



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: May 28, 2009

RE: Design Industries / 097 - 21367 - 00357

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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, Suite N 501E, 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  
FNPER.dot12/03/07



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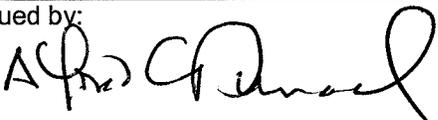
## Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**Design Industries, Inc.  
51 South Koweba Lane  
Indianapolis, Indiana 46201**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M097-21367-00357	
Issued by:  Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: <p style="text-align: center;">May 28, 2009</p> Expiration Date: <p style="text-align: center;">May 28, 2019</p>

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary wood office furniture and store fixtures manufacturing plant.

Source Address:	51 South Koweba Lane, Indianapolis, Indiana 46201
Mailing Address:	51 South Koweba Lane, Indianapolis, Indiana 46201
General Source Phone Number:	(317) 267-0621
SIC Code:	2541
County Location:	Marion
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

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This stationary source consists of the following emission units and pollution control devices:

- (a) Two (2) paint booths, identified as EU 001 and EU 006, each installed in 1995, each equipped with air atomization guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 001 and S/V 006.
- (b) Two (2) paint booths, identified as EU 003 and EU 004, each installed in 1995, each equipped with HVLP spray guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 003 and S/V 004.
- (c) A woodworking shop, identified as EU 007 (formerly EU 01), installed in 1995, with a maximum throughput of 164 pounds per hour of wood, using a baghouse for particulate control, and exhausting indoors through stack/vent S/V 007 (formerly S/V 01).
- (d) Fugitive emissions from paved and unpaved roads and parking lots.

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-1.1-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### **B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]**

- 
- (a) This permit, M097-21367-00357, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### **B.3 Term of Conditions [326 IAC 2-1.1-9.5]**

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### **B.4 Enforceability**

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### **B.5 Severability**

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### **B.6 Property Rights or Exclusive Privilege**

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This permit does not convey any property rights of any sort or any exclusive privilege.

### **B.7 Duty to Provide Information**

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

#### B.8 Certification

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

#### B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

#### B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to M097-21367-00357 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

**B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

**B.13 Permit Renewal [326 IAC 2-6.1-7]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
  - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.15 Source Modification Requirement**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

**B.16 Inspection and Entry**

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

**B.18 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees due within thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.19 Credible Evidence [326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

#### C.1 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to 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 this article.

#### C.2 Opacity [326 IAC 5-1]

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, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

#### C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

#### C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape 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 (Fugitive Dust Emissions).

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-6.1-5(a)(2)]**

#### **C.7 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.8 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

## **Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]**

### **C.9 Compliance Monitoring [326 IAC 2-1.1-11]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

### **C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.11 Instrument Specifications [326 IAC 2-1.1-11]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

## **Corrective Actions and Response Steps**

### **C.12 Response to Excursions or Exceedances**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or

- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.13 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

**C.14 Malfunctions Report [326 IAC 1-6-2]**

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

**C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]**

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

**C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]**

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- (a) Reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) paint booths, identified as EU 001 and EU 006, each installed in 1995, each equipped with air atomization guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 001 and S/V 006.
- (b) Two (2) paint booths, identified as EU 003 and EU 004, each installed in 1995, each equipped with HVLP spray guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 003 and S/V 004.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

#### D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12, the surface coatings applied to wood furniture from the paint booths, identified as EU 001, EU 003, EU 004 and EU 006, shall utilize one of the following application methods:

- (a) Airless Spray Application
- (b) Air Assisted Airless Spray Application
- (c) Electrostatic Spray Application
- (d) Electrostatic Bell or Disc Application
- (e) Heated Airless Spray Application
- (f) Roller Coating
- (g) Brush or Wipe Application
- (h) 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) pound 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.

#### D.1.2 Particulate Matter Emission Limitations [326 IAC 6.5-1-2] [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the paint booths (EU 001, EU 003, EU 004, and EU 006) shall not exceed 0.03 grains per dry standard cubic foot, each.
- (b) Pursuant to 6-3-2 (d), particulate from the four (4) paint booths, identified as EU 001, EU 003, EU 004, and EU 006, shall be controlled by the dry filters and the Permittee shall operate the control devices in accordance with manufacturer's specifications. In addition,

if overspray is visibly detected at the exhaust or accumulates on the ground, the source 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.

If overspray is visibly detected, the source 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.

#### D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for four (4) paint booths (EU 001, EU 003, EU 004, and EU 006) and any control devices.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (c) A woodworking shop, identified as EU 007 (formerly EU 01), installed in 1995, with a maximum throughput of 164 pounds per hour of wood, using a baghouse for particulate control, and exhausting indoors through stack/vent S/V 007 (formerly S/V 01).

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

#### D.2.1 Particulate Matter Emission Limitations [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the woodworking shop (EU 007) shall not exceed 0.03 grains per dry standard cubic foot.

