



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 21, 2010

RE: Willoughby Industries/ 097 - 28979 - 00564

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Willoughby Industries, Inc.
1610 S. 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 provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or 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.

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.

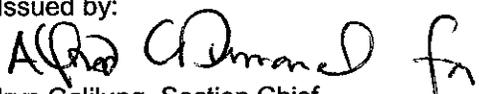
Operation Permit No.: F097-28979-00564	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 21, 2010 Expiration Date: December 21, 2020

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 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)]

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

Source Address:	1610 S. Girls School Road, Indianapolis, Indiana 46231
General Source Phone Number:	317-638-2381
SIC Code:	3088
County Location:	Marion
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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, constructed in 2005, consisting of both open molding and closed molding operations, injecting a maximum of 91.90 pounds per hour of resin, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting through the wall to the atmosphere with no control.
- (b) One (1) finishing operation, identified as Unit 02, constructed in 2005, consisting of Sanding Booth #1, Sanding Booth #2, Sanding Booth #3 and large belt sander performing machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with (4) cartridge dust collector units operated from a single control panel 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)]

This stationary source also includes the following insignificant activities:

- (a) 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]
- (b) 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.

- (c) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface. The equipment consists of four (4) mills, five (5) lathes, one (1) polisher and one (1) saw.
- (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).
- (i) Activities associated with production including:
 - (1) Two (2) Air compressors and (1) dryer in the Compressor Room.
 - (B) An area for sheet metal operations, consisting of one (1) punch press, spot and TIG welding, and CO2 Laser cutting machine (exempt) and one (1) press brake.
 - (C) A tube bending/tool room with various fabrication processes, consisting of tube bending, milling, drilling, and surface grinding. Various pieces of equipment are located in this area to accomplish these tasks. Some of this equipment includes a tube bender, mills, lathe, drill and surface grinder. None of this equipment is expected to generate significant amounts of criteria or HAP pollutants, in addition, many of these emission sources are considered exempt pursuant to 326 IAC 2-1.1-3.
 - (D) A closed injection molding area consisting of three (3) Van Dorn closed molding injection molding machines, processing a maximum of 21.58 lbs of material per hour combined, all three are connected to the same stack and exhaust to stack (S1); one (1) chiller/heater and three (3) regrinders, two regrinders operating at a maximum capacity of 55 pounds per hour, each; and one regrinder, at a maximum capacity of grinding 40 pounds per hour, and all with a 20% regrind limit for use.
 - (E) Draw Press Area consisting of currently three (3) draw presses:
 - (1) One (1) draw press that punches and forms stainless barrier cups, maximum 30,000 parts per year, 708 pounds of parts and 2,595 lbs of scrap.
 - (2) One (1) draw press that forms stainless magnet cup, maximum of 30,000 parts per year, 1200 lbs of parts.
 - (3) One (1) draw press currently not in use.

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) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

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

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.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F097-28979-00564, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-8-4(4)]

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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

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

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
- (ii) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

- (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 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, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ 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.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (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) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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.

The Permittee shall implement the PMPs.

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) 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.12 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 describe 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, 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 Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

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

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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "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 may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ 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.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F097-28979-00564 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
- (2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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.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]**

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "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 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 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 at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ 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)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "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.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

Such records shall consist of all information required to be submitted to IDEM, OAQ 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 Source Modification Requirement [326 IAC 2-8-11.1]

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "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 no later than 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 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

Emission 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.
- (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 (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 5-1-1 (Applicability) and 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]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

Corrective Actions and Response Steps [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]

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 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual

manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present

or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee 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 except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (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 on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) resin mixing and casting operation, identified as Unit 01, constructed in 2005, consisting of both open molding and closed molding operations, injecting a maximum of 91.90 pounds per hour of resin, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting through the wall to the atmosphere with no control.
- (b) One (1) finishing operation, identified as Unit 02, constructed in 2005, consisting of Sanding Booth #1, Sanding Booth #2, Sanding Booth #3 and large belt sander performing machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with (4) cartridge dust collector units operated from a single control panel for particulate emissions control, exhausting inside the building.

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

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

D.1.1 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-4.1] [40 CFR 63, Subpart WWWW]

- (a) Styrene (single HAP)
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 shall be limited such that the combined potential to emit (PTE) of any single HAP shall not exceed 9.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Methyl Methacrylate (MMA) (single HAP)
The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of methyl methacrylate (MMA) shall be limited such that the combined potential to emit (PTE) of any single HAP shall not exceed 9.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Styrene and Methyl Methacrylate (MMA) (total HAP)
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 such that the total HAPs shall not exceed 24.79 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per 12 consecutive month period, and total HAPs to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP), and 40 CFR 63, Subpart WWWW not applicable.

