



**NEW SOURCE CONSTRUCTION PERMIT  
and FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
INDIANA DEPARTMENT OF ENVIRONMENTAL  
MANAGEMENT  
OFFICE OF AIR QUALITY  
and CITY OF INDIANAPOLIS  
OFFICE OF ENVIRONMENTAL SERVICES**

**Willoughby Industries, Inc.  
1610 South Girls School Road  
Indianapolis, Indiana 46231**

(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.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Operation Permit No.: F097-21390-00564	
Issued by:	Issuance Date: November 18, 2005
Originally signed by: Felicia A. Robinson Manager of Environmental Planning Office of Environmental Services	Expiration Date: November 17, 2010

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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) and the City of Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 through A.3 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 2-8-3(b)]

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The Permittee owns and operates a stationary cast polymer plumbing fixture manufacturing operation.

Authorized individual:	Engineering Manager
Source Address:	1610 S. Girls School Road, Indianapolis, IN 46231
Mailing Address:	2210 West Morris Street, Indianapolis, IN 46221
General Source Phone:	(317) 638-2381
SIC Code:	3088
Source Location Status:	Marion County Nonattainment for PM2.5 Nonattainment for the 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules and Nonattainment NSR; Minor Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) resin mixing and casting operation, identified as Unit 01, to be constructed in 2005, consisting of both open molding and closed molding operations, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting inside the building; and
- (b) One (1) finishing operation, identified as Unit 02, to be constructed in 2005, consisting of machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with a cartridge dust collector for particulate emissions control, exhausting inside the building.

### A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour, including the following building heaters:
  - (1) Unit F1, with a maximum heat input rating of 0.075 MMBtu per hour;
  - (2) Unit F2, with a maximum heat input rating of 0.1 MMBtu per hour;
  - (3) Unit F3, with a maximum heat input rating of 0.075 MMBtu per hour;
  - (4) Unit F4, with a maximum heat input rating of 1.946 MMBtu;
  - (5) Unit F5, with a maximum heat input rating of 0.3 MMBtu per hour.
- (b) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (c) Machining where an aqueous cutting coolant continuously floods the machining interface.

- (d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 – Parts washer used in maintenance with a remote solvent reservoir. [326 IAC 8-3-2]
- (e) Paved and unpaved roads and parking lots with public access.
- (f) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (g) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (h) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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

## **SECTION B GENERAL CONDITIONS**

### **B.1 Permit No Defense [IC 13]**

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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 FESOP under 326 IAC 2-8.

### **B.2 Definitions [326 IAC 2-8-1]**

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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 2-7) shall prevail.

### **B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]**

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This permit is issued for a fixed term of five (5) 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.

### **B.4 Enforceability [326 IAC 2-8-6]**

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

### **B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]**

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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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

### **B.6 Severability [326 IAC 2-8-4(4)]**

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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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]**

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

### **B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

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- (a) The Permittee shall furnish to IDEM, OAQ, and OES within a reasonable time, any information that IDEM, OAQ, and OES 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, and OES 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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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IDEM, OAQ and OES may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]**

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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.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

- (b) The annual compliance certification report 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, and OES on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;

- (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
- (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, and OES may require to determine the compliance status of the source.

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

B.12 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

The PMP extension notification does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, and OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and OES. IDEM, OAQ, and OES 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 the "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.13 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ and OES, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

OES  
Telephone No.: 317-327-2234  
Facsimile No.: 317-327-2274

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency. The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ and OES, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

**B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination**  
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ or OES determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ or OES, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ or OES, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ or OES, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.16 Permit Renewal [326 IAC 2-8-3(h)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and OES and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, IN 46221

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) 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, and OES on or before the date it is due.

(2) If IDEM, OAQ and OES upon receiving a timely and complete 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.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

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 2-8 until IDEM, OAQ and OES 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 and OES, any additional information identified as needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, IN 46221

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

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, IN 46221

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and OES, in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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, and OES, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, IN 46221

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) 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.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

#### C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.3 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.4 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.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

C.6 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.7 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  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Asbestos Section  
2700 South Belmont Avenue  
Indianapolis, IN 46221

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 the "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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.8 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 Data Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "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 the "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 and OES not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and OES, 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.9 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 2-8-4] [326 IAC 2-8-5(a)(1)]**

#### **C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

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

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

#### **C.11 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.

### **Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

#### **C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

#### **C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

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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 and 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

#### **C.14 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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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 or OES makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or OES 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.