#### D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the woodworking shop (EU 007) and any control devices.

### Compliance Determination Requirements

#### D.2.3 Particulate Control

- (a) In order to comply with Conditions D2.1, the baghouse for particulate control shall be in operation and control emissions from the woodworking shop (EU 007) all times the woodworking shop is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

#### D.2.4 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the woodworking shop. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. All defective bags shall be replaced.

#### D.2.5 Broken or Failed Bag Detection

- (a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**MINOR SOURCE OPERATING PERMIT (MSOP)  
CERTIFICATION**

Source Name: Design Industries, Inc.  
Source Address: 51 South Kowebe Lane, Indianapolis, Indiana 46201  
Mailing Address: 51 South Kowebe Lane, Indianapolis, Indiana 46201  
MSOP No.: M097-21367-00357

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)\_\_\_\_\_
- Report (specify)\_\_\_\_\_
- Notification (specify)\_\_\_\_\_
- Affidavit (specify)\_\_\_\_\_
- Other (specify)\_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	Design Industries, Inc.
<b>Address:</b>	51 South Kowebe Lane
<b>City:</b>	Indianapolis, Indiana 46201
<b>Phone #:</b>	(317) 267-0621
<b>MSOP #:</b>	M097-21367-00357

I hereby certify that Design Industries, Inc. is :

still in operation.

no longer in operation.

I hereby certify that Design Industries, Inc. is :

in compliance with the requirements of MSOP M097-21367-00357.

not in compliance with the requirements of MSOP M097-21367-00357.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

### MALFUNCTION REPORT

#### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER: (317) 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_, 100 TONS/YEAR CARBON MONOXIDE ?\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_  
INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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

Technical Support Document (TSD) for a Minor Source Operating Permit Renewal

**Source Background and Description**

<b>Source Name:</b>	<b>Design Industries, Inc.</b>
<b>Source Location:</b>	<b>51 South Kowebe Lane, Indianapolis, Indiana 46201</b>
<b>County:</b>	<b>Marion</b>
<b>SIC Code:</b>	<b>2541</b>
<b>Permit Renewal No.:</b>	<b>M097-21367-00357</b>
<b>Permit Reviewer:</b>	<b>Sarah Conner, Ph. D.</b>

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Design Industries, Inc. relating to the operation of a stationary wood office furniture and store fixtures manufacturing plant.

**History**

On June 1, 2005 Design Industries, Inc. submitted an application to the OAQ requesting to renew its operating permit. Design Industries, Inc. was issued an MSOP M097-11076-00357 on July 28, 2000. Additional information, including material safety data sheets (MSDS) were submitted in February and March 2009 regarding the MSOP renewal application that had been submitted on June 1, 2005. The source is removing two paint booths, identified as EU 002 and EU 005 in order to keep their potential to emit below Title V thresholds.

**Permitted Emission Units and Pollution Control Equipment**

- (a) Two (2) paint booths, identified as EU 001 and EU 006, each installed in 1995, each equipped with air atomization guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 001 and S/V 006.
- (b) Two (2) paint booths, identified as EU 003 and EU 004, each installed in 1995, all equipped with HVLP spray guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 003 and S/V 004.
- (c) A woodworking shop, identified as EU 007 (formerly EU 01), installed in 1995, with a maximum throughput of 164 pounds per hour of wood, using a baghouse for particulate control, and exhausting indoors through stack/vent S/V 007 (formerly S/V 01).

**Emission Units and Pollution Control Equipment Not Included in Previous Approvals**

The source also consists of the following emission units that were not included in previous approvals:

- (d) Fugitive emissions from paved and unpaved roads and parking lots.

### **Emission Units and Pollution Control Equipment Removed From the Source**

- (a) Two (2) paint booths, identified as EU 002 and EU 005, each installed in 1995, each equipped with HVLP spray guns, each with a maximum capacity of 0.75 gallon of coating per hour, each using dry filters for overspray control, and exhausting to stack/vents, identified as S/V 002 and S/V 005.

### **Existing Approvals**

Since the issuance of the MSOP (M097-11076-00357) on July 28, 2000, the source has constructed or has been operating under the following approvals as well:

- (a) Notice Only Change No. (M097-20205-00357) issued on May 17, 2005.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been revised in this MSOP Renewal:

- (a) All D section conditions referencing 326 IAC 6-3-2 have been revised with conditions specific to 326 IAC 6.5-1-2. This source is located in Marion County, and is subject to particulate matter limitations established in 326 IAC 6.5-1-2.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this MSOP Renewal:

- (a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

- (b) The visible emission notations and record keeping requirements have been removed from the D section for the woodworking shop because the baghouse vents indoors therefore, visible emission notations are not required.

### **Air Pollution Control Justification as an Integral Part of the Process**

The potential to emit will be determined after the baghouse:

In October 1993 a Final Order Granting Summary Judgment was signed by an Administrative Law Judge ("ALJ") resolving an appeal of an IDEM permit related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls were necessary for the facility to produce its normal product and is integral to the normal operation of the facility, and therefore, potential emissions were to be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the controls.

