

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**Four Woods Laminating, Inc.  
7640 W. 500 S.  
Topeka, Indiana 46571**

is hereby authorized to construct

a wood cabinet and bath door manufacturing plant, consisting of the equipment listed on page 2 of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

|   |                |
|---|----------------|
| Construction Permit No.: CP-087-9074-00036                                  |                |
| Issued by:<br><br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

- (a) one (1) existing surface coating booth, constructed in 1970, referred to as booth 1,

- utilizing an airless spray application, with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
- (b) one (1) existing surface coating booth, constructed in 1994, referred to as booth 2, utilizing an airless spray application, with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
  - (c) four (4) new surface coating booths, referred to as booths 3, 4, 5, and 6, each utilizing an airless spray application, each with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
  - (d) one (1) new 350 horsepower diesel generator, referred to as engine 3, with a maximum heat input capacity of 2.45 million British thermal units per hour;
  - (e) one (1) new waste wood-fired heater, referred to as Wood 1, with a maximum heat input capacity of 0.04 million British thermal units per hour;
  - (f) one (1) new propane-fired air make up heater, referred to as Air 1, with a maximum heat input capacity of 2.333 million British thermal units per hour.

## Construction Conditions

### General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
  - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
  - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
  - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
  - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

- (e) The Permittee has submitted their Part 70 permit on September 17, 1997 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

- 7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

### **Operation Conditions**

#### General Operation Conditions

- 1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
- 2. That the Permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

#### Preventive Maintenance Plan

- 3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
  - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
  - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
  - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

#### Transfer of Permit

- 4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
  - (a) In the event that ownership of this wood cabinet and bath door manufacturing plant is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
  - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
  - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.
  - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
  - (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
  - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
  - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM or other public official having jurisdiction.

PSD Minor Source Limit

7. That the six paint booths designated as booths 1 through 6, shall use no more than 20.65 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per month. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

NESHAP Minor Source Limit

8. Pursuant to 40 CFR Part 63, Subpart JJ (national Emission Standards for Wood Furniture Manufacturing Operations), the six paint booths designated as booths 1 through 6, shall use no more than 0.78 tons of on any single HAP, including coatings, dilution solvents, and cleaning solvents, per month, and no more than 2.03 tons of any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, per month. Therefore, the emission limits listed in 40 CFR Part 63, Subpart JJ (national Emission Standards for Wood Furniture Manufacturing Operations) are not applicable, because this source is not a major source as defined in 40 CFR Part 63.2. However, pursuant to this rule, the source shall keep records to show that they are a minor source of HAPs.

Annual Emission Reporting

9. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015

Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

10. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

11. That pursuant to 326 IAC 6-3 (Process Operations):

- (a) The dry filters for particulate matter overspray control shall be in operation at all times when the paint booths are in operation.
- (b) The surface coating operation shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10P^{0.67} \quad \text{where: } E = \text{rate of emission in pounds per hour,}$$

P = process weight in tons per hour, if  
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

- (c) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the filters.
- (d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Volatile Organic Compound (VOC) Limitations

12. That pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet coating), the surface coatings applied to wood furniture and/or wood components from booths 2, 3, 4, 5, and 6 shall utilize one or more 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    | Aerosol Spray Cans                     |

High volume low pressure spray is an acceptable alternative application of air-assisted airless spray. High volume low pressure (HVLP) spray means technology used to apply coating to a 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.

Reporting Requirements

13. That a log of information necessary to document compliance with operation permit condition numbers 7, 8 and 11 (c) shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).
- (a) A quarterly summary to document compliance with operation permit condition numbers 7 and 8 shall be submitted to:
- Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015
- within thirty (30) calendar days after the end of the quarter being reported in the format attached. The reports shall include the VOC and HAP usages, including those from thinners, coatings and clean-up solvents. The records shall include the coating, thinner and clean up solvent usage, material safety data sheet (MSDS) and the date of use.
- (b) Unless otherwise specified in this permit, any notice, report, or other submissions required by this permit shall be timely if:
- (i) Postmarked on or before the date it is due; or
- (ii) Delivered by any other method if it is received and stamped by IDEM, OAM on or before the date it is due.
- (c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.
- (d) Any corrective actions taken as a result of an exceedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.
- (e) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

Open Burning

14. That the Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

15. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within 180 calendar days from the date on which this source commences operation.