#### **C.15 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

- (c) 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, and OES on or before the date it is due.
- (d) 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be 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.

### **Stratospheric Ozone Protection**

#### **C.16 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) resin mixing and casting operation, identified as Unit 01, to be constructed in 2005, consisting of both open molding and closed molding operations, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting inside the building; and
- (b) One (1) finishing operation, identified as Unit 02, to be constructed in 2005, consisting of machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with a cartridge dust collector for particulate emissions control, exhausting inside the building.

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

### Construction Conditions

#### General Construction Conditions

##### D.1.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

#### Effective Date of the Permit

##### D.1.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

##### D.1.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

#### Operation Conditions

#### Emission Limitations and Standards [326 IAC 2-8-4(1)]

##### D.1.4 VOC and HAP Limits [326 IAC 2-8-4][326 IAC 8-1-6]

- (a) The use of resins and solvents in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of VOC shall be limited to 24.84 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of styrene and methyl methacrylate (MMA) shall each be limited to 9.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (c) The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of the combination of styrene and MMA shall be limited to

24.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits shall be determined based on the emission factors approved by IDEM, OAQ: "Unified Emission Factors for Open Molding of Composites", Composites Fabricators Association (CFA), July 23, 2001.

Compliance with the HAP emission limits shall render the requirements of 326 IAC 2-7 (Part 70) not applicable. Compliance with the VOC emission limit shall render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.

#### D.1.5 Particulate [326 IAC 6-3-2]

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Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the finishing operation shall not exceed 0.9 pounds per hour when operating at a process weight rate of 206.5 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

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

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

#### D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the finishing operation and any control devices.

### Compliance Determination Requirements

#### D.1.7 Volatile Organic Compounds (VOC) and HAP [326 IAC 8-1-2][326 IAC 8-1-4]

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To demonstrate compliance with condition D.1.4, the Permittee shall keep the monthly Air Quality Compliance Data Log and will use the following formulas for calculating monthly emissions from the resin mixing and casting operation (Unit 01), utilizing the "Unified Emission Factors for Open Molding of Composites" (Composites Fabricators Association (CFA), July 23, 2001):

(a) Styrene emission from resins:

$$E_S = ((F_1 * S) - C) * R * (1 \text{ ton}/2,000 \text{ pounds resin}), \text{ where:}$$

$E_S$  = Styrene emission from resins in tons

$F_1$  = Emission Factor of 0.157 (from CFA emission factor source noted above for "mechanical non-atomized" resin use in pound emitted per pound of resin used)

$S$  = Percent of styrene in resin (obtained from applicable MSDS sheet or manufacturer's specification sheet)

$C$  = Constant of 0.0165 (from CFA emission factor source noted above for "mechanical non-atomized" resin use)

$R$  = Total amount of resin in pounds

(b) Methyl Methacrylate (MMA) emissions from resins:

$$E_M = (F_2 * M) * R * (1 \text{ ton}/2,000 \text{ pounds resin}), \text{ where:}$$

$E_M$  = Methyl methacrylate (MMA) emission in tons

$F_2$  = Emission factor of 0.75 (from CFA emission factor source noted above for MMA emissions in pound emitted per pound of resin used)

$M$  = Percent of MMA in resin (obtained from applicable MSDS sheet or manufacturer's specification sheet)

$R$  = Total amount of resin in pounds

- (c) VOC from catalyst:  
 $E_V = F_3 * V * K * (1 \text{ ton}/2,000 \text{ pounds})$ , where:  
 $E_V$  = VOC emissions in tons  
 $F_3$  = Emission factor of 0.02 (based on information from the catalyst supplier, only 2% of VOCs are emitted, with the remainder being consumed in the reaction)  
 $V$  = Percent of VOC content (obtained from applicable MSDS sheet or manufacturer's specification sheet)  
 $K$  = Total amount of catalyst in pounds
- (d) VOC from pigment:  
 $E_P = F_4 * V * P * (1 \text{ ton}/2,000 \text{ pounds})$ , where:  
 $E_P$  = VOC emissions in tons  
 $F_4$  = Emission factor of 1.0 (in absence of other data, it is assumed that all VOC is emitted)  
 $V$  = Percent of VOC content (obtained from applicable MSDS sheet or manufacturer's specification sheet)  
 $P$  = Total amount of pigment in pounds
- (e) VOC from mold release chemical:  
 $E_R = F_5 * V * R * (1 \text{ ton}/2,000 \text{ pounds})$ , where:  
 $E_R$  = VOC emission in tons  
 $F_5$  = Emission factor of 1.0 (in absence of other data, it is assumed that all VOC is emitted)  
 $V$  = Percent of VOC content (obtained from applicable MSDS sheet or manufacturer's specification sheet)  
 $R$  = Total amount of mold release in pounds
- (f) VOC from pot-washer chemical  
 $E_W = F_6 * V * W * (1 \text{ ton}/2,000 \text{ pounds})$ , where:  
 $E_W$  = VOC emissions in tons  
 $F_6$  = Emission factor of 0.25 (based on information from the chemical supplier, only 25% of the VOCs are emitted)  
 $V$  = Percent of VOC content (obtained from applicable MSDS sheet or manufacturer's specification sheet)  
 $W$  = Total amount of pot-washer chemical in pounds.
- (g) Combination of HAP emissions in tons =  $E_S + E_M$
- (h) Total VOC emissions in tons =  $E_S + E_M + E_V + E_P + E_R + E_W$

