(2), the requirements of 326 IAC 8-2-12 are not applicable to the paint booth, because the facility does not manufacture wood furniture including cabinets (kitchen, bath and vanity), tables, beds, chairs, sofas (non-upholstered), art objects, and any other coated furnishings made of solid wood, wood composition or simulated wood material.

326 IAC 8-11 (Wood Furniture Coatings)

Pursuant to 326 IAC 8-11(a), the requirements of 326 IAC 8-11 are not applicable to the paint booth, because the source has a potential to emit of VOCs is less than 25 tons per year. The paint booth was installed in 1994.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The requirements of 326 IAC 6-2 are not applicable to the space heaters, hot water heater, or updraft furnaces, because these units are not indirect heating facilities as defined in 326 IAC 1-2-19.

## Conclusion

The operation of this wood door and trim manufacturing and surface coating plant shall be subject to the conditions of the Registration No. 039-22554-00292.

## Appendix A: Emission Calculations

**Company Name: Woodwright Door & Trim, Inc.**  
**Source Location: 808 S. Ninth Street, Elkhart, Indiana, 46515**  
**Permit Number: R039-22554-00292**  
**Reviewer: Tanya White/EVP**  
**Date: February, 2006**

### Uncontrolled Potential Emissions (tons/year)

Pollutant	Emissions Generating Activity				TOTAL
	Combustion Sources	Miscellaneous Woodworking	Adhesive Assembly	Surface Coating Booth	
PM	0.01	15.37	0.00	4.16	19.54
PM10	0.03	15.37	0.00	4.16	19.56
SO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00
NO <sub>x</sub>	0.37	0.00	0.00	0.00	0.37
VOC	0.02	0.00	0.02	20.43	20.47
CO	0.31	0.00	0.00	0.00	0.31
total HAPs	0.01	0.00	0.00	13.71	13.71
worst case single HAP	0.01	0.00	0.00	6.12	
	Hexane			Xylene	

Total emissions based on rated capacity at 8,760 hours/year.

### Controlled Potential Emissions (tons/year)

Pollutant	Emissions Generating Activity				TOTAL
	Combustion Sources	Miscellaneous Woodworking	Adhesive Assembly	Surface Coating Booth	
PM	0.01	2.32	0.00	4.16	6.49
PM10	0.03	2.32	0.00	4.16	6.51
SO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00
NO <sub>x</sub>	0.37	0.00	0.00	0.00	0.37
VOC	0.02	0.00	0.02	20.43	20.47
CO	0.31	0.00	0.00	0.00	0.31
total HAPs	0.01	0.00	0.00	13.71	13.71
worst case single HAP	0.01	0.00	0.00	6.12	6.12
	Hexane			Xylene	

Total emissions based on rated capacity at 8,760 hours/year, after control.

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**Company Name:** Woodwright Door & Trim, Inc.  
**Source Location:** 808 S. Ninth Street, Elkhart, Indiana, 46515  
**Permit Number:** R039-22554-00292  
**Reviewer:** Tanya White/EVP  
**Date:** April-06

Emission Units	Heat Input Capacity MMBTu/hr	Potential Throughput MMCF/yr
Space Heater	0.231	2.024
Space Heater	0.150	1.314
Space Heater	0.250	2.190
One (1) Hot Water Heater	0.028	0.245
Two (2) Updraft Furnaces	0.180	1.577
<b>Total Heat Input =</b>	<b>0.839</b>	<b>Total NG Usage = 7.350</b>

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
<b>Potential Emission in tons/yr</b>						
Space Heater	0.00	0.01	0.00	0.10	0.01	0.08
Space Heater	0.00	0.00	0.00	0.07	0.00	0.06
Space Heater	0.00	0.01	0.00	0.11	0.01	0.09
One (1) Hot Water Heater	0.00	0.00	0.00	0.01	0.00	0.01
Two (2) Updraft Furnaces	0.00	0.01	0.00	0.08	0.00	0.07
<b>Total Potential Emission in tons/yr =</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.37</b>	<b>0.02</b>	<b>0.31</b>

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

\*\*Emission Factor for NOx: Uncontrolled = 100 lb/MMCF

Emission Factor in lb/MMCF	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
<b>Potential Emission in tons/yr</b>					
Space Heater	2.12E-06	1.21E-06	7.59E-05	1.82E-03	3.44E-06
Space Heater	1.38E-06	7.88E-07	4.93E-05	1.18E-03	2.23E-06
Space Heater	2.30E-06	1.31E-06	8.21E-05	1.97E-03	3.72E-06
One (1) Hot Water Heater	2.58E-07	1.47E-07	9.20E-06	2.21E-04	4.17E-07
Two (2) Updraft Furnaces	1.66E-06	9.46E-07	5.91E-05	1.42E-03	2.68E-06
<b>Total Potential Emission in tons/yr =</b>	<b>7.72E-06</b>	<b>4.41E-06</b>	<b>2.76E-04</b>	<b>6.61E-03</b>	<b>1.25E-05</b>

