



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: March 22, 2007  
RE: Hoosier Wood Specialties / 001-23872-00063  
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 03/23/06



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

Mr. Gene Wallace  
Hoosier Wood Specialties  
7474 North Piqua Road  
Decatur, Indiana 46733

March 22, 2007

Re: Registered Construction and Operation Status,  
001-23872-00063

Dear Mr. Wallace:

The application from Hoosier Wood Specialties, received on November 8, 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 stationary custom wood components manufacturing and finishing operation, to be located at 7474 North Piqua Road, Decatur, Indiana 46733, is classified as registered:

- (a) One (1) woodworking operation, identified as EU-001, constructed in 2005, with a maximum wood throughput rate of 100 pounds per hours, with particulate emissions controlled by a baghouse (BH-001), and exhausting to stack SV-001.
- (b) One (1) spray booth applying stain, sealer or topcoat, identified as EU-002, constructed in 2005, with a maximum throughput rate of 45 wood pieces per hour, with particulate emissions controlled by a dry filter, and exhusting through stack SV-002.
- (c) Four (4) natural gas-fired space heaters, identified as EU-003a through EU-003d, constructed in 2005, with a combined maximum heat input capacity of 2.33 MMBtu per hour, and exhausting to stacks SV-003a through EU-003d, respectively.

The following conditions shall be applicable:

1. 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 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.
2. Pursuant to 326 IAC 6-4, the Permittee shall not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

3. Pursuant to 326 IAC 6-3, (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the surface coating operations (EU-002) shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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:

- (a) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (b) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

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.

4. Pursuant to 326 IAC 6-3-2(e)(1) and (e)(2), (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the woodworking operations (EU-001) shall be limited to five-hundred fifty-one thousandths (0.551) pounds per hour when operating at a process weight rate equal to or less than one hundred (100) pounds per hour.

The baghouse shall be in operation at all times the woodworking operations (EU-001) are in operation, in order to comply with this limit.

5. Pursuant to 326 IAC 8-2-12, for surface coating booth EU-002, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, the surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

This registration is the first air approval issued to this source at this location. 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.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mr. Stephen Treimel, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7902 to speak directly to Mr. Treimel. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

ERG/ST

cc: File - Adams County  
Adams County Health Department  
Air Compliance - Ryan Hillman  
Permit Tracking  
Compliance Data Section  
Office of Enforcement

<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>	<b>Hoosier Wood Specialties</b>
<b>Address:</b>	<b>7474 North Piqua Road</b>
<b>City:</b>	<b>Decatur, Indiana 46733</b>
<b>Authorized individual:</b>	<b>Lynn Garner</b>
<b>Phone #:</b>	<b>(260) 724-3233</b>
<b>Registration #:</b>	<b>001-23872-00063</b>

I hereby certify that Hoosier Wood Specialties is still in operation and is in compliance with the requirements of Registration 001-23872-00063.

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

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD) for a  
New Source Construction and Registration

**Source Background and Description**

Source Name:	Hoosier Wood Specialties
Source Location:	7474 North Piqua Road, Decatur, Indiana 46733
County:	Adams
SIC Code:	2434
Registration No.:	001-23872-00063
Permit Reviewer:	ERG/ST

The Office of Air Quality (OAQ) has reviewed an application from Hoosier Wood Specialties relating to the construction and operation of a custom wood components manufacturing and finishing operation.

**History and Background**

On May 22, 2002, Hoosier Wood Specialties, Inc. was issued New Construction MSOP 179-15234-00030 to operate a stationary wood cabinet doors production facility located at 7224 East 900 North, Ossian, Indiana 46777 in Wells County. In June 2005, the company relocated their business operations to 7474 North Piqua Road, Decatur, Indiana 46733 in Adams County. On November 8, 2006, Hoosier Wood Specialties submitted a permit application (001-23872-00063) for their operations in Decatur, Indiana. On December 5, 2006, Hoosier Wood Specialties, Inc. was issued Revocation 179-23779-00030 for their operations in Ossian, Indiana.

**Permitted Emission Units and Pollution Control Equipment**

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

**Unpermitted Emission Units and Pollution Control Equipment**

The source consists of the following unpermitted emission units:

- (a) One (1) woodworking operation, identified as EU-001, constructed in 2005, with a maximum wood throughput rate of 100 pounds per hours, with particulate emissions controlled by a baghouse (BH-001), and exhausting to stack SV-001.
- (b) One (1) spray booth applying stain, sealer or topcoat, identified as EU-002, constructed in 2005, with a maximum throughput rate of 45 wood pieces per hour, with particulate emissions controlled by a dry filter, and exhausting through stack SV-002.
- (c) Four (4) natural gas-fired space heaters, identified as EU-003a through EU-003d, constructed in 2005, with a combined maximum heat input capacity of 2.33 MMBtu per hour, and exhausting to stacks SV-003a through EU-003d, respectively.
- (d) Unpaved roads and parking lots.