#### D.1.8 Particulate Control

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In order to comply with condition D.1.5, the cartridge dust collector for particulate control shall be in operation and control emissions from the sanding and grinding in the finishing operation at all times that the sanding and grinding in the finishing operation are in operation.

### Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

#### D.1.9 Record Keeping Requirements

- 
- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records, including monthly VOC and HAP emission calculations, in a monthly "Air Quality Compliance Log" in accordance with (1) through (6) below. These records shall be taken monthly and shall be complete and sufficient to demonstrate compliance with the VOC and/or HAP emission limits established in Condition D.1.4. These records shall be available within 30 days of the end of each compliance period and shall contain, but not be limited to, the following information:
- (1) The VOC and HAP content of each resin and solvent used.

- (2) The amount of resin and solvent less water used on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC, single HAP, and combined HAP usage for each month; and
  - (5) Amount of VOC and HAPs emitted for each compliance period.
  - (6) Monthly inventory records necessary to verify the type and amount used.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.4 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Insignificant Activities

- (d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 – Parts washer used in maintenance with a remote solvent reservoir. [326 IAC 8-3-2]

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

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
AND  
CITY OF INDIANAPOLIS  
OFFICE OF ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Willoughby Industries, Inc.  
Source Address: 1610 S. Girls School Road, Indianapolis, IN 46231  
Mailing Address: 2210 West Morris Street, Indianapolis, IN 46221  
FESOP No.: F097-21390-00564

**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 BRANCH  
100 North Senate Avenue  
Indianapolis, IN 46204-2251  
Phone: 317-233-5674  
Fax: 317-233-5967  
and  
INDIANAPOLIS OFFICE of ENVIRONMENTAL SERVICES  
AIR COMPLIANCE  
2700 South Belmont Avenue  
Indianapolis, IN 46221  
Phone:317-327-2234  
Fax:317-327-2274**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Willoughby Industries, Inc.  
Source Address: 1610 S. Girls School Road, Indianapolis, IN 46231  
Mailing Address: 2210 West Morris Street, Indianapolis, IN 46221  
FESOP No.: F097-21390-00564

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
and  
CITY OF INDIANAPOLIS  
OFFICE of ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Willoughby Industries, Inc.  
Source Address: 1610 S. Girls School Road, Indianapolis, IN 46231  
Mailing Address: 2210 West Morris Street, Indianapolis, IN 46221  
FESOP No.: F097-21390-00564

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

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

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

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE DATA SECTION**  
 and  
**CITY OF INDIANAPOLIS**  
**OFFICE of ENVIRONMENTAL SERVICES**  
**FESOP Quarterly Report**

Source Name: Willoughby Industries, Inc.  
 Source Address: 1610 S. Girls School Road, Indianapolis, Indiana 46231  
 Mailing Address: 2210 West Morris Street, Indianapolis, Indiana 46221  
 FESOP No.: F097-21390-00564

Facility: resin mixing and casting operation (Unit 01)  
 Parameter: resin and solvent usage to limit VOC and HAP emissions

- Limit: (a) The use of resins and solvents in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of VOC shall be limited to 24.84 tons per twelve (12) consecutive month period with compliance determined at the end of each month.  
 (b) The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of styrene and methyl methacrylate (MMA) shall each be limited to 9.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month  
 (c) The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of the combination of styrene and MMA shall be limited to 24.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