Since the baghouse is considered an integral part of the woodworking shop, the baghouse for particulate control shall be in operation and control emissions from the woodworking shop (EU 007) at all times that the woodworking shop is in operation.

### Enforcement Issue

There are no enforcement actions pending.

### Emission Calculations

See Appendix A of this document for detailed emission calculations.

### County Attainment Status

The source is located in Marion County

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 <sup>th</sup> Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O <sub>3</sub>	Attainment effective November 8, 2007, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
<sup>1</sup> Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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 ozone. Marion 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.

- (b) **PM2.5**  
Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**  
Marion 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.
- (d) **Fugitive Emissions**  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

### **Unrestricted Potential Emissions**

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

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

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

### **Federal Rule Applicability**

#### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60.310, Subpart EE, are not included in the permit because the source does not coat metal furniture, the source only coats wood furniture.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Furniture, (40 CFR 63.800 Subpart JJ), are not included in the permit for this source because the source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Miscellaneous Metal Parts and Products, Subpart MMM are not included in the permit because the source does not coat miscellaneous metal parts or products.

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Wood Building Products (40 CFR Part 63), Subpart QQQQ are not included in the permit for this source because the source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR Part 63), Subpart HHHHHH are not included in the permit for this source because the source does not have paint stripping operations that use the chemical methylene chloride and does not perform autobody refinishing operations and does not perform spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources (40 CFR Part 63), Subpart QQQQQQ are not included in the permit for this source because the source is not a wood preserving operation.
- (h) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

#### **State Rule Applicability - Entire Source**

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

The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

##### **326 IAC 2-1.1-5 (Nonattainment New Source Review)**

This existing source is not a major stationary source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than ten 2.5 micrometers (PM<sub>2.5</sub>), is less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.

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

This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

##### **326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))**

The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of pollutant VOC is less than one hundred (100) tons per but greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.

##### **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 Exemptions), 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 Limitations)

The source is subject to the requirements of 326 IAC 6-4, because the paved and unpaved roads at the source have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape 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 not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

### **State Rule Applicability – Individual Facilities**

#### Surface Coating and Woodworking

#### 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

This source is located in Marion and has actual particulate matter emissions greater than 10 tons per year. Therefore the emission units at this source must comply with the requirements of 326 IAC 6.5 and 326 IAC 6-3-2.

- (a) Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the paint booths (EU 001, EU 003, EU 004, and EU 006), and woodworking shop (EU 007) shall not exceed 0.03 grains per dry standard cubic foot, each.
- (b) Pursuant to 6-3-2 (d), particulate from the four (4) paint booths, identified as EU 001, EU 003, EU 004, and EU 006, shall be controlled by the dry filters and the Permittee shall operate the control devices in accordance with manufacturer's specifications. In addition, if overspray is visibly detected at the exhaust or accumulates on the ground, the source 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.

If overspray is visibly detected, the source 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.

In order to comply with the limit established in 326 IAC 6.5-1-2(a), the baghouse shall be in operation at all times the woodworking shop is in operation.

#### 326 IAC 8-1-6 (New facilities; general reduction requirements)

The paint booths are not subject to the provisions of 326 IAC 8-1-6 because they are subject to 326 IAC 8-2-12.

**326 IAC 8-2-12 (Volatile Organic Compounds (VOC): Wood Furniture and Cabinet Coating)**

Pursuant to 326 IAC 8-2-12, the surface coatings applied to wood furniture are subject to this rule because, their construction commenced after July 1, 1990, and their actual emissions are greater than fifteen (15) pounds of VOC per day before add-on controls. Pursuant to 326 IAC 8-2-12, the surface coatings applied to wood furniture shall utilize the following one of the following application methods:

- (a) Airless Spray Application
- (b) Air Assisted Airless Spray Application
- (c) Electrostatic Spray Application
- (d) Electrostatic Bell or Disc Application
- (e) Heated Airless Spray Application
- (f) Roller Coating
- (g) Brush or Wipe Application
- (h) 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) pound 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.

Paint Booths, EU-001 and 006 are equipped with air atomization guns, while EU-003 and EU 004 are equipped with HVLP spray guns. Since all of the paint booths are equipped with application systems or methods mentioned above, the source will be able to comply with 326 IAC 8-2-12.

**Compliance Determination and Monitoring Requirements**

The compliance determination and monitoring requirements applicable to this source are as follows:

<b>Emission Unit/Control</b>	<b>Operating Parameters</b>	<b>Frequency</b>
Baghouse	Inspection of all bags controlling the woodworking shop.	Quarterly

## **Recommendation**

The staff recommends to the Commissioner that the MSOP Renewal 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 June 1, 2005. Additional information was received when requested through March 2009.

## **Conclusion**

The operation of this stationary wood office furniture and store fixtures manufacturing plant shall be subject to the conditions of the attached MSOP Renewal No. M097-21367-00357.