(c) If the ERP is disapproved by IDEM, OAM the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**Quarterly Report**

Source Name: Four Woods Laminating, Inc.  
Source Address: 7640 W. 500 S., Topeka, Indiana 46571  
CP No.: CP087-9074-00036  
Facility: surface coating booths 1 through 6  
Parameter: VOC usage, HAP usage  
Limits: 20.65 tons VOC per month, 0.78 tons any single HAP per month, 2.03 tons any combination of HAPs per month

**Year:** \_\_\_\_\_

| Month | VOC Usage (tons/month) | HAP Usage -- combination of all HAPs delivered to the applicator (tons/month) | HAP Usage -- worst case single HAP delivered to applicator (tons/month) |
|-------|------------------------|---|---|
|       |                        |   |   |
|       |                        |   |   |
|       |                        |   |   |

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for New Construction and Operation

#### Source Background and Description

Source Name: Four Woods Laminating, Inc.  
Source Location: 7640 W. 500 S., Topeka, Indiana 46571  
County: LaGrange  
Construction Permit No.: CP-087-9074-00036  
SIC Code: 2434  
Permit Reviewer: Nisha Sizemore

The Office of Air Management (OAM) has reviewed an application from Four Woods Laminating, Inc. relating to the construction and operation of a wood cabinet and bath door manufacturing plant, consisting of the following equipment:

- (a) one (1) existing surface coating booth, constructed in 1970, referred to as booth 1, utilizing an airless spray application, with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
- (b) one (1) existing surface coating booth, constructed in 1994, referred to as booth 2, utilizing an airless spray application, with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
- (c) four (4) new surface coating booths, referred to as booths 3, 4, 5, and 6, each utilizing an airless spray application, each with a maximum capacity of 93.5 doors per hour, with dry filters for overspray control;
- (d) one (1) new 350 horsepower diesel generator, referred to as engine 3, with a maximum heat input capacity of 2.45 million British thermal units per hour;
- (e) one (1) new waste wood-fired heater, referred to as Wood 1, with a maximum heat input capacity of 0.04 million British thermal units per hour;
- (f) one (1) new propane-fired air make up heater, referred to as Air 1, with a maximum heat input capacity of 2.333 million British thermal units per hour.

### Stack Summary

| Stack ID | Operation | Height (feet) | Diameter (feet) | Temperature (°F) |
|----------|-----------|---------------|-----------------|------------------|
| 1        | booth 1   | 17            | 2               | 70               |
| 2        | booth 2   | 17            | 2               | 70               |
| 3        | booth 3   | 17            | 2               | 70               |
| 4        | booth 4   | 17            | 2               | 70               |
| 5        | booth 5   | 17            | 2               | 70               |
| 6        | booth 6   | 17            | 2               | 70               |

### Enforcement Issue

IDEM is aware that two of the surface coating booths were constructed prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

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

Information, unless otherwise stated, 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 September 17, 1997, with additional information received on December 4, 1997 and December 9, 1997.

### Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (2 pages).

### Total Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

| Pollutant                            | Potential Emissions (tons/year) |
|--------------------------------------|---------------------------------|
| Particulate Matter (PM)              | 121                             |
| Particulate Matter (PM10)            | 121                             |
| Sulfur Dioxide (SO <sub>2</sub> )    | 21.7                            |
| Volatile Organic Compounds (VOC)     | 1010                            |
| Carbon Monoxide (CO)                 | 9.12                            |
| Nitrogen Oxides (NO <sub>x</sub> )   | 34.8                            |
| Single Hazardous Air Pollutant (HAP) | 41.4                            |
| Combination of HAPs                  | 51.5                            |

- (a) Allowable emissions (as defined in the Indiana Rule) of VOC, NO<sub>x</sub>, and PM are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (b) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

### County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. LaGrange County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) LaGrange County has been classified as attainment or unclassifiable for PM10, SO<sub>2</sub>, CO and total suspended particulate. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

| Pollutant        | Emissions<br>(ton/yr) |
|------------------|-----------------------|
| PM               | 121                   |
| PM10             | 121                   |
| SO <sub>2</sub>  | 21.7                  |
| VOC              | 249                   |
| CO               | 9.12                  |
| NO <sub>x</sub>  | 34.8                  |
| Single HAP       | 9.4                   |
| Combination HAPs | 24.4                  |

- (a) 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, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The amount of VOCs delivered to the applicators of the surface coating booths shall not exceed 20.65 tons per month. This production limit is necessary to limit the source potential to emit of VOC to 249 tons per year, therefore, the PSD requirements do not apply.

## Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is greater than or equal to 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
- (c) any combination of HAPs is greater than or equal to 25 tons per year.