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

Month	Column 1a	Column 2a	Column 3a	Column 1b	Column 2b	Column 3b	Column 1a + Column 1b	Column 2a + Column 2b	Column 3a + Column 3b	All HAPs Total
	VOC Emission this month, tons	HAP Emissions, this month, tons		VOC Emission, previous 11 months, tons	HAP Emissions, previous 11 months, tons		VOC Emission 12 Month Total, tons	HAP Emissions, 12 Month Total, tons		
		Styrene	MMA		Styrene	MMA		Styrene	MMA	

- No deviation occurred in this quarter.  
 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Phone: \_\_\_\_\_

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

Attach a signed certification to complete this report

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
City of Indianapolis  
Office of Environmental Services**

Technical Support Document (TSD) for a  
Federally Enforceable State Operating Permit (FESOP)

**Source Background and Description**

<b>Source Name:</b>	<b>Willoughby Industries, Inc.</b>
<b>Source Location:</b>	<b>1610 S. Girls School Road, Indianapolis, IN 46231</b>
<b>County:</b>	<b>Marion</b>
<b>SIC Code:</b>	<b>3088</b>
<b>Operation Permit No.:</b>	<b>F097-21390-00564</b>
<b>Permit Reviewer:</b>	<b>Trish Earls/EVP</b>

The Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) have reviewed a FESOP application from Willoughby Industries, Inc. relating to the construction and operation of a cast polymer plumbing fixture manufacturing operation.

**Permitted Emission Units and Pollution Control Equipment**

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

**Unpermitted Emission Units and Pollution Control Equipment**

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

**New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval**

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

- (a) One (1) resin mixing and casting operation, identified as Unit 01, to be constructed in 2005, consisting of both open molding and closed molding operations, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting inside the building; and
- (b) One (1) finishing operation, identified as Unit 02, to be constructed in 2005, consisting of machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with a cartridge dust collector for particulate emissions control, exhausting inside the building.

**Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour, including the following building heaters:
  - (1) Unit F1, with a maximum heat input rating of 0.075 MMBtu per hour;

- (2) Unit F2, with a maximum heat input rating of 0.1 MMBtu per hour;
  - (3) Unit F3, with a maximum heat input rating of 0.075 MMBtu per hour;
  - (4) Unit F4, with a maximum heat input rating of 1.946 MMBtu;
  - (5) Unit F5, with a maximum heat input rating of 0.3 MMBtu per hour.
- (b) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
  - (c) Machining where an aqueous cutting coolant continuously floods the machining interface.
  - (d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 – Parts washer used in maintenance with a remote solvent reservoir. [326 IAC 8-3-2]
  - (e) Paved and unpaved roads and parking lots with public access.
  - (f) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
  - (g) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
  - (h) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).

### **Existing Approvals**

There are no existing approvals that have been issued to this source. This is the first air approval issued to this source.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Recommendation**

The staff recommends to the Commissioner that the FESOP 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 administratively complete FESOP application for the purposes of this review was received on July 7, 2005. Additional information was received on August 1, 2005.

There was no notice of completeness letter mailed to the source.

### **Emission Calculations**

See Appendix A of this document for detailed emission calculations (pages 1 through 5).

**Potential to Emit**

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

Pollutant	Potential to Emit (tons/yr)
PM	21.92
PM-10	21.98
SO <sub>2</sub>	0.01
VOC	38.98
CO	0.92
NO <sub>x</sub>	1.09

HAPs	Potential to Emit (tons/yr)
Styrene	Greater than 10
MMA	Greater than 10
MEK	Less than 10
Xylene	Less than 10
Cumene	Less than 10
Hexane	Less than 10
Total	Greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.
- (b) **Fugitive Emissions**  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

**Potential to Emit After Issuance**

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Resing Mixing and Casting (Unit 01)	0.0	0.0	0.0	<25.0	0.0	0.0	<10.0 (single) <25.0 (total)
Finishing Operations (Unit 02)	0.24	0.24	0.0	0.0	0.0	0.0	0.0
Natural Gas Combustion	0.02	0.08	0.01	0.06	0.92	1.09	0.02
Total Emissions	0.26	0.32	0.01	<25.0	0.92	1.09	<10.0 (single) <25.0 (total)

\* VOC, single HAP, and total HAP emissions from the resin mixing and casting operation shall be limited to less than 25, 10, and 25 tons per year, respectively, to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable and to comply with 326 IAC 2-8 (FESOP). This limit will also render the requirements of the NESHAP, 40 CFR 63, Subpart WWWW, not applicable.

### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM2.5	Nonattainment
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Basic Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) 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. See the State Rule Applicability for the source section.

## Source Status

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

Pollutant	Emissions (tons/yr)
PM	0.26
PM-10	0.32
SO <sub>2</sub>	0.01
VOC	<25.0
CO	0.92
NO <sub>x</sub>	1.09
Single HAP	<10.0
Combination HAPs	<25.0

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This new source is **not** a major stationary source because NO<sub>x</sub> and VOC are not emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) This new source is **not** a major stationary source because PM10 is not emitted at a rate of 100 tons per year or greater. Therefore, the Non-attainment New Source Review requirements do not apply.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.
- (b) The requirements of the NSPS, 40 CFR Part 60.110b through 60.117b, Subpart Kb (326 IAC 12) are not included in the permit for the insignificant VOC storage tanks with capacity less than or equal to 1,000 gallons because the tank storage capacity is less than 75 cubic meters.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit for this source.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production, 326 IAC 20-56, (40 CFR Part 63.5780 through 63.5935, Subpart WWWW) were not included in this permit because this rule applies to reinforced plastic composites production facilities that are located at a major source of HAP emissions. This rule has a compliance date of April 21, 2006. In order to comply with 326 IAC 2-8 (FESOP), this source has accepted a resin usage limit to limit the potential to emit of any single HAP and any combination of HAPs to less than 10 and 25 tons per year, respectively. Therefore, prior to the compliance date of this rule, this source will not be a major source of HAP emissions so that the requirements of this rule do not apply.

## State Rule Applicability – Entire Source

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

This new source is not a major PSD source under this rule because the potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, it is a minor PSD source and the requirements of 326 IAC 2-2 do not apply.

### 326 IAC 2-3 Emission Offset

Marion County has been designated as non-attainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM 2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area as a source that emits or has the potential to emit 100 ton per year of any regulated pollutant. Willoughby Industries, Inc. has a potential to emit of PM10 below 100 tons per year. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-3 does not apply.

Marion County has been designated as basic nonattainment for the 8-hour ozone standard. The potential to emit of NOx and VOC from this source is less than 100 tons per year for each pollutant. Therefore, the requirements of 326 IAC 2-3 do not apply.

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

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

### 326 IAC 2-8 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). In order to comply with 326 IAC 2-8-4, the source's potential to emit of any single HAP and any combination of HAPs must be limited to less than the major source levels of 10 and 25 tons per year, respectively. The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of styrene and methyl methacrylate (MMA) shall each be limited to 9.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, and the PTE of the combination of styrene and MMA shall be limited to 24.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit shall be determined based on the emission factors approved by IDEM, OAQ: "Unified Emission Factors for Open Molding of Composites", Composites Fabricators Association (CFA), July 23, 2001. This limit combined with potential single HAP and total combined HAP emissions from all other solvent usage and all other emission units at this source, including insignificant activities, will limit source-wide single HAP emissions and combined HAP emissions to less than 10 and 25 tons per year, respectively. Compliance with this limit shall render the requirements of 326 IAC 2-7 (Part 70) not applicable.

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

The operation of this new source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

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

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

- (a) Opacity shall not exceed an average of 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.

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

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).

**326 IAC 6.5-1 (formerly 326 IAC 6-1) (County Specific Particulate Matter Limitations)**

Pursuant to 326 IAC 6.5-1-1, this rule applies to sources located in Marion County if the source has the potential to emit 100 tons per year or more of particulate matter or has actual emissions of 10 tons or more of particulate matter per year and is not specifically listed in 326 IAC 6.5-6 (Marion County). This source, which is located in Marion county and is not specifically listed in 326 IAC 6.5-6 (Marion County), does not have the potential to emit 100 tons per year or more of particulate matter and does not have actual emissions of 10 tons or more per year of particulate matter. Therefore, this rule does not apply.

**326 IAC 20-25 (Emissions from Reinforced Plastics Composites Fabricating Emission Units)**

This rule applies to reinforced plastics composites part manufacturers that have the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs. In order to comply with 326 IAC 2-8 (FESOP), this source has accepted a resin usage limit to limit the potential to emit of any single HAP and any combination of HAPs to less than 10 and 25 tons per year, respectively. Therefore, the requirements of this rule do not apply since this is not a major source of HAP emissions.