Summary

Company Name: Design Industries, Inc.  
 Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
 Permit Number: M097-21367-00357  
 Reviewed by: Sarah Conner, Ph. D.  
 Date: 3/10/2009

<b>**Potential to Emit (PTE)</b>									
<b>Emission Unit</b>	tons/yr								
	PM	PM-10	*PM2.5	VOC	SO2	NOx	CO	Worst Single HAP	Combined HAPs
Paint Booth 1 and 6	8.57	8.57	8.57	41.64	-	-	-	3.20 (Xylene)	8.54
Paint Booth 3	1.373	1.373	1.373	20.497	-	-	-	1.54 (Toluene)	1.54
Paint Booth 4	5.536	5.536	5.536	18.500	-	-	-	4.70 (Xylene)	13.78
*Woodworking	2.248	2.248	2.248	-	-	-	-	-	-
Paved Roads	0.060	0.012	0.002	-	-	-	-	-	-
Unpaved Roads	0.194	0.049	0.005	-	-	-	-	-	-
<b>Total</b>	<b>17.98</b>	<b>17.79</b>	<b>17.74</b>	<b>80.64</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.9(Xylene)</b>	<b>23.86</b>

\* If an emission factor was not available from AP-42 for PM2.5 it was assumed to be equal to PM10

\*\* Uncontrolled PTE is equal to controlled PTE

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations  
Booth 1 and 6**

Company Name: Design Industries, Inc  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/hr)	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	
colorants	thalo blue tint paste	8.6	60.55%	0.0%	60.6%	0.0%	39.45%	0.023	5.21	0.12	2.93	0.53	0.09	13.20	75%	
colorants	GDP Titanium White	15.8	10.50%	0.0%	10.5%	0.0%	80.00%	0.023	1.66	1.66	0.04	0.93	0.17	0.36	2.07	75%
colorants	S3819 NGR CONC YELLOW	6.8	96.40%	0.0%	96.4%	0.0%	3.60%	0.023	6.56	6.56	0.15	3.69	0.67	0.01	182.09	75%
colorants	S3818 NGR CONC BLACK	6.8	96.60%	0.0%	96.6%	0.0%	3.40%	0.023	6.57	6.57	0.15	3.69	0.67	0.01	193.20	75%
colorants	GDP Lamp Black	9.2	35.00%	0.0%	35.0%	0.0%	60.00%	0.023	3.22	3.22	0.08	1.81	0.33	0.15	5.37	75%
colorants	G-P-D Van Dyke brown	10.8	15.50%	0.0%	15.5%	0.0%	65.00%	0.023	1.68	1.68	0.04	0.95	0.17	0.24	2.58	75%
colorants	V Hansa Yellow	8.5	100.00%	0.0%	100.0%	0.0%	0.00%	0.023	8.50	8.50	0.20	4.78	0.87	0.00	0.00	75%
colorants	GPD Burnt Umber	13.4	30.00%	0.0%	30.0%	0.0%	70.00%	0.023	4.02	4.02	0.09	2.26	0.41	0.24	5.74	75%
stain base	gm-16-8507 low haps stain base	6.4	93.40%	0.0%	93.4%	0.0%	6.60%	0.750	5.99	5.99	4.49	107.85	19.68	0.35	0.00	75%
Total VOC or PM in tons per year when using stain												<b>20.82</b>	<b>0.71</b>			
primer	primer white (MDF) unisurfacr (Bernyl Surfacer)	10.8	52.81%	18.0%	34.8%	0.0%	47.19%	0.750	3.76	3.76	2.82	67.67	12.35	4.19	7.97	75%
catalyst	03 DV5943H Catalyst 309	7.1	86.00%	0.0%	86.0%	0.0%	8.15%	0.094	6.06	6.06	0.57	13.64	2.49	0.10	74.39	75%
thinner	Butyl acetate	7.4	100.00%	0.0%	100.0%	0.0%	0.00%	0.094	7.40	7.40	0.69	16.65	3.04	0.00	0.00	75%
Total VOC or PM in tons per year when using primer												<b>18.58</b>	<b>4.29</b>			
sealer	Sealer, HAPS Clear Vinyl	7.6	78.00%	0.0%	78.0%	0.0%	22.00%	0.750	5.93	5.93	4.45	106.70	19.47	1.37	26.95	75%
thinner	Butyl acetate	7.4	100.00%	0.0%	100.0%	0.0%	0.00%	0.023	7.40	7.40	0.17	4.16	0.76	0.00	0.00	75%
Total VOC or PM in tons per year when using sealer												<b>20.50</b>	<b>1.37</b>			
cleaner	Methyl Ethyl Ketone	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.009	6.70	6.70	0.06	1.45	0.26	0.00	0.00	75%
cleaner	Methyl Ethyl Ketone	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.024	6.70	6.70	0.16	3.86	0.70	0.00	0.00	75%
Total VOC or PM in tons per year when using either stain, primer, or sealer												<b>20.82</b>	<b>4.29</b>			

**METHODOLOGY**

Booths 1 and 6 can only be used for stain, primer or sealer. Topcoat cannot be used in this booth in order for the source to keep HAPs below Title V thresholds.