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 not applicable, 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 not exceed 24.84 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

Note: This VOC limit is for the VOC emissions from the resin, catalyst, mold release, pigments and pot cleaner.

D.1.3 Particulate [326 IAC 6-3-2]

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 0.9 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.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for the finishing operation and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.5 Volatile Organic Compounds (VOC) and HAP [326 IAC 8-1-2][326 IAC 8-1-4]

To demonstrate compliance with conditions D.1.1 and D.1.2, 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) or its updates:

(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 per month

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

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 per month

(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 per month

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

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

R = Total amount of resin in pounds per month

- (c) VOC from catalyst:
 $E_V = F_3 * V * K * (1 \text{ ton}/2,000 \text{ pounds})$, where:
 E_V = VOC emissions in tons per month
 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 per month
- (d) VOC from pigment:
 $E_P = F_4 * V * P * (1 \text{ ton}/2,000 \text{ pounds})$, where:
 E_P = VOC emissions in tons per month
 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 per month
- (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 per month
 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 per month
- (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 per month
 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 per month.
- (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.1.6 Particulate Control

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.1.7 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1 and D.1.2, 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.1.1 and D.1.2.

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) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.8 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1 and D.1.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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

- (a) 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**

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

Source Name: Willoughby Industries, Inc.
Source Address: 1610 S. Girls School Road, Indianapolis, Indiana 46231
FESOP Permit No.: F097-28979-00564

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 AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

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

Source Name: Willoughby Industries, Inc.
Source Address: 1610 S. Girls School Road, Indianapolis, Indiana 46231
FESOP Permit No.: F097-28979-00564

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), 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 ₂ , VOC, NO _x , 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FESOP Quarterly Report

Source Name: Willoughby Industries, Inc.
Source Address: 1610 S. Girls School Road, Indianapolis, Indiana 46231
FESOP Permit No.: F097-28979-00564
Facility: resin mixing and casting operation (Unit 01)
Parameter: resin and solvent usage to limit VOC emissions
Limit: 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.

YEAR: _____

Month	VOC Emissions (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

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

Source Name: Willoughby Industries, Inc.
 Source Address: 1610 S. Girls School Road, Indianapolis, Indiana 46231
 FESOP Permit No.: F097-28979-00564
 Facility: resin mixing and casting operation (Unit 01)
 Parameter: resin and solvent usage to limit HAP emissions
 Limit: (a) 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.
 (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 the combination of styrene and methyl methacrylate (MMA) shall each be limited to 24.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Total HAPs (tons)			Total HAPs (tons)			Total HAPs (tons)			All HAPs (tons)
	This Month			Previous 11 Months			12 Month Total			
	Styrene	MMA	Other	Styrene	MMA	Other	Styrene	MMA	Other	

No deviation occurred in this quarter.
 Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 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, Indiana 46231
 FESOP Permit No.: F097-28979-00564

Months: _____ **to** _____ **Year:** _____

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, 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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Background and Description

Source Name:	Willoughby Industries, Inc.
Source Location:	1610 S. Girls School Road Indianapolis, Indiana 46231
County:	Marion
SIC Code:	3088
Permit Renewal No.:	097-28979-00564
Permit Reviewer:	Janet Mobley

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Willoughby Industries, Inc. relating to the operation of a stationary cast polymer plumbing fixture manufacturing operation.

History

On February 16, 2010, Willoughby Industries, Inc. submitted an application to the OAQ requesting to renew its operating permit. Willoughby Industries, Inc. was issued a New Source Construction and FESOP on November 18, 2005.

Permitted Emission Units and Pollution Control Equipment

- (a) One (1) resin mixing and casting operation, identified as Unit 01, constructed in 2005, consisting of both open molding and closed molding operations injecting a maximum of 91.90 pounds per hour of resin, producing a maximum of 206.5 pounds of plumbing fixtures per hour, exhausting through the wall to the atmosphere with no control.
- (b) One (1) finishing operation, identified as Unit 02, constructed in 2005, consisting of Sanding Booth #1, Sanding Booth #2, Sanding Booth #3 and large belt sander performing machining and sanding operations, processing a maximum of 206.5 pounds of plumbing fixtures per hour, with (4) cartridge dust collector units operated from a single control panel for particulate emissions control, exhausting inside the building.

Permitted 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).