## Existing Approvals

This is the first operating approval to be issued to this source at this location.

## Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment".
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed Registration is intended to satisfy the requirements of 326 AIC 2-5.1-2(b) and 326 IAC 2-5.5-2(c).

## Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
SC-001	Woodworking	15	3.0	18,000	65
SV-002	Spray Booth	30	2.0	2,100	65
SV-003 through SV-006	Four (4) Heaters	15	1.0	300	120

## Recommendation

The staff recommends to the Commissioner that the construction and 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 November 8, 2006, with additional information received on December 27, 2006 and January 18, 2007.

## Emission Calculations

See Appendix A of this document for detailed emission calculations (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/year)
PM	12.4
PM-10	12.3
SO <sub>2</sub>	0.01
VOC	8.84
CO	0.05
NO <sub>x</sub>	1.00
Single HAP (Methanol)	7.34
Total HAPs	7.43

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 25 tons per year and the potential to emit of PM and PM10 are equal to or greater than five (5) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) 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 (Part 70 Permit Program).
- (c) **Fugitive Emissions**  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 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.

### County Attainment Status

The source is located in Adams County.

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

- (a) Adams 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 PM2.5 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 - Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) emissions 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 ozone. Adams County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (c) Adams 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 - Entire 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

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

Pollutant	Emissions (tons/year)
PM	0.45
PM-10	0.37
SO <sub>2</sub>	0.01
VOC	8.84
CO	0.05
NO <sub>x</sub>	1.00
Single HAP	7.34
Combination HAPs	7.43

This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is 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 per year.

This is the first air approval issued to this source at this location.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this Registration.
- (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 Registration.
- (c) The requirements of the National Emission Standards for Hazardous Air for Surface Coating of Wood Furniture (40 CFR 63, Subpart JJ) are not included in this Registration for the surface coating booth (EU-002) because this source is a minor source of HAP, as defined in 40 CFR 63.2.

### State Rule Applicability – Entire Source

326 IAC 1-5-3 (Emergency Reduction Plan)

The source-wide potential to emit of PM, PM10, CO, NO<sub>x</sub>, SO<sub>2</sub>, and VOC is less than 100 tons per year. Therefore, the requirements of 326 IAC 1-5 are not applicable to this source.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of the surface coating facilities has an unrestricted potential to emit less than ten (10) tons per year of a single hazardous air pollutant (HAP) and less than twenty-five (25) tons per year of a combination of hazardous air pollutants (HAPs). Therefore, the requirements of 326 IAC 2-4.1 do not apply.

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

This source is located in Adams County, is not required to operate under a Part 70 permit, and emits less than five (5) tons per year of lead. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

**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.

**326 IAC 6-4 (Fugitive Dust Emissions)**

The source is subject to 326 IAC 6-4 (Fugitive Dust Emissions) because the source maintains paved roads and parking lots with public access. Pursuant to 326 IAC 6-4, the Permittee shall not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

The source is located in Adams County and did not receive all of the necessary preconstruction approvals prior to December 13, 1985. However, the fugitive particulate emissions from the paved and unpaved roads and parking lots are negligible. Pursuant to 326 IAC 6-5-7(d), this source is not subject to the requirements of 326 IAC 6-5.

**326 IAC 8-6 (Organic Solvent Emission Limitations)**

The source is not subject to 326 IAC 8-6 (Organic Solvent Emission Limitations) because it was constructed after January 1, 1980, and the potential to emit of VOC is less than 100 tons per year.

**State Rule Applicability – Individual Facilities**

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

Particulate from the surface coating operations (EU-002) shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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:

- (a) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

- (b) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

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 8-2-12 (Wood Furniture and Cabinet Coating)**

The surface coating booth (EU-001) was constructed after July 1, 1990, applies organic coatings to wood furniture components and has potential emissions of greater than fifteen (15) pounds of VOC per day before add-on controls.

Pursuant to 326 IAC 8-2-12, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, the surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

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

The woodworking operations (EU-001) have the potential to emit greater than 0.551 pounds of particulate per hour. Pursuant to 326 IAC 6-3-2(e)(1) and (e)(2), (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the woodworking operations (EU-001) shall be limited to five-hundred fifty-one thousandths (0.551) pounds per hour when operating at a process weight rate equal to or less than one hundred (100) pounds per hour.