Emission Factor in lb/MMCF	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
<b>Potential Emission in tons/yr</b>					
Space Heater	5.06E-07	1.11E-06	1.42E-06	3.84E-07	2.12E-06
Space Heater	3.29E-07	7.23E-07	9.20E-07	2.50E-07	1.38E-06
Space Heater	5.48E-07	1.20E-06	1.53E-06	4.16E-07	2.30E-06
One (1) Hot Water Heater	6.13E-08	1.35E-07	1.72E-07	4.66E-08	2.58E-07
Two (2) Updraft Furnaces	3.94E-07	8.67E-07	1.10E-06	3.00E-07	1.66E-06
<b>Total Potential Emission in tons/yr =</b>	<b>1.84E-06</b>	<b>4.04E-06</b>	<b>5.14E-06</b>	<b>1.40E-06</b>	<b>7.72E-06</b>

**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 from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4 (SCC #1-02-006-01, 02) and (1-03-006-02, 03) (AP-42 Supplement D 3/98)

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

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: Emissions Calculations  
Woodworking Operations**

Company Name: Woodwright Door & Trim, Inc.  
Source Location: 808 S. Ninth Street, Elkhart, Indiana, 46515  
Permit Number: R039-22554-00292  
Reviewer: Tanya White/EVP  
Date: February, 2006

**Uncontrolled Potential Emissions (tons/year)**

Process	No. of Units	Grain Loading per acf of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Emission Rate (lb/hr)	Total (tons/yr)
<b>P1 (Fifteen Inch Planer)</b>	1	0.001	3.8	527.79	99%	1.72	7.53
<b>P2 (Table Saw)</b>	1	0.001	5.7	263.89	99%	1.29	5.65
Estimated emissions from equipment not connected to dust collector =						0.50	2.19
<b>Total =</b>						<b>3.01</b>	<b>15.37</b>

**Controlled Potential Emissions (tons/year)**

Process	No. of Units	Grain Loading per acf of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Emission Rate (lb/hr)	Total (tons/yr)
<b>P1 (Fifteen Inch Planer)</b>	1	0.001	3.8	527.79	99%	0.02	0.075
<b>P2 (Table Saw)</b>	1	0.001	5.7	263.89	99%	0.01	0.056
Estimated emissions from equipment not connected to dust collector =						0.50	2.19
<b>Total =</b>						<b>0.03</b>	<b>2.32</b>

**Methodology**

Uncontrolled Emissions (tons/yr) = Grain Loading (grain/acf) \* Air /Cloth Ratio (acfm/ft<sup>2</sup>) \* Filter Area (ft<sup>2</sup>) \* 1/7000 (lb/grains) \* 60 (min/hr) \* 8,760 (hr/yr) \* 1/2,000 (ton/lb) \* 1/(1-Control Efficiency)

Controlled Emissions (tons/yr) = Uncontrolled Emissions \* (1-Control Efficiency)

PM = PM-10

Assumed 8,760 hours of operation per year

**For calculations of emissions from equipment not connected to dust collector refer to page 6.**

**Estimated emissions from equipment not connected to dust collector was provided by source.**

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Adhesive Assembly Operations**

**Company Name:** Woodwright Door & Trim, Inc.  
**Source Location:** 808 S. Ninth Street, Elkhart, Indiana, 46515  
**Permit Number:** R039-22554-00292  
**Reviewer:** Tanya White/EVP  
**Date:** April-06

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency*
Titebond Wood Glue**	9.2	54.10%	53.1%	0.97%	58.44%	40.49%	0.00525	10.00	0.21	0.09	0.00	0.11	0.02	0.00	0.22	100%

**Potential Emissions**

<b>0.00</b>	<b>0.11</b>	<b>0.02</b>	<b>0.00</b>
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations  
VOC and Particulate  
From the Surface Coating Booth**

**Company Name:** Woodwright Door & Trim, Inc.  
**Source Location:** 808 S. Ninth Street, Elkhart, Indiana, 46515  
**Permit Number:** R039-22554-00292  
**Reviewer:** Tanya White/EVP  
**Date:** April-06

Material*	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency**
Lite Maple Stain (FM5119)	7.88	98.86%	0.00%	98.86%	0.00%	6.55%	0.01720	10.00	7.79	7.79	1.34	32.16	5.87	0.03	118.93	50%
OR																
HC Vinyl Sealer (L49C0279)	7.58	75.53%	5.87%	69.66%	6.50%	23.39%	0.01280	10.00	5.65	5.28	0.68	16.22	2.96	0.52	22.57	50%
OR																
HC 40 Sheen Topcoat (L42C0818)	7.59	71.41%	8.02%	63.39%	9.21%	26.71%	0.08760	10.00	5.30	4.81	4.21	101.15	18.46	4.16	18.01	50%
AND																
Wash Thinner- Blend 2739	7.02	100.00%	0.00%	100.00%	0.00%	0.00%	0.00640	10.00	7.02	7.02	0.45	10.78	1.97	0.00	#DIV/0!	100%