Insignificant Activities Being Added to the Source at this Renewal

The source is also adding the following insignificant/trivial emission units to the source in this renewal:

- (1) The source already has in its permit as an insignificant activity “Machining where an aqueous cutting coolant continuously floods the machining interface” but is adding additional insignificant equipment associated with that activity: four (4) mills, five (5) lathes, one (1) polisher and includes one (1) saw that was already there previously.
- (2) Activities associated with production including:
 - (A) Two (2) Air compressors and (1) dryer located in the Compressor Room.
 - (B) An area for sheet metal operations, consisting of one (1) punch press, spot and TIG welding, and CO2 Laser cutting machine (exempt) and one (1) press brake.
 - (C) A tube bending/tool room with various fabrication processes, consisting of tube bending, milling, drilling, and surface grinding. Various pieces of equipment are located in this area to accomplish these tasks. Some of this equipment includes a tube bender, mills, lathe, drill and surface grinder. None of this equipment is expected to generate significant amounts of criteria or HAP pollutants, in addition, many of these emission sources are considered exempt pursuant to 326 IAC 2-1.1-3.
 - (D) A closed injection molding area consisting of three (3) Van Dorn closed molding injection molding machines, processing a maximum of 21.58 lbs of material per hour combined, all three are connected to the same stack and exhaust to stack (S1); one (1) chiller/heater and three (3) regrinders, two regrinders operating at a maximum capacity of 55 pounds per hour, each; and one regrinder, at a maximum capacity of grinding 40 pounds per hour, and all with a 20% regrind limit for use.
 - (E) Draw Press Area consisting of currently three (3) draw presses:
 - (1) One (1) draw press that punches and forms stainless barrier cups, maximum 30,000 parts per year, 708 pounds of parts and 2,595 lbs of scrap.

- (2) One (1) draw press that forms stainless magnet cup, maximum of 30,000 parts per year, 1200 lbs of parts.
- (3) One (1) draw press currently not in use.

Emission Units and Pollution Control Equipment Removed From the Source

There have not been any emission units removed from the source during this review. The source has one (1) draw press, however it is currently not in use and is to be moved out of the plant.

Existing Approvals

Since the issuance of the New Source Construction/ FESOP (097-21390-00564) on November 28, 2005, the source has constructed or has been operating under the following approvals as well:

- (a) Administrative Amendment No. (097-28499-00564) issued on October 14, 2009.

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

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Attainment effective November 8, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.

¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
Marion County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM_{2.5} emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
Marion County has been classified as attainment or unclassifiable in Indiana for all other regulated criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) **Fugitive Emissions**
This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and there is not an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of 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. However, the source has agreed to limit their HAP emissions to less than Title V levels, therefore the source will be issued a FESOP Renewal.

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

- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. 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	PM _{2.5}	SO ₂	VOC	CO	NO _x	HAPs
Resin Mixing and Casting (Unit 01)	0.00	0.00	0.00	0.00	<25.00	0.00	0.00	<24.88
Finishing Operations (Unit 02)	3.94 **	3.94	3.94	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.02	0.08	0.08	0.01	0.06	0.92	1.09	0.02
Welding Operation	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00
Laser Cutting	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00
Closed Injection Molding Operations/three scrap regrinder machines	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00
Van Dorn Injection Molding Units	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Total Emissions	7.31	7.37	7.37	0.01	<25 *	0.92	1.09	<10 & 25 *
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10/25
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA
Emission Offset/ Nonattainment New Source Review/ Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA
<p>Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". Additionally, US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.</p> <p>* 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.</p> <p>** PM emissions from the finishing operation (identified as Unit 02) shall not exceed 0.9 pounds per hour when operating at a process weight rate of 206.5 pounds per hour per 326 IAC 6-3. It is also assumed that PM10 equals PM2.5.</p>								

(a)

FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will continue to be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) **Styrene (Single HAP)**
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 shall be limited such that the combined potential to emit (PTE) of any single HAP shall not exceed 9.9 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 and its updates. Refer to Appendix A of this TSD for the methodology.
- (2) **Methyl Methacrylate (MMA) (Single HAP)**
The use of resin in the resin mixing and casting operation (Unit 01) shall be limited such that the potential to emit (PTE) of methyl methacrylate (MMA) shall be limited such that the combined potential to emit (PTE) of any single HAP shall not exceed 9.9 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 and its updates. Refer to Appendix A of this TSD for the methodology.
- (3) **Styrene and Methyl Methacrylate (MMA) (total HAP)**
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 such that the total HAPs shall not exceed 24.79 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Refer to Appendix A of this TSD for the methodology.
- (4) **VOC**
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 not exceed 24.84 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Refer to Appendix A of this TSD for the methodology.

Note: This VOC limit is for the VOC emissions from the resin, catalyst, mold release, pigments and pot cleaner.

Compliance with these limits, combined with the potential to emit VOC, HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per 12 consecutive month period, and total HAPs to less than twenty-five (25) tons per 12 consecutive month period, VOC to less than 25 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2(Prevention of Significant Deterioration (PSD)), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP), and 40 CFR 63, Subpart WWWW not applicable.