This source has submitted their FESOP (F-087-8992-00036) application on September 17, 1997.

### **Federal Rule Applicability**

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

40 CFR Part 63, Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations Pursuant to 40 CFR Part 63, Subpart JJ (national Emission Standards for Wood Furniture Manufacturing Operations), the six paint booths designated as booths 1 through 6, shall use no more than 0.78 tons of on any single HAP, including coatings, dilution solvents, and cleaning solvents, per month, and no more than 2.03 tons of any combination of HAPs, including coatings, dilution solvents, and cleaning solvents, per month. Therefore, the emission limits listed in 40 CFR Part 63, Subpart JJ (national Emission Standards for Wood Furniture Manufacturing Operations) are not applicable, because this source is not a major source as defined in 40 CFR Part 63.2. However, pursuant to this rule, the source shall keep records to show that they are a minor source of HAPs.

### **State Rule Applicability**

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

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons per year of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

#### 326 IAC 2-2 (prevention of Significant Deterioration)

Pursuant to this rule, the six paint booths designated as booths 1 through 6, shall use no more than 20.65 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per month. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

#### 326 IAC 5-1-2 (Visible Emission Limitations)

Pursuant to this rule, except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-3 (Process Operations)

Pursuant to this rule, the following conditions shall apply:

(a) The dry filters for particulate matter overspray control shall be in operation at all times when the paint booths are in operation.

(b) The surface coating operation shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10P^{0.67} \quad \text{where: } E = \text{rate of emission in pounds per hour,}$$

P = process weight in tons per hour, if  
P is equal to or less than 60,000 lbs/hr (30 tons/hr)

(c) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the filters.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

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

The new surface coating booths designated as booths 3, 4, 5, and 6 must comply with this rule because each booth has actual VOC emissions greater than 15 pounds per day. The existing surface coating booth designated as booth 2, must comply with this rule because the booth was constructed after 1990 and has actual VOC emissions greater than 15 pounds per day. The surface coating booth designated as booth 1 is exempt from this rule because it was constructed prior to July 1, 1990. The surface coatings applied to wood furniture and/or wood components from booths 2, 3, 4, 5, and 6 shall utilize one or more 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    | Aerosol Spray Cans                     |

High volume low pressure spray is an acceptable alternative application of air-assisted airless spray. High volume low pressure (HVLP) spray means technology used to apply coating to a 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 4-1 (Open Burning)

That the Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

326 IAC 1-5-2 (Emergency Reduction Plans; Submission)

The source must comply with this rule because it has the potential to emit VOCs in excess of 100 tons per year. Pursuant to this rule, the following conditions shall apply:

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within 180 calendar days from the date on which this source commences operation.

(c) If the ERP is disapproved by IDEM, OAM the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This new source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

(b) See attached spreadsheets for detailed air toxic calculations.



## **Conclusion**

The construction of this wood cabinet and bath door manufacturing plant will be subject to the conditions of the attached proposed Construction Permit No. CP-087-9074-00036.

Appendix A: Emission Calculations

Company Name: Four Woods Laminating, Inc.  
Plant Location: 7640 W. 500 S., Topeka, IN 46571  
County: LaGrange  
Date Received: September 17, 1997  
Permit Reviewer: Nisha Sizemore

Baghouse

$$\frac{7000 \text{ gr/dscf} \times 2000 \text{ sq ft cloth} \times 525600 \text{ min/yr}}{7000 \text{ gr/lb} \times 2000 \text{ lb/ton}} \times 1 \text{ :1 air/cloth ratio} = 0.00 \text{ tons/yr}$$

**Appendix A: Emission Calculations  
Internal Combustion Engines - Diesel Fuel  
Turbine (>250 and <600 HP)  
Reciprocating**

**Company Name:** Four Woods Laminating, Inc.  
**City, Indiana:** Topeka, Indiana  
**Reviewer:** Nisha Sizemore

**CP#:** 087-9074  
**Plt ID:** 087-00036

**A. Emissions calculated based on output rating (hp)**

Heat Input Capacity  
Horsepower (hp)

Potential Throughput  
hp-hr/yr

350.0

3066000.0

| Emission Factor in lb/hp-hr   | Pollutant |        |        |        |        |        |
|-------------------------------|-----------|--------|--------|--------|--------|--------|
|                               | PM        | PM10   | SO2    | NOx    | VOC    | CO     |
|                               | 0.0022    | 0.0022 | 0.0021 | 0.0310 | 0.0025 | 0.0067 |
| Potential Emission in tons/yr | 3.4       | 3.4    | 3.1    | 47.5   | 3.9    | 10.2   |