**State Potential to Emit (Worst Case Potential Emissions - Topcoat Application + Wash Thinner)**

<b>4.66</b>	<b>111.94</b>	<b>20.43</b>	<b>4.16</b>
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Material*	Density (Lb/Gal)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Formaldehyde	Weight % MEK	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	MEK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (Ton/yr)
Lite Maple Stain (FM5119)	7.88	0.01720	10.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
OR														
HC Vinyl Sealer (L49C0279)	7.58	0.01280	10.00	1.00%	0.00%	0.00%	20.00%	3.00%	0.04	0.00	0.00	0.85	0.13	1.02
OR														
HC 40 Sheen Topcoat (L42C0818)	7.59	0.08760	10.00	10.00%	1.00%	0.00%	10.00%	21.00%	2.91	0.29	0.00	2.91	6.12	12.23
AND														
Wash Thinner- Blend 2739	7.02	0.00640	10.00	0.00%	0.00%	20.00%	55.0%	0.00%	0.00	0.00	0.39	1.08	0.00	1.48

**State Potential to Emit (Worst Case Potential Emissions - Topcoat Application + Wash Thinner)**

<b>2.91</b>	<b>0.29</b>	<b>0.39</b>	<b>3.99</b>	<b>6.12</b>	<b>13.71</b>
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**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used  
HAP emission rate (ton/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* Weight % of HAP \* (8760 hr/yr) \* (1 ton/2000 lbs)  
**\*Mutually exclusive coating operations. The spray booth can only apply one of Stain, Seal or apply Topcoat at a time.  
Coating applied using an air-assisted airless spray application and manual cleaning.**

**Appendix A: Emissions Calculations  
Particulate Matter Emissions  
From Miscellaneous Woodworking**

**Company Name:** Woodwright Door & Trim, Inc.  
**Source Location:** 808 S. Ninth Street, Elkhart, Indiana, 46515  
**Permit Number:** R039-22554-00292  
**Reviewer:** Tanya White/EVP  
**Date:** April-06

**\*Emissions are included with woodworking operations on Page 3**

<b>Radial Arm Saw</b>												
30.00	BF/hr	/	2	BF/cut*	=	15	cuts/hr					
*Smallest Length												
15.00	cuts/hr	x	0.125	in width	x	1.00	in thick	x	12	in long	=	22.5 in3 loss/hr
22.50	in3 loss/hr	/	1,728	in3/ft3	x	10.00	lb/ft3	=	0.13	lb loss/hr		

<b>Chop Saw</b>												
30.00	BF/hr	/	4	BF/cut*	=	7.5	cuts/hr					
*Smallest Length												
7.50	cuts/hr	x	0.125	in width	x	1.00	in thick	x	12	in long	=	11.25 in3 loss/hr
11.25	in3 loss/hr	/	1,728	in3/ft3	x	10.00	lb/ft3	=	0.07	lb loss/hr		

<b>Drill Press</b>												
30.00	BF/hr	/	4	BF/piece	=	7.5	pieces/hr					
7.50	pieces/hr	x	4.000	holes/piece	x	3.14	pi	x	0.0156	r2*	x	1.5 in depth = 2.21 in3 loss/hr
*1/4 in diameter bit												
2.21	in3 loss/hr	/	1,728	in3/ft3	x	10.00	lb/ft3	=	0.01	lb loss/hr		

<b>Jointer</b>												
30.00	BF/hr	/	2	BF/piece*	=	15	pieces/hr					
*Smallest Length												
15.00	pieces/hr	x	0.250	in width	x	0.50	in thick	x	4	in long	=	7.5 in3 loss/hr
7.50	in3 loss/hr	/	1,728	in3/ft3	x	10.00	lb/ft3	=	0.04	lb loss/hr		

<b>Drum Sander</b>												
30.00	BF/hr	x	12.00	in/BF long	x	0.01	in thick (surface loss)	x	12	in long	=	43.2 in3 loss/hr
43.20	in3 loss/hr	/	1,728	in3/ft3	x	10.00	lb/ft3	=	0.25	lb loss/hr		

Total Loss Estimate =	0.50 lb loss/hr
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**Note:** The Drum Sander has the highest emission rate from all miscellaneous woodworking operations at 0.25 lbs/hr. Since the combined PM potential to emit for miscellaneous woodworking operations is less than 0.551 pounds per hour, these emission units are exempt from the requirements of 326 IAC 6-3-2.