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

- (c) **Nonattainment New Source Review Minor Source**
This existing source is not a major stationary source, under Nonattainment New Source Review (326 IAC 2-1.1-5), because the potential to emit PM_{2.5}, is less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.

Federal Rule Applicability

New Source Performance Standards (NSPS)

- (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.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 326 IAC 20-48 (40 CFR 63.5683, Subpart VVVV (Boat Manufacturing)), are not included in this permit because this source does not manufacture boats.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20-56 (40 CFR 63.5785, Subpart WWWW (Reinforced Plastic Composites Production)), are not included in this permit because this source has accepted federally enforceable limits on the amount of hazardous air pollutants (HAPs) emitted, such that the potential to emit of any single HAP is limited to less than 10 tons per year and the potential to emit of any combination of HAPs is limited to less than 25 tons per year.
- (e) 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.

Compliance Assurance Monitoring (CAM)

- (f) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM) is not included in this permit. This source is operating as a FESOP. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring are not applicable to this source.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source after Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (c) 326 IAC 2-1.1-5 (PM_{2.5} Nonattainment Counties)
This existing source is not a major stationary source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than ten 2.5

- micrometers (PM_{2.5}), is less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HAPs from the existing units is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit of HAPs from the existing units to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (e) 326 IAC 2-6 (Emission Reporting)
This source is located in Marion County. 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.
- (f) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:
- (a) Opacity shall not exceed an average of 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.
- (g) 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).
- (h) 326 IAC 6.5-1 (Particulate Matter Limitations Except Lake County)
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.
- (i) 326 IAC 20-25 (Emissions from Reinforced Plastics Composites Fabricating Emission Units)
This rule has been repealed since the previous permit was issued.
- (j) 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

Resin Mixing and Casting Operations (Unit 01)

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 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. To demonstrate compliance with this limit an equation will be used. 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.

Finishing Operations (Unit 02)

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:

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

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 12 (New Source Performance Standards)

See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)

See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Insignificant Activities - Degreasing

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.

State Rule Applicability – Insignificant Activities – Natural Gas Building Heaters

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

The five (5) building heaters, each, do not meet the definition of a "manufacturing process", as defined in 326 IAC 6-3-1.5(2), therefore they are exempt from the requirements of 326 IAC 6-3, and the requirements are not included in the permit.

State Rule Applicability – Insignificant Activities - Laser Cutting Machine

The laser cutting machine is exempt per 326 IAC 2-1.1-3(1)(A) because the potential to emit PM/PM10 is less than five tons per year, uncontrolled is 3.3

State Rule Applicability – Insignificant Activities - Welding Machining Operations

326 IAC 6-3-2 (Particulate Emission Limitations)

Pursuant to 326 IAC 6-3-1 welding is exempt from 326 IAC 6-3-2, provided that less than six hundred twenty-five (625) pounds of rod or wire is consumed per day. The welding operations at this source consume less than six hundred twenty-five (625) pounds of rod or wire is consumed per day. Therefore no limits apply.

State Rule Applicability – Insignificant Activities – Closed Injection Molding Area

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

The potential particulate emissions from the three Van Dorn closed molding machines as part of the injection molding process are less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the injection molding process is exempt from 326 IAC 6-3, and the requirements are not included in the permit.

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

The controlled particulate emissions from the three regrinders are 0.02 tons per year, which is less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the plastic granulation operations are exempt from 326 IAC 6-3, and the requirements are not included in the permit

State Rule Applicability – Insignificant Activities – Draw Press Area

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

The potential particulate emissions from the three draw presses are less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the draw press process is exempt from 326 IAC 6-3, and the requirements are not included in the permit.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a 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 Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements 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.

Testing Requirements

There are no applicable testing requirements included in this permit.

Recommendation

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

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

An application for the purposes of this review was received on February 16, 2010. Additional information was received on May 4, May 19 and September 14, 2010 .