**326 IAC 20-56 (Reinforced Plastic Composites Production)**

This rule incorporates by reference 40 CFR 63, Subpart WWWW, National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Production. Therefore, this rule applies to sources as provided in 40 CFR 63.5785, Subpart WWWW. This rule applies to reinforced plastic composites production facilities that are located at a major source of HAP emissions. In order to comply with 326 IAC 2-8 (FESOP), this source has accepted a resin usage limit to limit the potential to emit of any single HAP and any combination of HAPs to less than 10 and 25 tons per year, respectively. Therefore, this source is not a major source of HAP emissions so that the requirements of this rule do not apply.

**State Rule Applicability – Individual Facilities**

**326 IAC 6-3-2 (Particulate Emissions)**

Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential particulate emissions less than 0.551 pound per hour are exempt from the requirements of 326 IAC 6-3. Since the resin mixing and casting operation has no particulate emissions because it has 100% transfer efficiency, it is exempt from the requirements of this rule pursuant to 326 IAC 6-3-1(b)(14).

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the finishing operation (Unit 02) shall not exceed 0.90 pounds per hour when operating at a process weight rate of 206.5 pounds per hour. The pound per hour limitation was calculated with the following equation:

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

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

Since potential uncontrolled particulate emissions from the finishing operation are greater than the allowable particulate emission limit, the cartridge dust collector shall be in operation at all times the finishing operation is in operation, in order to comply with this limit.

#### 326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compounds (VOC) emissions of 25 tons per year or more, and which are not otherwise regulated by other provisions of 326 IAC 8, to reduce VOC emissions using Best Available Control Technology (BACT). The use of resins and solvents in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of VOC shall be limited to 24.84 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the potential to emit of VOC from the resin mixing and casting operation (Unit 01) to less than 25 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 not applicable.

#### 326 IAC 8-3-2 (Cold Cleaner Operations)

The degreasing operation, an insignificant activity, is subject to this rule because it is a cold cleaner degreaser constructed after January 1, 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

This rule applies to cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990. The degreasing operation at this source does have a remote solvent reservoir and is not subject to this rule.

### Testing Requirements

There are no applicable testing requirements included in this permit.

### Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result,

compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this source:

- (a) There are no applicable compliance monitoring requirements for the resin mixing and casting operation (Unit 01) because compliance with 326 IAC 2-8 and 326 IAC 8-1-6 limits are determined by record keeping and reporting requirements.
- (b) There are no applicable compliance monitoring requirements for the finishing operation (Unit 02) because the operation has a control device and has allowable emissions that are low.

### **Conclusion**

The operation of this cast polymer plumbing fixture manufacturing operation shall be subject to the conditions of the FESOP 097-21390-00564.

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
Indianapolis Office of Environmental Services**

**Addendum to the  
Technical Support Document (TSD)  
for a Federally Enforceable State  
Operating Permit (FESOP)**

**Source Name:** Willoughby Industries, Inc.  
**Source Location:** 1610 S. Girls School Road, Indianapolis, IN 46231  
**County:** Marion  
**SIC Code:** 3088  
**Operation Permit No.:** F097-21390-00564  
**Permit Reviewer:** Trish Earls/EVP

On October 10, 2005, the Indianapolis Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that on July 7, 2005, Willoughby Industries, Inc. applied for a Federally Enforceable State Operating Permit (FESOP) relating to the construction and operation of a cast polymer plumbing fixture manufacturing operation, located at 1610 S. Girls School Road, Indianapolis, Indiana. The notice also stated that the OES proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

The TSD will remain as it originally appeared when published. Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and OES prefer that the Technical Support Document reflects the permit that was on public notice. Changes to the permit or technical support material that occur after the permit has been published are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision (bolded language has been added, the language with a line through it has been deleted). The Table of Contents and page numbering have been revised as needed.

No comments were received during the Public Notice period.

IDEM and OES have determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation. Therefore, IDEM and OES have deleted paragraph (b) of Section B Condition B.12 – Preventive Maintenance Plan, and have amended the Section B Condition B.13 – Emergency Provisions as follows:

**B.12 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]**

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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)~~ The Permittee shall implement the PMPs, including any required record keeping as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- ~~(e)~~ **(b)** A copy of the PMPs shall be submitted to IDEM, OAQ, and OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and OES. IDEM, OAQ, and OES 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 does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- ~~(d)~~ **(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.13 Emergency Provisions [326 IAC 2-7-16]**

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- .....
- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, IN 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

.....

- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.**
- 

IDEM and OES have clarified the Section B Operational Flexibility condition as follows:

**B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]**

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- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
  - (3) The changes do not result in emissions which exceed the ~~emissions allowable~~

~~under~~ **limitations provided in** this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

and

Indianapolis OES  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, IN 46221

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions ~~trading trades~~ that are subject to 326 IAC 2-8-15(b) through (d). ~~and makes~~ **The Permittee shall make** such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, and OES in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

.....

- (c) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade **emissions** increases and decreases ~~in emissions in~~ at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

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The IDEM mailing address was corrected throughout the Permit:

Indiana Department of Environmental Management  
.....  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

**Appendix A: Emissions Calculations  
Reinforced Plastics and Composites  
Open Molding Operations\***

**Company Name: Willoughby Industries, Inc.  
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231  
FESOP No.: 097-21390-00564  
Reviewer: Trish Earls**

Emission Unit ID	Material (Resin or Gel Name)	Density (Lb/Gal)	Weight % Monomer (as styrene) or VOC	Weight % MMA	Maximum usage (lbs/hour)	UEF (lbs styrene/ton resin or gel)	UEF (lbs MMA/ton resin or gel)	Potential VOC** &HAP (as styrene) (pounds per day)	Potential VOC** &HAP (as styrene) (tons per year)	Potential VOC** &HAP (as MMA) (pounds per day)	Potential VOC** &HAP (as MMA) (tons per year)	€
01	Resin	9.1	35.0%	5.0%	91.90	77.00	75.00	84.92	15.50	82.71	15.09	
01	Catalyst	8.35	100.0%	n/a	1	n/a	n/a	24.00	4.38	n/a	n/a	
01	mold release	6.34	99.0%	n/a	0.07	n/a	n/a	1.55	0.28	n/a	n/a	
01	pigments	17.36	1.0%	n/a	0.50	n/a	n/a	0.12	0.02	n/a	n/a	
01	pot-cleaner	8.86	100.0%	n/a	0.83	n/a	n/a	19.99	3.65	n/a	n/a	
<b>Total Potential to Emit:</b>								<b>130.58</b>	<b>23.83</b>	<b>82.71</b>	<b>15.09</b>	

\* Although this source only performs open molding 20% of the time and closed molding 80% of the time, the emission factors for open molding operations were used to represent the worst case emissions if only open molding.

\*\* Catalyst, mold release, pigments and pot-cleaner are VOC only (i.e., no HAP as styrene).

**METHODOLOGY**

For the resin, which can be used as a gel coat per the MSDS (but is not in this case), it contains both styrene monomer and methyl methacrylate (MMA) monomer.

Use the emission factors based on the type of application from "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association (July 23, 2001) to calculate resin emissions.

UEF: The United Emission Factor is the emission factor for the resin styrene or MMA content determined using the 7/2001 UEF Table.

Potential VOC Pounds per Hour = Maximum usage (lbs/ hr) x [UEF Emission Factor (lb styrene or MMA/ton resin or gelcoat)/2000 lbs material; or wt. % VOC]

Potential VOC Emissions (lb/day) = Potential VOC Emissions (lb/hr) x 24 (hr/day)

Potential VOC Emissions (tons/yr) = ( Potential VOC Emissions (lb/hr) x 8,760 (hr/yr) ) / 2,000 (lb/ton)

Potential PM (ton/year) = Density \* (1 - Weight % monomer or VOC) \* Maximum Usage \* (1 - transfer efficiency) \* 24 hrs/day \* 365 days/year \* (1 ton/2000 lb)

Emission Unit ID	Material (Resin or Gel Name)	Density (Lb/Gal)	Maximum usage (lbs/hour)	Weight% MEK	Weight% Xylene	Weight% Cumene	MEK Emissions (tons/yr)	Xylene Emissions (tons/yr)	Cumene Emissions (tons/yr)	Total HAP Emissions (tons/yr)
01	Catalyst	8.35	1	2.0%	0.0%	0.0%	0.09	0.00	0.00	0.09
01	mold release	6.34	0.01	0.0%	5.0%	2.0%	0.00	2.3E-03	9.0E-04	3.2E-03
01	pigments	17.36	0.50	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00
01	pot-cleaner	8.86	0.83	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00
							<b>0.09</b>	<b>2.3E-03</b>	<b>9.0E-04</b>	<b>0.09</b>

**Appendix A: Emissions Calculations  
Reinforced Plastics and Composites  
Finishing Operations (Unit 02)**

**Company Name: Willoughby Industries, Inc.  
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231  
FESOP No.: 097-21390-00564  
Reviewer: Trish Earls**

Fixtures were weighed before finishing (machining and sanding) and then weighed afterwards to determine the amount of material that was removed in the finishing processes. From that and the maximum production rates, the average hourly rate of total PM generated was determined to be 5.0 lbs/hour.