Gallons of material per hour was calculated assuming that 6oz are used per 1 unit and a maximum of 16 units per hour.

Gallons used per hour = (oz used \* 1 gal / 128 oz \* 16 units / hr)

A maximum of 4oz of colorant is added to 1 gallon of stain base (oz added \* 1gal / 128 oz) \* (gal / hr) = gal / hr of colorant

16 oz of catalyst is added to 1 gallon of primer (oz added \* 1gal / 128 oz) \* (gal / hr) = gal / hr of catalyst

16 oz of thinner is added to 1 gallon of primer or 4oz of thinner is added to sealer if needed (oz added \* 1gal / 128 oz) \* (gal / hr) = gal / hr of thinner

An estimated amount of Methyl Ethyl Ketone used for cleanup after stain base is based on the frequency of cleanup which depends on the shelf life of the stain base and is equivalent to 0.009 gal / hr

An estimated amount of Methyl Ethyl Ketone used for cleanup after primer is based on the frequency of cleanup which depends on the shelf life of the primer and is equivalent to 0.024 gal / hr

An estimated amount of Methyl Ethyl Ketone used for cleanup after sealer is based on the frequency of cleanup which depends on the shelf life of the sealer and is equivalent to 0.009 gal / hr

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)

See next page for HAPs information

**Appendix A: Emission Calculations  
HAP Emission Calculations  
Booth 1 and 6**

Company Name: Design Industries, Inc  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Gallons of Material (gal/hour)	Weight % Naphthalene	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Ethyl Benzene	Weight % Methanol	Weight % MIBK	Weight % Magnesium Compounds	Naphthalene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Magnesium Compounds Emissions (ton/yr)	Total HAPs (ton/yr)
colorants thalo blue tint paste	8.6	0.023	5.00%	5.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.04	0.04	0.00	0.00	0.01	0.00	0.00	0.00	0.10
colorants GDP Titanium White	15.8	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
colorants S3819 NGR CONC YELLOW	6.8	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.57
colorants S3818 NGR CONC BLACK	6.8	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.57
colorants GDP Lamp Black	9.2	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
colorants G-P-D Van Dyke brown	10.8	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
colorants V Hansa Yellow	8.5	0.023	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
colorants GPD Burnt Umber	13.4	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14
stain base gm-16-8507 low haps stain base	6.4	0.750	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Single and Total HAPs in tons per year when using stain											<b>0.14</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.57</b>	<b>0.00</b>	<b>0.14</b>	<b>0.93</b>
primer primer white (MDF) unisurfacer (Berry Surfacer)	10.8	0.750	0.00%	4.51%	0.00%	0.02%	0.80%	0.00%	0.00%	0.00%	0.00	1.60	0.00	0.01	0.28	0.00	0.00	0.00	1.89
catalyst 03 DV5943H Catalyst 309	7.1	0.094	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
thinner Butyl acetate	7.4	0.094	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single and Total HAPs in tons per year when using primer											<b>0.00</b>	<b>1.60</b>	<b>0.00</b>	<b>0.01</b>	<b>0.28</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.89</b>
sealer Sealer, HAPS Clear Vinyl	7.6	0.750	0.00%	0.00%	6.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	1.54	0.00	0.00	0.00	0.00	0.00	1.54
thinner Butyl acetate	7.4	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single and Total HAPs in tons per year when using sealer											<b>0.00</b>	<b>0.00</b>	<b>1.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.54</b>
Single and Combined HAPS total in tons per year when using either stain, primer, or sealer											<b>0.14</b>	<b>1.60</b>	<b>1.54</b>	<b>0.01</b>	<b>0.28</b>	<b>0.57</b>	<b>0.00</b>	<b>0.14</b>	<b>4.27</b>

**METHODOLOGY**

Is the same as the previous page

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations  
Booth 4**

Company Name: Design Industries, Inc  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/hr)	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
topcoat conversion varnish flat	7.9	72.93%	8.0%	64.9%	0.0%	27.07%	0.750	5.13	5.13	3.85	92.33	16.85	1.76	18.95	75%
topcoat conversion varnish semi gloss	7.9	73.46%	8.5%	65.0%	0.0%	26.54%	0.750	5.13	5.13	3.85	92.37	16.86	1.72	19.34	75%
topcoat conversion varnish gloss	7.8	73.84%	7.5%	66.3%	0.0%	26.16%	0.750	5.17	5.17	3.88	93.14	17.00	1.68	19.78	75%
topcoat Gem Var Haps Comp 12	7.9	73.08%	8.4%	64.7%	0.0%	26.92%	0.750	5.11	5.11	3.83	91.97	16.79	1.75	18.98	75%
topcoat H/C prec semi gloss lacquer	7.6	70.00%	0.0%	70.0%	0.0%	30.00%	0.750	5.32	5.32	3.99	95.76	17.48	1.87	17.73	75%
thinner Butyl acetate	7.4	100.00%	0.0%	100.0%	0.0%	0.00%	0.023	7.40	7.40	0.17	4.16	0.76	0.00	0.00	75%
Total VOC or PM in tons per year when using (not MATADOR) topcoat												<b>18.50</b>	<b>1.87</b>		