Conclusion

The operation of this cast polymer plumbing fixture manufacturing operations shall be subject to the conditions of the attached FESOP Renewal No. 097-28979-00564.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Janet Mobley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emission Calculations
Summary of Emissions**

Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 South Girls School Road, Indianapolis, Indiana 46231
Permit Number: 097-28979-00564
Reviewer: Janet Mobley

Unlimited Potential to Emit (tons/year)									
	PM	PM10	PM2.5	SO ₂	VOC	CO	NOx	Total HAPs	Worst Single Hap
Resin Mixing and Casting Operations (Unit 01)	0.00	0.00	0.00	0.00	38.92	0.00	0.00	30.68	15.50 Styrene
Finishing Operations (Unit 02)	21.92	21.98	21.98	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.02	0.08	0.08	0.01	0.06	0.92	1.09	0.02	0.02 (Hexane)
Welding Operation	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.002 (Manganese)
Laser Cutting	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	
Closed Injection Molding Operations/three scrap regrinder machines	0.52	0.52	0.52	0.00	0.00	0.00	0.00	0.00	
Van Dorn Injection Molding Units	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	
TOTAL PTE	25.79	25.91	25.91	0.01	38.99	0.92	1.09	30.70	

Limited Potential to Emit (tons/year)									
	PM	PM10	PM2.5	SO ₂	VOC	CO	NOx	Total HAPs	Worst Single Hap
Resin Mixing and Casting Operations (Unit 01)	0.00	0.00	0.00	0.00	<25.00	0.00	0.00	<24.88	<10.00
Finishing Operations (Unit 02)	3.94	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.02	0.08	0.08	0.01	0.06	0.92	1.09	0.02	0.02 (Hexane)
Welding Operation	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.002 (Manganese)
Laser Cutting	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	
Closed Injection Molding Operations/three scrap regrinder machines	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	
Van Dorn Injection Molding Units	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	
TOTAL PTE	7.31	7.37	7.37	0.01	<25.00	0.92	1.09	<25.00	<10.00

PM=PM10 & PM2.5
 Total emissions based on 8,760 hours/year

**Appendix A: Emissions Calculations
Reinforced Plastics and Composites
Open Molding Operations*
Resin Mixing and Casting (Unit 01)**

**Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231
FESOP No.: 097-28979-00564
Reviewer: Janet Mobley**

Emission Unit ID	Material (Resin or Gel Name)	UEF > 50 Styrene (lbs styrene/lbs resin)	UEF > 20 MMA (lbs MMA/lbs resin)	Weight % Monomer (as styrene) or VOC	Weight % MMA	CFA EF Constant	Percent VOC Emitted (%)	Maximum usage (lbs/hour)	Maximum Usage (lbs/month)	Potential VOC** &HAP (as styrene) (tons per month)	Potential VOC** &HAP (as styrene) (tons per year)	Potential VOC** &HAP (as MMA) (tons per month)	Potential VOC** &HAP (as MMA) (tons per year)	Total VOC emissions (tons/yr)
01	Resin	0.157	0.75	35.0%	5.0%	0.0165		91.90	67087.00	1.29	15.48	1.26	15.09	30.57
01	Catalyst	n/a		100.0%		n/a	2.0%	1	730.00	0.0073	0.09	n/a	n/a	0.09
01	mold release			99.0%		n/a	100.0%	0.07	51.10	0.0253	0.30	n/a	n/a	0.30
01	pigments	n/a		1.0%		n/a	100.0%	0.50	365.00	0.0018	0.02	n/a	n/a	0.02
01	pot-cleaner			100.0%		n/a	25.0%	0.83	605.90	0.0757	0.91	n/a	n/a	0.91
Total Potential to Emit:										1.40	16.80	1.26	15.09	31.89

* 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 was performed.

** 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.

Maximum usage pounds per month = maximum usage lbs/hour x 8760 / 12 months per year

Resin - Potential VOC & HAP (as styrene) tons per month = [UEF Emission Factor (lb styrene/lb resin) x UEF MMA (lbs MMA/lbs resin) - Constant of 0.0165 (CFA EF) x max. usage (lbs/month) / 2000 lbs

Catalyst, mold release, pigments & pot cleaner - Potential VOC & HAP as styrene (tons per month) = weight % monomer x % VOC emitted * max. usage (lbs/month) / 2000 (lb/ton)

Potential VOC & HAP (as styrene tons/year) = potential VOC & HAP (as styrene tons/month) x 12 (months/year)

Potential VOC & HAP (tons/month) = (UEF MMA (lbs MMS/lbs resin) x Weight % Monomer * max usage lb/month) / 2,000 (lb/ton)

Potential VOC & HAP as MMA = potential VOC & HAP (as MMA tons/month) x 12 months/year

Total VOC emissions(tons/year) = potential VOC & HAP (as styrene tons/year) + potential VOC & HAP as MMA

HAP Emissions = maximum usage (lbs/hour) x weight % of HAP x 4.38

Emission Unit ID	Material (Resin or Gel Name)	Density (Lb/Gal)	Maximum usage (lbs/hour)	Weight% Xylene	Weight% Cumene	Xylene Emissions (tons/yr)	Cumene Emissions (tons/yr)	Total HAP Emissions (tons/yr)
01	Catalyst	8.35	1	0.0%	0.0%	0.00	0.00	0.00
01	mold release	6.34	0.01	5.0%	2.0%	2.3E-03	9.0E-04	3.2E-03
01	pigments	17.36	0.50	0.0%	0.0%	0.00	0.00	0.00
01	pot-cleaner	8.86	0.83	0.0%	0.0%	0.00	0.00	0.00
						2.3E-03	9.0E-04	0.0032

15.48	HAP as Styrene tpy
15.09	HAP as MMA tpy
30.57	TOTAL HAPs

MEK had previously been included as a HAP but has been delisted.