**Methodology**

Potential Throughput (hp-hr/yr) = hp \* 8760 hr/yr

Emission Factors are from AP42 (Fifth edition, January 1995), Table 3.3-2

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton )

**Appendix A: Emission Calculations  
Internal Combustion Engines - Diesel Fuel  
Turbine (>600 HP)**

**Company Name:** Four Woods Laminating, Inc.  
**City, Indiana:** Topeka, Indiana  
**Reviewer:** Nisha Sizemore

**CP#:** 087-9074  
**Plt ID:** 087-00036

**Emissions calculated based on heat input capacity (MMBtu/hr)**

Heat Input Capacity  
MM Btu/hr

S=  = WEIGHT % SULFUR

| Emission Factor in lb/MMBtu   | Pollutant    |                |                       |            |            |            |
|-------------------------------|--------------|----------------|-----------------------|------------|------------|------------|
|                               | PM<br>0.0697 | PM10<br>0.0573 | SO2<br>2.0<br>(1.01S) | NOx<br>3.1 | VOC<br>0.1 | CO<br>0.81 |
| Potential Emission in tons/yr | 0.7          | 0.6            | 21.7                  | 33.3       | 1.1        | 8.7        |

**Methodology**

Potential Throughput (hp-hr/yr) = hp \* 8760 hr/yr

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] \* 8760 hr/yr / (2,000 lb/ton )

**Appendix A: Emission Calculations**  
**LPG-Propane - Industrial Boilers**  
**(Heat input capacity: > 0.3 MMBtu/hr and < 10 MMBtu/hr)**

**Company Name:** Four Woods Laminating, Inc.  
**Address City IN Zip:** 7640 W. 500 S., Topeka, IN 46571  
**CP:** 087-9074  
**Plt ID:** 087-00036  
**Reviewer:** Nisha Sizemore

|                                   |                                     |   |                                   |
|-----------------------------------|-------------------------------------|---|-----------------------------------|
| Heat Input Capacity<br>MMBtu/hr   | Potential Throughput<br>kgals/year  | SO2 Emission factor = 0.10 x S<br>S = Weight % Sulfur = | <input type="text" value="1.50"/> |
| <input type="text" value="2.33"/> | <input type="text" value="217.44"/> |   |                                   |

| Emission Factor in lb/kgal    | Pollutant |             |                       |             |            |           |
|-------------------------------|-----------|-------------|-----------------------|-------------|------------|-----------|
|                               | PM<br>0.4 | PM10<br>0.4 | SO2<br>0.2<br>(0.10S) | NOx<br>14.0 | VOC<br>0.5 | CO<br>1.9 |
| Potential Emission in tons/yr | 0.0       | 0.0         | 0.0                   | 1.5         | 0.1        | 0.2       |

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.094 MMBtu

Emission Factors are from AP42, Fifth Edition (January 1995), Table 1.5-2 (SCC #1-03-010-02)

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

**Appendix A: Emissions Calculations  
VOC, HAPs, and Particulate  
From Surface Coating Operations**

**Company Name: Four Woods Laminating, Inc.  
Address City IN Zip: 7640 W. 500 S., Topeka, IN 46571  
CP: 087-9074  
Pit ID: 087-00036  
Reviewer: Nisha Sizemore**

| Material     | Booth | Density (Lb/Gal) | Weight % Volatile (H2O& Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Vol (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 |
|--------------|-------|------------------|-----------------------------------|----------------|-------------------|----------------|---------------------------|-----------------------|---------------------|---|----------------------------------|-------------------------------|------------------------------|-----------------------------|------------------------------|--------------------|---------------------|
| Facett 50    | 1     | 7.78             | 66.30%                            | 0.0%           | 66.3%             | 0.0%           | 14.50%                    | 0.130000              | 93.500              | 5.16  | 5.16                             | 62.70                         | 1504.73                      | 274.61                      | 34.90                        | 35.57              | 75%                 |
| Dutch Sunset | 2     | 9.84             | 8.60%                             | 0.0%           | 8.6%              | 0.0%           | 25.00%                    | 0.050000              | 93.500              | 0.85  | 0.85                             | 3.96                          | 94.95                        | 17.33                       | 46.04                        | 3.38               | 75%                 |
| Waterford    | 3     | 7.38             | 97.70%                            | 0.0%           | 97.7%             | 0.0%           | 1.00%                     | 0.050000              | 93.500              | 7.21  | 7.21                             | 33.71                         | 808.99                       | 147.64                      | 0.87                         | 721.03             | 75%                 |
| Facett 50    | 4     | 7.78             | 66.30%                            | 0.0%           | 66.3%             | 0.0%           | 14.50%                    | 0.130000              | 93.500              | 5.16  | 5.16                             | 62.70                         | 1504.73                      | 274.61                      | 34.90                        | 35.57              | 75%                 |
| Oak Light    | 5     | 7.42             | 96.70%                            | 0.0%           | 96.7%             | 0.0%           | 1.40%                     | 0.050000              | 93.500              | 7.18  | 7.18                             | 33.54                         | 805.05                       | 146.92                      | 1.25                         | 512.51             | 75%                 |
| Fruitwood    | 6     | 7.47             | 94.20%                            | 0.0%           | 94.2%             | 0.0%           | 3.30%                     | 0.050000              | 93.500              | 7.04  | 7.04                             | 32.90                         | 789.52                       | 144.09                      | 2.22                         | 213.23             | 75%                 |