topcoat MATADOR 20T-5 CLEAR TINT BASE	8.9	41.88%	8.5%	33.4%	0.0%	58.12%	0.750	2.97	2.97	2.23	53.47	9.76	4.25	5.11	75%
topcoat MATADOR 20-5 ENAMEL	10.9	39.29%	14.5%	24.8%	0.0%	60.71%	0.750	2.70	2.70	2.03	48.64	8.88	5.43	4.45	75%
catalyst 03 DV5943H Catalyst 309	7.1	86.00%	0.0%	86.0%	0.0%	8.15%	0.094	6.06	6.06	0.57	13.64	2.49	0.10	74.39	75%
thinner Butyl acetate	7.4	100.00%	0.0%	100.0%	0.0%	0.00%	0.094	7.40	7.40	0.69	16.65	3.04	0.00	0.00	75%
Total VOC or PM in tons per year when using MATADOR topcoat												<b>15.55</b>	<b>5.54</b>		

cleaner Methyl Ethyl Ketone	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.009	6.70	6.70	0.06	1.45	0.26	0.00	0.00	75%
cleaner Methyl Ethyl Ketone	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.024	6.70	6.70	0.16	3.86	0.70	0.00	0.00	75%
Total VOC or PM in tons per year when using either stain, primer, sealer or topcoat												<b>18.50</b>	<b>5.54</b>		

**METHODOLOGY**

Booth 4 is designated for Topcoats only. Stain, sealer and primer cannot be used in this booth in order for the source to keep HAPs below Title V thresholds.  
Gallons of material per hour was calculated assuming that 6oz are used per 1 unit and a maximum of 16 units per hour.  
Gallons used per hour = (oz used \* 1 gal / 128 oz \* 16 units / hr)  
16 oz of catalyst is added to 1 gallon of MATADOR topcoat (oz added \* 1 gal / 128 oz) \* (gal / hr) = gal / hr of MATADOR topcoat  
16 oz of thinner is added to 1 gallon of the MATADOR topcoats only, 4oz of thinner is added to the other topcoats if needed (oz added \* 1 gal / 128 oz) \* (gal / hr) = gal / hr of thinner  
An estimated amount of Methyl Ethyl Ketone used for cleanup topcoat is based on the frequency of cleanup which depends on the shelf life of the topcoat is equivalent to 0.009 gal / hr  
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)  
See next page for HAPs information

**Appendix A: Emission Calculations  
HAP Emission Calculations  
Booth 4**

Company Name: Design Industries, Inc  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Gallons of Material (gal/hour)	Weight % Naphthalene	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Ethyl Benzene	Weight % Methanol	Weight % MIBK	Weight % Magnesium Compounds	Naphthalene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Magnesium Compounds Emissions (ton/yr)	Total HAPs (ton/yr)	
topcoat conversion varnish flat	7.9	0.750	0.00%	9.00%	12.00%	1.00%	2.00%	0.00%	0.00%	0.00%	0.00	2.34	3.11	0.26	0.52	0.00	0.00	0.00	0.00	6.23
topcoat conversion varnish semi gloss	7.9	0.750	0.00%	9.00%	12.00%	1.00%	2.00%	0.00%	0.00%	0.00%	0.00	2.34	3.11	0.26	0.52	0.00	0.00	0.00	0.00	6.23
topcoat conversion varnish gloss	7.8	0.750	0.00%	9.00%	12.00%	1.00%	2.00%	0.00%	0.00%	0.00%	0.00	2.31	3.07	0.26	0.51	0.00	0.00	0.00	0.00	6.15
topcoat Gem Var Haps Comp 12	7.9	0.750	0.00%	3.00%	17.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.78	4.41	0.00	0.00	0.00	0.00	0.00	0.00	5.19
topcoat H/C prec semi gloss lacquer	7.6	0.750	0.00%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
thinner Butyl acetate	7.4	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single and Total HAPs in tons per year when using (not MATADOR) topcoat											<b>0.00</b>	<b>2.34</b>	<b>4.41</b>	<b>0.26</b>	<b>0.52</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.53</b>
topcoat MATADOR 20T-5 CLEAR TINT BASE	8.9	0.750	0.00%	8.68%	0.00%	0.26%	1.53%	0.00%	0.00%	0.00%	0.00	2.54	0.00	0.08	0.45	0.00	0.00	0.00	0.00	3.06
topcoat MATADOR 20-5 ENAMEL	10.9	0.750	0.00%	13.12%	0.00%	0.20%	12.32%	0.00%	0.00%	0.00%	0.00	4.70	0.00	0.07	4.41	0.00	0.00	0.00	0.00	9.18
catalyst 03 DV5943H Catalyst 309	7.1	0.094	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
thinner Butyl acetate	7.4	0.094	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single and Total HAPs in tons per year when using MATADOR topcoat											<b>0.00</b>	<b>4.70</b>	<b>0.00</b>	<b>0.08</b>	<b>4.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.19</b>
Single and Combined HAPS total in tons per year when using either stain, primer, sealer or topcoat (non MATADOR and MATADOR)											<b>0.00</b>	<b>4.70</b>	<b>4.41</b>	<b>0.26</b>	<b>4.41</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.78</b>