**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.: 097-28979-00564
Reviewer: Janet Mobley

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. ⁽¹⁾

$$5 \text{ lbs/hr} \times 8,760 \text{ hrs/yr} / 2,000 \text{ lbs/ton} = 21.9 \text{ tons/yr uncontrolled potential emissions (PM is assumed equal to PM10)}$$

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 $\times (1 - 0.99) = 0.05 \text{ lbs/hour}$ 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 $\times (1 - 0.999) = 0.00495 \text{ lbs/hour}$ 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.

$$0.05495 \text{ lbs/hr not captured} \times 8,760 \text{ hrs/yr} / 2,000 \text{ lbs/ton} = 0.24 \text{ tons/yr PM/PM10 emitted after controls}$$

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

Compliance with 6-3-2 Limit			
0.9 lb/hour x	8760 hrs/yr/	2,000 lbs/ton=	3.94 tons/year

⁽¹⁾ The average hourly rate of total PM generated was determined in the initial FESOP issued (097-21390-00564) November 18, 2005. CDS did not verify the data.

**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.: 097-28979-00564
Reviewer: Janet Mobley**

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
Potential Emission in tons/yr	1.9	7.6	0.6	100.0 **see below	5.5	84.0
	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.: 097-28979-00564
 Reviewer: Janet Mobley**

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.

Appendix A: Emission Calculations Summary
Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231
MSOP No.: 097-28979-00564
Reviewer: Janet Mobley

Welding Operation Description:

Welding operations, including spot and TIG welding at a maximum capacity to use 1 pound of electrode per hour. The source uses less than this PTE.

Potential Emissions Calculation

Type of Welding	MIG	TIG
Type of Electrode/Consumable	N/D	N/D
Maximum Electrode Usage [lb/hr] ⁽¹⁾ =	1	1
Percent of Electrode Converted to Fume [%] ⁽²⁾ =	0.6%	0.6%
Percent of Manganese in Fume [%] ⁽²⁾ =	7.7%	N/A
Potential PM/PM ₁₀ Emissions [lb/hr] ⁽³⁾ =	0.006	0.006
Potential Manganese Emissions [lb/hr] ⁽⁴⁾ =	0.0005	N/A
Potential PM/PM₁₀ Emissions [tpy] ⁽⁵⁾ =	0.026	0.026
Potential Manganese Emissions [tpy] ⁽⁶⁾ =	0.002	N/A

Methodology

(1) MIG: Maximum Electrode Usage [lb/hr] = Maximum Electrode Usage (2,000 lb every 3 mo x 4) / 8,760 hr/yr
 Assumed TIG maximum electrode usage to be the same as MIG.

(2) Percent of electrode converted to fume and percent of manganese in fume were obtained from the "Guide for Estimating Welding Emissions for EPA and Ventilation Permit Reporting" published by the American Welding Society. Used factors for ER70S-3. Assumed that TIG welding produces the same amount of fume as MIG welding.

(3) Potential PM/PM₁₀ Emissions [lb/hr] = Maximum Electrode Usage [lb/hr] x Percent of Electrode Converted to Fume [%]

(4) Potential Manganese Emissions [lb/hr] = Potential PM/PM₁₀ Emissions [lb/hr] x Percent of Manganese in Fume [%]

(5) Potential PM/PM₁₀ Emissions [tpy] = Potential PM/PM₁₀ Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton

(6) Potential Manganese Emissions [tpy] = Potential Manganese Emissions [lb/hr] x 8,760 hr/yr / 2,000 lb/ton

Appendix A: Emission Calculations Summary
Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231
MSOP No.: 097-28979-00564
Reviewer: Janet Mobley

Laser Cutting

$$\frac{1,000,000 \text{ lbs}}{\text{yr}} \times \frac{8,760 \text{ hrs/yr}}{8 \text{ hrs/day} \times 5 \text{ days/week} \times 52 \text{ weeks/yr}} \times \frac{15.7 \text{ lb PM } (*)}{1,000 \text{ lbs metal}} \times 10\% \times \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

3.3 (tons/year)

Methodology

To determine emissions from the machine the annual throughput was scaled up to 8760 hours per year, and assumed that 10% of the throughput was cut. An emission factor of 15.7 pounds of PM per 1,000 pounds metal throughput was used for the calculations.