The baghouse shall be in operation at all times the woodworking operations (EU-001) are in operation, in order to comply with this limit.

**Conclusion**

The construction and operation of this stationary custom wood components manufacturing and finishing operation shall be subject to the conditions of the New Source Construction and Registration 001-23872-00063.

Appendix A: Emission Calculations  
 VOC and Particulate Emissions From Surface Coating Operations

Company Name: Hoosier Wood Specialties  
 Address: 7474 North Piqua Road, Decatur, Indiana 46733  
 Registration: 001-23872-00063  
 Reviewer: ERG/ST  
 Date: February 13, 2007

**Surface Coating Booth EU-002**

Material	Density (lb/gal)	Weight % VOC	Weight % Solids	Usage (gal/unit)	Maximum Throughput (units/hour)	PTE VOC (lbs/day)	PTE VOC (tons/year)	Transfer Efficiency (%)	PTE PM/PM10 Before Control (tons/year)	Control Efficiency (%)	PTE PM/PM10 After Control (tons/year)
<b>Stain</b>											
SW Cherry Stain	6.67	98.0%	2.0%	0.006	45	42.4	7.73	65%	0.06	80%	0.01
<b>Sealer</b>											
SW Lacquer Sealer	7.64	70.3%	21.0%	0.006	45	34.8	6.35	65%	0.66	80%	0.13
<b>Topcoat</b>											
SW Lacquer	7.64	70.3%	21.0%	0.006	45	34.8	6.35	65%	0.66	80%	0.13
<b>Thinner</b>											
SW Lacquer Thinner	6.90	100%	0.0%	0.0002	45	1.49	0.27	65%	0.00	80%	0.00
<b>* Totals</b>						<b>43.8</b>	<b>8.00</b>		<b>0.66</b>		<b>0.13</b>

\* The spray booth can apply stain, sealer or topcoat at the maximum throughput rate of 45 units per hour. Only one coating can be applied at a time. Maximum PTE is calculated using the worst case emissions of VOC and PM/PM10 for these three coatings plus thinner usage. Thinner is used in application and cleanup for stain, sealer and topcoat.

**METHODOLOGY**

PTE VOC (lbs/day) = Density (lb/gal) x Weight % VOC x Usage (gal/unit) x Maximum Throughput (units/hour) x 24 hours/day

PTE VOC (tons/year) = Density (lb/gal) x Weight % VOC x Usage (gal/unit) x Maximum Throughput (units/hour) x 8760 hours/year x 1 ton/2,000 lbs

PTE PM/PM10 Before Control (tons/year) = Density (lb/gal) x Weight % Solids x Usage (gal/unit) x Maximum Throughput (units/hour) x 8760 hours/year x 1 ton/2,000 lbs x (1 - Transfer Efficiency (%))

PTE PM/PM10 (tons/year) = PTE PM/PM10 Before Control (tons/year) x (1 - Control Efficiency (%))

Appendix A: Emission Calculations  
HAP Emissions From Surface Coating Operations

Company Name: Hoosier Wood Specialties  
Address: 7474 North Piqua Road, Decatur, Indiana 46733  
Registration: 001-23872-00063  
Reviewer: ERG/ST  
Date: February 13, 2007

Material	Density (lb/gal)	Usage (gal/unit)	Maximum Throughput (units/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethylbenzene	Weight % 2-Butoxyethanol	Weight % Methanol
<b>Stain</b>								
SW Cherry Stain	6.67	0.006	45	0.0%	0.0%	0.0%	0.0%	93.0%
<b>Sealer</b>								
SW Lacquer Sealer	7.64	0.006	45	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Topcoat</b>								
SW Lacquer	7.64	0.006	45	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Thinner</b>								
SW Lacquer Thinner	6.90	0.0002	45	5.00%	15.0%	0.90%	4.00%	3.00%

Material	Density (Lb/Gal)	Usage (gal/unit)	Maximum Throughput (units/hour)	Potential to Emit (tons/year)							
				PTE Xylene	PTE Toluene	PTE Ethylbenzene	PTE 2-Butoxyethanol	PTE Methanol			
<b>Stain</b>											
SW Cherry Stain	(same as above)		45	0.0	0.0	0.0	0.0	7.34			
<b>Sealer</b>											
SW Lacquer Sealer				0.0	0.0	0.0	0.0	0.0			
<b>Topcoat</b>											
SW Lacquer				0.0	0.0	0.0	0.0	0.0			
<b>Thinner</b>											
SW Lacquer Thinner	0.01	0.04	0.002	0.01	0.008						
			<b>* Totals</b>	<b>0.01</b>	<b>0.04</b>	<b>0.002</b>	<b>0.01</b>	<b>7.34</b>			

\* The spray booth can apply stain, sealer or topcoat at the maximum throughput rate of 45 units per hour. Only one coating can be applied at a time. Maximum PTE is calculated using the worst case emissions of HAP for these three coatings plus thinner usage. Thinner is used in application and cleanup for stain, sealer and topcoat.