5 lbs/hr x 8,760 hrs/yr / 2,000 lbs/ton = 21.9 tons/yr uncontrolled potential emissions (PM is assumed equal to PM10)

The published dust collector equipment specifications were used for the control efficiency calculation -- "99.9% effective on particles as small as 1 micron." The capture efficiency of 99% was a number given for typical efficiency for the sanding booth design that is going to be used (3 walls and a ceiling with dust collectors mounted in the rear of the booth).

**APPLYING CAPTURE EFFICIENCY FACTOR:**

5.0 lbs/hour of PM produced x (1 - 0.99) = 0.05 lbs/hour that is NOT pulled into the intake vents of the dust collection system. (4.95 lbs/hour does make it into the system)

**APPLYING CONTROL EFFICIENCY FACTOR:**

4.95 lbs/hour into the dust collection system x (1 - 0.999) = 0.00495 lbs/hour that is NOT filtered out by the dust collection system. (4.94505 lbs/hour is captured by the system.)

**ADDING TOGETHER THE PM NOT CAPTURED IN THE DUST COLLECTION SYSTEM:**

0.05 lbs/hour of PM emitted due to the capture efficiency factor + 0.00495 lbs/hour of PM emitted due to the control efficiency factor = 0.05495 lbs/hour that is NOT captured by the dust collection system.

0.05495 lbs/hr not captured x 8,760 hrs/yr / 2,000 lbs/ton = 0.24 tons/yr PM/PM10 emitted after controls

These units do NOT exhaust to the exterior of the building. They are vented internally.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100**

**Company Name: Willoughby Industries, Inc.  
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231  
FESOP No.: 097-21390-00564  
Reviewer: Trish Earls**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.5

21.9

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.02	0.08	0.01	1.09	0.06	0.92

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

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

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

See next page for HAPs emissions calculations.

**Appendix A: Emissions Calculations  
 Natural Gas Combustion Only  
 MM BTU/HR <100  
 HAPs Emissions**

**Company Name: Willoughby Industries, Inc.  
 Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231  
 FESOP No.: 097-21390-00564  
 Reviewer: Trish Earls**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.296E-05	1.312E-05	8.199E-04	1.968E-02	3.717E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.466E-06	1.203E-05	1.531E-05	4.154E-06	2.296E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Company Name:** Willoughby Industries, Inc.  
**Address City IN Zip:** 1610 S. Girls School Road, Indianapolis, IN 46231  
**FESOP No.:** 097-21390-00564  
**Reviewer:** Trish Earls

<b>Total Potential To Emit (tons/year)</b>				
Emissions Generating Activity				
Pollutant	Fiberglass Operations	Natural Gas Combustion	Finishing Operation	TOTAL
PM	0.00	0.02	21.90	21.92
PM10	0.00	0.08	21.90	21.98
SO2	0.00	0.01	0.00	0.01
NOx	0.00	1.09	0.00	1.09
VOC	38.92	0.06	0.00	38.98
CO	0.00	0.92	0.00	0.92
total HAPs	30.68	0.02	0.00	30.70
worst case single HAP	(Styrene) 15.50	(Hexane) 0.02	0.00	(Styrene) 15.50

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

\*\*For the purposes of determining Title V applicability, PM10 (not PM) is the regulated pollutant in consideration

<b>Limited Emissions (tons/year)</b>				
Emissions Generating Activity				
Pollutant	Fiberglass Operations	Natural Gas Combustion	Finishing Operation	TOTAL
PM	0.00	0.02	0.24	0.26
PM10	0.00	0.08	0.24	0.32
SO2	0.00	0.01	0.00	0.01
NOx	0.00	1.09	0.00	1.09
VOC	<25.00	0.06	0.00	<25.00
CO	0.00	0.92	0.00	0.92
total HAPs	<24.88	0.02	0.00	<25.00
worst case single HAP	<10.00	(Hexane) 0.02	0.00	<10.00

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

\*\*For the purposes of determining Title V applicability, PM10 (not PM) is the regulated pollutant in consideration