**State Potential Emissions  
Emissions after controls**

**Add worst case coating to all solvents**

**229.50                      5507.98                      1005.21                      120.17  
4.21**

**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

| Material     | Booth | Density (Lb/Gal) | Gal of Mat (gal/unit) | Maximum (unit/hour) | Weight % Xylene | Weight % Ethylene Glycol | Xylene Emissions (ton/yr) | Ethylene Glycol Emissions (ton/yr) |
|--------------|-------|------------------|-----------------------|---------------------|-----------------|--------------------------|---------------------------|------------------------------------|
| Facett 50    | 1     | 7.78             | 0.130000              | 93.500              | 10.00%          | 0.00%                    | 41.42                     | 0.00                               |
| Dutch Sunset | 2     | 9.84             | 0.050000              | 93.500              | 0.00%           | 5.00%                    | 0.00                      | 10.07                              |
| Waterford    | 3     | 7.38             | 0.050000              | 93.500              | 0.00%           | 0.00%                    | 0.00                      | 0.00                               |
| Facett 50    | 4     | 7.78             | 0.130000              | 93.500              | 10.00%          | 0.00%                    | 41.42                     | 0.00                               |
| Oak Light    | 5     | 7.42             | 0.050000              | 93.500              | 0.00%           | 0.00%                    | 0.00                      | 0.00                               |
| Fruitwood    | 6     | 7.47             | 0.050000              | 93.500              | 0.00%           | 0.00%                    | 0.00                      | 0.00                               |

Total State Potential Emissions  
Totals HAPs

92.91

82.84

10.07

**Waste Wood Heater**

**Appendix A: Emissions Calculations  
Wood Waste Combustion**

**Company Name: Four Woods Laminating, Inc.**  
**City, Indiana: Topeka, Indiana**  
**Reviewer: Nisha Sizemore**

**CP#: 087-9074**  
**Pit ID: 087-00036**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
tons/year

0.04

32

|                               | Pollutant |             |              |            |             |             |                |
|-------------------------------|-----------|-------------|--------------|------------|-------------|-------------|----------------|
| Emission Factor in lb/ton     | PM<br>8.8 | PM10<br>6.5 | SO2<br>0.075 | NOx<br>1.5 | VOC<br>1.40 | CO<br>13.60 | lead<br>0.0029 |
| Potential Emission in tons/yr | 0.14      | 0.10        | 0.00         | 0.02       | 0.02        | 0.22        | 0.0000         |

|                               |                          |                    |                          |                     |                         |                     |                     |
|-------------------------------|--------------------------|--------------------|--------------------------|---------------------|-------------------------|---------------------|---------------------|
| Emission Factor in lb/ton     | formaldehyde<br>0.006600 | phenol<br>0.000390 | acetaldehyde<br>0.003000 | benzene<br>0.003600 | naphthalene<br>0.002300 | arsenic<br>0.000088 | cadmium<br>0.000017 |
| Potential Emission in tons/yr | 0.000105                 | 0.000006           | 0.000048                 | 0.000057            | 0.000037                | 0.000001            | 0.000000            |

|                               |                      |                       |                     |                    |                      |            |
|-------------------------------|----------------------|-----------------------|---------------------|--------------------|----------------------|------------|
| Emission Factor in lb/ton     | chromium<br>0.000130 | manganese<br>0.008900 | mercury<br>0.000007 | nickel<br>0.000560 | selenium<br>0.000180 | Total HAPs |
| Potential Emission in tons/yr | 0.000002             | 0.000142              | 0.000000            | 0.000009           | 0.000003             | 0.000457   |