**METHODOLOGY**

Is the same as the previous page  
HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations  
Booth 3**

Company Name: Design Industries, Inc.  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/hr)	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
sealer Sealer, HAPS Clear Vinyl	7.6	78.00%	0.0%	78.0%	0.0%	22.00%	0.750	106.70	19.47	1.37	26.95	75%
thinner Butyl acetate	7.4	100.00%	0.0%	100.0%	0.0%	0.00%	0.023	4.16	0.76	0.00	0.00	75%
Total VOC or PM in tons per year when using sealer									<b>20.50</b>	<b>1.37</b>		
cleaner Methyl Ethyl Ketone	6.7	100.00%	0.0%	100.0%	0.0%	0.00%	0.009	1.45	0.26	0.00	0.00	75%
Total VOC or PM in tons per year when using either topcoat or sealer									<b>20.50</b>	<b>1.37</b>		

**METHODOLOGY**

Booth 3 is designated for sealer only. Butyl acetate is used with sealer. Topcoat, stain and primer cannot be used in this booth in order for the source to keep HAPs below Title V thresholds.  
 Gallons of material per hour was calculated assuming that 6oz are used per 1 unit and a maximum of 16 units per hour.  
 Gallons used per hour = (oz used \* (1/128 gallons) \* 16 units/hr)  
 4oz of thinner is added to the sealer if needed (oz added \* 1gal / 128 oz) \* (gal / hr) = gal / hr of thinner  
 An estimated amount of Methyl Ethyl Ketone used for cleanup after sealer, which is based on the frequency of cleanup which depends on the shelf life of the sealer and is equivalent to 0.009 gal / hr  
 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)  
 See next page for HAPs information

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**  
**Booth 3**

Company Name: Design Industries, Inc.  
 Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
 Permit Number: M097-21367-00357  
 Reviewed by: Sarah Conner, Ph. D.  
 Date: 3/10/2009

Maximum gallons per hour used in one booth 0.750

Material	Density (Lb/Gal)	Gallons of Material (gal/hour)	Weight % Naphthalene	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Ethyl Benzene	Naphthalene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Magnesium Compounds Emissions (ton/yr)	Total HAPs (ton/yr)
sealer Sealer, HAPS Clear Vinyl	7.6	0.750	0.00%	0.00%	6.16%	0.00%	0.00%	0.00	0.00	1.54	0.00	0.00	0.00	0.00	0.00	1.54
thinner Butyl acetate	7.4	0.023	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single and Total HAPs in tons per year when using sealer								<b>0.00</b>	<b>0.00</b>	<b>1.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.54</b>
e and Combined HAPS total in tons per year when using any topcoat or sealer								<b>0.00</b>	<b>0.00</b>	<b>1.54</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.54</b>

**METHODOLOGY**

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HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

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

**Company Name: Design Industries, Inc.  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009**

Maximum Amount Collected (lbs/hr):	50.8
Control Efficiency:	99.0%
Uncontrolled total PTE Particulate (tons/yr):	224.75
*Controlled total PTE Particulate (tons/yr):	<b>2.25</b>

**Methodology**

Amount Collected based on records of amount collected between October 7, 2006 and January 9, 2007 divided by number of hours of operations for that time period.

Uncontrolled total PTE particulate (tons/yr) = amount collected in lbs/hr \* (1/control efficiency) \* 8760 hrs/yr \* 1 ton/2000 lbs

The Manufacturer's Specifications gives a control efficiency of up to 99.9% however as the bags deteriorate over time and their efficiency decreases; therefore, a control efficiency of 99.0% is used for the PTE calculations.

\*In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the controls.

**Appendix A: Emission Calculations  
Fugitive Dust Emissions - Paved Roads**

Company Name: Design Industries, Inc.  
Address City IN Zip: 51 South Kowebe Lane, Indianapolis, IN 46201  
Permit Number: M097-21367-00357  
Reviewed by: Sarah Conner, Ph. D.  
Date: 3/10/2009

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Employee Vehicle (entering plant) (one-way trip)	20.0	1.0	20.0	2.5	50.0	200	0.038	0.8	276.5
Employee Vehicle (leaving plant) (one-way trip)	20.0	1.0	20.0	2.5	50.0	200	0.038	0.8	276.5
Freight Truck or Cargo Van (entering plant) (one-way trip)	8.0	1.0	8.0	15.0	120.0	200	0.038	0.3	110.6
Freight Truck or Cargo Van (leaving plant) (one-way trip)	8.0	1.0	8.0	30.0	240.0	200	0.038	0.3	110.6
<b>Total</b>			<b>56.0</b>		<b>460.0</b>			<b>2.1</b>	<b>774.2</b>