Tons per year = 1,000,000 x 4.21 x 15.7/1000 x .10/2000

* Based on a 2006 evaluation of the source by their consultant, it was determined 10% of the throughput is cut and the emission factor of 15.7 lbs/1000 lbs. of metal was used. CDS did not verify the emission factor.

Appendix A: Emissions Calculations
Potential to Emit PM from the Closed Injection Molding Operation,
Including three (3) scrap regrinder machines

Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231
Permit No.: 097-28979-00564
Reviewer: Janet Mobley

Maximum Hourly Injection Molding Machine Resin Throughput (lbs/hr)	91.90
Facility Wide Scrap (%) ⁽²⁾	20.0%
Maximum Hourly Scrap Throughput (lbs/hr)	18.38
Grinding Emission Factor for PM (lbs/ton) ⁽¹⁾	1.30E+01
Control Efficiency of Cyclone and Bagfilter system	97.0%
Potential Hourly Uncontrolled PM Emissions (lbs/hr)	0.12
Potential Hourly Controlled PM Emissions (lbs/hr)	0.004
Potential Annual Uncontrolled PM Emissions (tons/yr)	0.52
Potential Annual Controlled PM Emissions (tons/yr) ^α	0.02

Methodology

Maximum Hourly Scrap Throughput (lbs/hr) = Maximum Hourly Resin Throughput (lbs/hr) * Facility Wide Scrap (%)

Potential Hourly Uncontrolled PM Emissions (lbs/hr) = Maximum Hourly Scrap Throughput (lbs/hr) * Grinding Emission Factor for PM (lbs/ton) / 2000 (lbs/ton)

Potential Hourly Controlled PM Emissions (lbs/hr) = Potential Hourly Uncontrolled Emissions (lbs/hr) * (1 - Control Efficiency of Cyclone and Filter)

Potential Annual Uncontrolled PM Emissions (tons/yr) = Potential Hourly PM Emissions (lbs/hr) * 8760 (hrs/yr) / 2000 (lbs/ton)

Potential Annual Controlled PM Emissions (tons/yr) = Potential Annual Uncontrolled PM Emissions (tons/yr) * (1 - Control Efficiency of Cyclone and Filter)

Notes

⁽¹⁾ No AP-42 emission factors exist for the grinding of thermoplastics. Therefore, the EPA Webfire emission factor for Fiberglass Resin Products - Plastics Machining: Drilling/Sanding/Sawing/etc. (SCC 30800701), has been used.

⁽²⁾ This is based on the evaluation of the source on their injection molding process.

Appendix A: Emissions Calculations
Potential to Emit from the Van Dorn Injection Molding Units
Processing Polypropylene with a 505 °F Melt Temperature

Company Name: **Willoughby Industries, Inc.**
Address City IN Zip: **1610 S. Girls School Road, Indianapolis, IN 46231**
Permit No.: **097-28979-00564**
Reviewer: **Janet Mobley**

VanDorn Machine #	Resin Type	Max Throughput Rate (lbs resin/hr)	PM			VOC		
			⁽¹⁾ Emission Factor (lbs/10 ⁶ lbs)	Emissions (lbs/hr)	Emissions (tons/yr)	⁽¹⁾ Emission Factor (lbs/10 ⁶ lbs)	Emissions (lbs/hr)	Emissions (tons/yr)
IS	PP	21.58	34.5	0.00	0.00	80.3	0.00	0.01
Totals		21.58		0.00	0.00		0.00	0.01

Methodology

Emissions (lbs/hr) = Max Throughput Rate (lbs resin/hr) * Emission Factor (lbs/10⁶ lbs) / 1000000
Emissions (tons/yr) = Emissions (lbs/hr) * 8760 (hrs/yr) / 2000 (lbs/ton)

Notes

⁽¹⁾ Emission factors for PM & VOC from Polypropylene molding were taken from a technical paper, volume 49 in January 1999, published by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 °F and reactor impact copolymer was used as the emission factor. The worst case emission factor was used for all machines that process polypropylene along with other plastics.

⁽²⁾ Polypropylene emission factors were the worst case emission factors for this machine and were used in lieu of the emission factors for PVC from the technical paper, "Process

^(a) No emission factors from the Journal of Vinyl & Additive Technology were used. The emissions from PVC were reviewed and were determined to lower than the PP emission factors, therefore the PP emission factors were used.

⁽³⁾ Polypropylene emission factors were the worst case emission factors for this machine and were used in lieu of the emission factors for TPE from the technical paper, "Development of Emission Factors for Polyethylene Processing" from volume 46 of the Journal of Air and Waste Management Association.