**Methodology**

Emission Factor Units are lb/ton  
 Emission Factors from AP-42, Chapter 1.6  
 Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton)/2,000 lb/ton  
 Heating Value of wood is 5500 MMBtu per pound

## Appendix A: Emissions Calculations

**Company Name:** Four Woods Laminating, Inc.  
**Address City IN Zip:** 7640 W. 500 S., Topeka, IN 46571  
**CP:** 087-9074  
**Plt ID:** 087-00036  
**Reviewer:** Nisha Sizemore

### Potential Emissions (tons/yr)

|                        | PM     | PM10   | VOC     | SO2   | NOx   | CO   | Xylene | Ethylene Glycol | Total HAPs |
|------------------------|--------|--------|---------|-------|-------|------|--------|-----------------|------------|
| surface coating        | 120.17 | 120.17 | 1005.21 | 0.00  | 0.00  | 0.00 | 41.42  | 10.07           | 51.49      |
| waste wood heater      | 0.14   | 0.10   | 0.02    | 0.00  | 0.02  | 0.22 | 0.00   | 0.00            | 0.00       |
| propane-fired heater   | 0.00   | 0.00   | 0.10    | 0.00  | 1.50  | 0.20 | 0.00   | 0.00            | 0.00       |
| diesel-fired generator | 0.70   | 0.60   | 1.10    | 21.70 | 33.30 | 8.70 | 0.00   | 0.00            | 0.00       |
| Totals                 | 121.01 | 120.87 | 1006.43 | 21.70 | 34.82 | 9.12 | 41.42  | 10.07           | 51.49      |

### Limited Emissions (tons/yr)

|                        | PM     | PM10   | VOC    | SO2   | NOx   | CO   | Xylene | Ethylene Glycol | Total HAPs |
|------------------------|--------|--------|--------|-------|-------|------|--------|-----------------|------------|
| surface coating        | 120.17 | 120.17 | 247.78 | 0.00  | 0.00  | 0.00 | 41.42  | 10.07           | 51.49      |
| waste wood heater      | 0.14   | 0.10   | 0.02   | 0.00  | 0.02  | 0.22 | 0.00   | 0.00            | 0.00       |
| propane-fired heater   | 0.00   | 0.00   | 0.10   | 0.00  | 1.50  | 0.20 | 0.00   | 0.00            | 0.00       |
| diesel-fired generator | 0.70   | 0.60   | 1.10   | 21.70 | 33.30 | 8.70 | 0.00   | 0.00            | 0.00       |
| Totals                 | 121.01 | 120.87 | 249.00 | 21.70 | 34.82 | 9.12 | 41.42  | 10.07           | 51.49      |



Mail to: Permit Administration & Development Section  
Office Of Air Management  
100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015

Four Woods Laminating, Inc.  
7640 W. 500 S.  
Topeka, Indiana 46571

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that Four Woods Laminating, Inc., 7640 W. 500 S., Topeka, Indiana 46571, has constructed the wood cabinet and bath door manufacturing plant in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on September 17, 1997 and as permitted pursuant to **Construction Permit No. CP-087-9074, Plant ID No. 087-00036** issued on \_\_\_\_\_
5. I hereby certify that Four Woods Laminating, Inc. has submitted a FESOP application.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_)

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of  
Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.  
My Commission expires: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**NOTICE OF 30-DAY PERIOD  
FOR PUBLIC COMMENT**

Proposed Approval of Construction and Operation Permit  
for **Four Woods Laminating, Inc.**  
in **LaGrange County**

**CP-087-9074, Plt ID-087-00036**

Notice is hereby given that the above company located at 7640 W. 500 S., Topeka, Indiana, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a permit to construct and operate a wood cabinet and bath door manufacturing plant. Based on 8,760 hours of operation per year, the potential emissions of VOC are 1010 tons per year. The VOC emissions are limited to 249 tons per year.

IDEM is aware that this wood cabinet and bath door manufacturing plant has been constructed prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Notice is hereby given that there will be a period of 30 days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any aggrieved individuals. A copy of the application and staff review is available for examination at the LaGrange County Public Library, Topeka Branch, 129 South Main Street, Topeka, Indiana. All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If appropriate adverse comments concerning the **air pollution impact** of this proposed source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Management (OAM), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Nisha Sizemore, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 317/232-8356 or at 1-800-451-6027 ext. (2-8356).

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

NLS