**METHODOLOGY**

PTE HAP (tons/year) = Density (lb/gal) x Weight % HAP x Usage (gal/unit) x Maximum Throughput (units/hour) x 8,760 hours/year x 1 ton/2,000 lbs

Appendix A: Emission Calculations  
 Combustion Emissions from Natural Gas-Fired Space Heaters

Company Name: Hoosier Wood Specialties  
 Address: 7474 North Piqua Road, Decatur, Indiana 46733  
 Registration: 001-23872-00063  
 Reviewer: ERG/ST  
 Date: February 13, 2007

**Space Heaters EU-003**

Total Heat Input Capacity *
MMBtu/hour
2.33

Maximum Potential Throughput
MMSCF/yr
20

\*Includes the following forced-air furnaces: One (1) 0.075 MMBtu/hr unit; Two (2) 0.25 MMBtu/hr units; and One (1) 1.75 MMBtu/hr unit.

Emission Factor (lb/MMSCF)	Pollutant						
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	HAPs
	1.9	7.6	0.6	100	84.0	5.5	1.89
PTE (tons/year)	0.02	0.08	0.01	1.00	0.84	0.05	0.02

All emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC 1-01-006-02, 1-02-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98) PM emission factor for Heaters and HVAC units is for filterable PM only. PM10 emission factor for Heaters and HVAC units is for filterable and condensable PM combined.

**Methodology**

Maximum Potential Throughput (MMSCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hr/yr x 1 MMSCF/1,020 MMBtu  
 PTE (ton/yr) = Max. Potential Throughput (MMSCF/yr) x Emission Factor (lb/MMSCF) x 1 ton/2,000 lb

Appendix A: Emission Calculations  
 Particulate Emissions from Woodworking Operations

Company Name: Hoosier Wood Specialties  
 Address: 7474 North Piqua Road, Decatur, Indiana 46733  
 Registration: 001-23872-00063  
 Reviewer: ERG/ST  
 Date: February 13, 2007

Operation	Baghouse	Process Weight Rate (lbs/hour)	Control Efficiency (%)	Sawdust Collected* (lbs/hr)	PTE PM/PM10 Uncontrolled (tons/year)	PTE PM/PM10 Controlled (lbs/hour)	PTE PM/PM10 Controlled (tons/year)	326 IAC 6-3-2 Maximum Allowable Emissions (lbs/hour)
Woodworking EU-001	CE-001	100	99.0%	2.60	11.5	0.03	0.11	0.55

\*Based on reported amount of sawdust collected from 8 hours of operations per day, 5 days per week, 26 weeks.  
 Assume all sawdust collected is PM. Assume PM = PM10. Density of oak is 50 pounds per cubic foot and density of sawdust is 50% that of solid wood.

**Methodology**

Sawdust Collected (lbs/hour) = 4 cubic yards sawdust / (8 hours/day x 5 days/week x 26 weeks) x 27 cubic feet per cubic yard x density of sawdust (25 pounds per cubic foot)  
 PTE PM/PM10 Uncontrolled (tons/year) = Sawdust Collected (lbs/hour) / (Control Efficiency %) x 8,760 (hours/year) \* 1 ton/2,000 lbs  
 PTE PM/PM10 Controlled (lbs/hour) = PTE PM/PM10 Uncontrolled (tons/year) x (1 - Control Efficiency %) x 2000lbs/1 ton x 1 year/8,760 hours  
 PTE PM/PM10 Controlled (tons/year) = PTE PM/PM10 Uncontrolled (tons/year) x (1 - Control Efficiency %)  
 326 IAC 6-3-2 Maximum Allowable Emissions (lbs/hour) = 4.1 x (Process Weight Rate (lbs/hour)/2000) ^ 0.67

Appendix A: Emission Calculations  
Fugitive Particulate Emissions from Roadways and Parking Lots

Company Name: Hoosier Wood Specialties  
Address: 7474 North Piqua Road, Decatur, Indiana 46733  
Registration: 001-23872-00063  
Reviewer: ERG/ST  
Date: February 13, 2007