Average Vehicle Weight Per Trip =  $\frac{8.2}{0.04}$  tons/trip  
Average Miles Per Trip =  $\frac{0.04}{0.04}$  miles/trip

Unmitigated Emission Factor, Ef =  $[k * (sL/2)^{0.65} * (W/3)^{1.5} - C]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	8.2	8.2	8.2	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m <sup>2</sup> = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [1 - (p/4N)]$

Mitigated Emission Factor, Eext =  $Ef * [1 - (p/4N)]$   
where p =  $\frac{125}{365}$  days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.17	0.03	0.00	lb/mile
Mitigated Emission Factor, Eext =	0.15	0.03	0.00	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Employee Vehicle (entering plant) (one-way trip)	0.02	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00
Employee Vehicle (leaving plant) (one-way trip)	0.02	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00
Freight Truck or Cargo Van (entering plant) (one-way trip)	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Freight Truck or Cargo Van (leaving plant) (one-way trip)	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] \* [1 - Dust Control Efficiency]

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particle Matter (<2.5 um)  
PTE = Potential to Emit

**Appendix A: Emission Calculations**  
**Fugitive Dust Emissions - Unpaved Roads**

**Company Name:** Design Industries, Inc.  
**Address City IN Zip:** 51 South Kowebe Lane, Indianapolis, IN 46201  
**Permit Number:** M097-21367-00357  
**Reviewed by:** Sarah Conner, Ph. D.  
**Date:** 3/10/2009

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Cargo Van (entering plant loaded) (one-way trip)	4.0	1.0	4.0	12.6	50.4	100	0.019	0.1	27.7
Cargo Van (leaving plant empty) (one-way trip)	4.0	1.0	4.0	2.6	10.4	100	0.019	0.1	27.7
Freight Truck (entering plant empty) (one-way trip)	4.0	1.0	4.0	15.0	60.0	100	0.019	0.1	27.7
Freight Truck (leaving plant loaded) (one-way trip)	4.0	1.0	4.0	30.0	120.0	100	0.019	0.1	27.7
<b>Total</b>			<b>16.0</b>		<b>240.8</b>			<b>0.3</b>	<b>110.6</b>

Average Vehicle Weight Per Trip =  tons/trip  
 Average Miles Per Trip =  miles/trip

Unmitigated Emission Factor, Ef =  $k[(s/12)^a][W/3]^b$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	15.1	15.1	15.1	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [(365 - P)/365]$

Mitigated Emission Factor, Eext =  $E * [(365 - P)/365]$

where P =  days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	5.33	1.36	0.14	lb/mile
Mitigated Emission Factor, Eext =	3.51	0.89	0.09	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Cargo Van (entering plant loaded) (one-way trip)	0.07	0.02	0.00	0.05	0.01	0.00	0.02	0.01	0.00
Cargo Van (leaving plant empty) (one-way trip)	0.07	0.02	0.00	0.05	0.01	0.00	0.02	0.01	0.00
Freight Truck (entering plant empty) (one-way trip)	0.07	0.02	0.00	0.05	0.01	0.00	0.02	0.01	0.00
Freight Truck (leaving plant loaded) (one-way trip)	0.07	0.02	0.00	0.05	0.01	0.00	0.02	0.01	0.00
	<b>0.29</b>	<b>0.08</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>0.00</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particle Matter (<2.5 um)  
 PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

**TO:** Mark Botkin  
Design Industries  
51 Koweba Ln  
Indianapolis, IN 46201

**DATE:** May 28, 2009

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
MSOP - Renewal  
097 - 21367 - 00357

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Mark Botkin, Secretary of Corporation  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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May 28, 2009

TO: East Washington Branch Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Design Industries**  
**Permit Number: 097 - 21367 - 00357**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 11/30/07

# Mail Code 61-53

IDEM Staff	LPOGOST 5/28/2009 Design Industries 097 - 21367 - 00357 (final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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											Remarks
1		Mark Botkin Design Industries 51 Koweba Ln Indianapolis IN 46201 (Source CAATS) Via confirmed delivery									
2		Marion County Health Department 3838 N. Rural St Indianapolis IN 46205-2930 (Health Department)									
3		Mrs. Sandra Lee Watson 7834 E 100 S Marion IN 46953 (Affected Party)									
4		Larry and Becky Bischoff 10979 North Smokey Row Road Mooresville IN 46158 (Affected Party)									
5		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)									
6		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)									
7		Ms. Janet McCabe Improving Kids Environment 3951 N Meridian Street Suite 160 Indianapolis IN 46208-4062 (Affected Party)									
8		Matt Mosier Office of Sustainability 2700 South Belmont Ave. Administration Bldg. Indianapolis IN 46221 (Local Official)									
9		East Washington Branch Library 2822 East Washington Street Indianapolis IN 46201 (Library)									
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