⁽⁴⁾ The polypropylene emission factor for PM was this worst case emission factor for this machine. The emission factor for VOC emissions come from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins", from volume 45 of the Journal of Air and Waste Management Association.

⁽⁵⁾ Emission factors for PM & VOC from Nylon processing were the worst case emission factors and were used in lieu of the emission factors for polypropylene molding. The emission factors come from the technical paper, "Development of Emission Factors for Polyamide Processing", from Volume 51 of the Journal of Air and Waste Management Association. The source uses two types of nylon, PA-66 and EPDM Toughened PA-66, and the worst case emission factor for each nylon were used.

**Appendix A: Emissions Calculations
Potential to Emit Hazardous Air Pollutants (HAPs) from the Injection Molding Machines**

**Company Name: Willoughby Industries, Inc.
Address City IN Zip: 1610 S. Girls School Road, Indianapolis, IN 46231
Permit No.: 097-28979-00564
Reviewer: Janet Mobley**

HAP Emission Factors from Processing Polypropylene

HAP Constituent	CAS #	⁽¹⁾ Emission Factor (lbs/10 ⁶ lbs)
Acetaldehyde	75-07-0	0.2
Acrolein	107-02-8	0.01
Formaldehyde	50-00-0	0.18
Propionaldehyde	123-38-6	0.95

HAP Emission Factors from Processing Nylon

HAP Constituent	CAS #	⁽²⁾ Emission Factor (lbs/10 ⁶ lbs)
Styrene	100-42-5	0.32

HAP Emission Factors from Processing ABS

HAP Constituent	CAS #	⁽³⁾ Emission Factor (lbs/10 ⁶ lbs)
Styrene	100-42-5	130

Dorel Machine #	Resin Type	Max Throughput Rate (lbs resin/hr)	Acetaldehyde Emissions (tons/yr)	Acrolein Emissions (tons/hr)	Formaldehyde Emissions (tons/yr)	Propionaldehyde Emissions (tons/yr)	Styrene Emissions (tons/yr)
IS	PP	21.58	1.89E-05	9.45E-07	1.70E-05	8.98E-05	NA
Totals			1.89E-05	9.45E-07	1.70E-05	8.98E-05	NA

Methodology

HAPs Emissions (tons/yr) = (Max Throughput Rate (lbs resin/hr) * Emission Factor (lbs/106 lbs) /1000000) * 8760 (hrs/yr) / 2000 (lbs/ton)

Notes

⁽¹⁾ Emission factors for HAPs from Polypropylene molding were taken from a technical paper, volume 49 in January 1999, published by the Journal of Air and Waste Management Association titled "Development of Emission Factors for Polypropylene Processing". A melt temperature of 505 oF and reactor impact copolymer was used as the emission factor.

⁽²⁾ Emission factors for HAPs from Nylon were taken from the technical paper, "Development of Emission Factors for Polyamide Processing", from Volume 51 of the Journal of Air and Waste Management Association. The source uses two types of nylon, PA-66 and EPDM Toughened PA-66, and the worst case emission factor for each nylon were used.

⁽³⁾ Emission factors for HAPs from Nylon were taken from the technical paper, "Sampling and Analysis of Volatile Organic Compounds Evolved During Thermal Processing of Acrylonitrile Butadiene Styrene Composite Resins" from Volume 45 of the Journal of Air and Waste Management Association.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
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Toll Free (800) 451-6027
www.idem.IN.gov

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

TO: David Schwartzkopf
Willoughby Industries
2210 W Morris Street
Indianapolis, IN 46221

DATE: December 21, 2010

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

SUBJECT: Final Decision
FESOP Renewal
097-28979-00564

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

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

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

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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December 21, 2010

TO: Wayne Township Public Library

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

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

Applicant Name: Willoughby Industries, Inc.
Permit Number: 097-28979-00564

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 12/21/2010 Willoughby Industries 097-28979-00564 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		David Schwartzkopf Willoughby Industries 2210 W Morris St Indianapolis IN 46221 (Source CAATS) via confirmed delivery										
2		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 (Health Department)										
3		Mrs. Sandra Lee Watson 7834 E 100 S Marion IN 46953 (Affected Party)										
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)										
5		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)										
6		Wayne Township Public Library 198 South Girl School Rd. Indianapolis IN 46231 (Library)										
7		Ms. Jodi Perras Improving Kids Environment 1111 East 54th Street, Suite 212 Indianapolis IN 46220 (Affected Party)										
8		Matt Mosier Office of Sustainability 2700 South Belmont Ave. Administration Bldg. Indianapolis IN 46221 (Local Official)										
9		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
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