**1. Emission Factors: AP-42**

According to AP-42, Chapter 13.2.2 - Unpaved Roads (11/06), the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

$$E = k \times (s/12)^a \times (w/3)^b \times ((365 - p)/365)$$

where:

E = emission factor (lb/vehicle mile traveled)	
s = surface material silt content (%) =	6.4 % (AP-42, Table 13.2.2-1)
w = mean vehicle weight (tons) =	1.3 tons
k = empirical constant =	4.9 for PM and 1.5 for PM10
a = empirical constant =	0.7 for PM and 0.9 for PM10
b = empirical constant =	0.45 for PM and PM10
p = number of days per year with 0.01 inches precipitation	112

PM Emission Factor =	$4.9 \times (6.4/12)^{0.7} \times (1.3/3)^{0.45} \times ((365 - 112)/365) =$	<b>1.51 lbs/mile</b>
PM10 Emission Factor =	$1.5 \times (6.4/12)^{0.9} \times (1.3/3)^{0.45} \times ((365 - 112)/365) =$	<b>0.41 lbs/mile</b>
Length of Unpaved Roads in One Direction =		<b>0.0136 miles</b>

**2. Potential to Emit (PTE) of PM/PM10 from Unpaved Roads:**

Vehicle Type	Vehicles per day	*Average Vehicle Weight	*Total Trip Number	Traffic Component	Component Vehicle Weight	Vehicle Mile Traveled (VMT)	PTE of PM	PTE of PM10
		(tons)	(trips/year)	(%)	(tons)	(miles/year)	(tons/year)	(tons/year)
Passenger Car	23	1.25	8,395	92.0%	1.15	229	0.17	0.05
Delivery Truck	2	2	730	8.0%	0.16	19.9	0.01	0.00
<b>Total</b>	<b>25</b>			<b>100%</b>	<b>1.31</b>	<b>249</b>	<b>0.19</b>	<b>0.05</b>

\* This information is provided by the source.

**Methodology**

Average Vehicle Weight (ton) = (Weight of Unloaded Vehicles + Weight of Loaded Vehicles) / 2

Total Trip Number (trips/yr) = Vehicles per day x 365 (days/year)

Traffic Component (%) = Vehicles per Day (by type) / Total Vehicles per Day

Component Vehicle Weight (tons) = Average Vehicle Weight (tons) x Traffic Component (%)

(Note that the summation of the component vehicle weight equals the Mean Vehicle Weight.)

Vehicle Miles Traveled (miles/year) = Length of Unpaved Roads in One Direction (miles) x 2 x Total Trip Numbers (trips/yr)

PTE of PM/PM10 (tons/year) = VMT (miles/year) x PM/PM10 Emission Factors (lbs/mile) x 1 tons/2,000 lbs

Appendix A: Emission Calculations  
Summary

Company Name: Hoosier Wood Specialties  
 Address: 7474 North Piqua Road, Decatur, Indiana 46733  
 Registration: 001-23872-00063  
 Reviewer: ERG/ST  
 Date: February 13, 2007

<b>Potential To Emit Before Controls (tons/year)</b>								
Emission Units	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	Single HAP*	Total HAPs
Spray Booth EU-002	0.66	0.66	0	0	8.00	0	7.34	7.41
Heaters EU-003	0.02	0.08	0.01	1.00	0.84	0.05	0.02	0.02
Woodworking EU-001	11.5	11.5	0	0	0	0	0	0
Fugitives (Roads and Parking)	0.19	0.05	0	0	0	0	0	0
<b>Total</b>	<b>12.4</b>	<b>12.3</b>	<b>0.01</b>	<b>1.00</b>	<b>8.84</b>	<b>0.05</b>	<b>7.34</b>	<b>7.43</b>

<b>Potential To Emit After Controls (tons/year)</b>								
Emission Units	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	Single HAP*	Total HAPs
Spray Booth EU-002	0.13	0.13	0	0	8.00	0	7.34	7.41
Heaters EU-003	0.02	0.08	0.01	1.00	0.84	0.05	0.02	0.02
Woodworking EU-001	0.11	0.11	0	0	0	0	0	0
Fugitives (Roads and Parking)	0.19	0.05	0	0	0	0	0	0
<b>Total</b>	<b>0.45</b>	<b>0.37</b>	<b>0.01</b>	<b>1.00</b>	<b>8.84</b>	<b>0.05</b>	<b>7.34</b>	<b>7.43</b>

\* Methanol