



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
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(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: December 27, 2006  
RE: Astral Industries, Inc. / 135-23570-00002  
FROM: Nisha Sizemore  
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, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER.dot 03/23/06



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Indianapolis, Indiana 46204-2251  
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**FEDERALLY ENFORCEABLE STATE OPERATING  
PERMIT (FESOP)  
OFFICE OF AIR QUALITY**

**Astral Industries, Inc.  
502 East Sherman Street  
and  
7375 S. U.S. Highway 27  
Lynn, IN 47355 - 0638**

(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.**

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.

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.

Operation Permit No.: F135-23570-00002	
Original signed by  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: December 27, 2006  Expiration Date: December 27, 2011

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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, A.3 and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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Authorized individual:	David A. Hazelett
Source Address:	Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355
Mailing Address:	7375 South U.S. Highway 27, Lynn, IN 47355
General Source Phone:	(765) 874-2525
SIC Code:	3995
Source Location Status:	Randolph
Source Status:	Attainment for all other criteria pollutants Federally Enforceable State Operating Permit (FESOP) Minor Source under PSD Minor Source under Emission Offset and Minor Source, Section 112 of the Clean Air Act

### A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

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This metal casket manufacturing company consists of two (2) plants:

- (a) Plant 1: 502 East Sherman Street, Lynn, IN 47355; and
- (b) Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355.

Since the two (2) plants are located on contiguous or adjacent properties belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of the original Title V permit, T135-7722-00002.

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

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This stationary source consists of the following emission units and pollution control devices at Plant 1 and Plant 2:

- (a) One (1) touch-up spray booth, equipped with air atomization spray applicators, identified as U1, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S1;
- (b) One (1) topcoat spray booth, equipped with airless spray applicators, identified as U3, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S3;
- (c) One (1) shading spray booth, equipped with air atomization spray applicators, identified as U4, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S4;
- (d) One (1) colorcoat spray booth, equipped with air atomization spray applicators, identified as U5, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S5;

- (e) One (1) prime spray booth, equipped with both airless and HVLP airless spray applicators, identified as U2, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S2;
- (f) One (1) sealer booth, equipped with air atomization spray applicators, identified as U8, constructed in 1996, with the maximum capacity of 5 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S8;
- (g) A casket assembly and powder coating operation, constructed in 2000, with an average maximum throughput of 120 caskets per hour, consisting of the following emission units:
  - (1) One (1) manual powder coat booth, identified as Versa Coat Booth, with dry filters for PM overspray control;
  - (2) Two (2) automated powder coat booths, identified as Powder Coat Booths 1 and 2, with integral dry filters for PM overspray control.
- (h) One (1) natural gas fired boiler, constructed in 2000, with a maximum heat input capacity of 15 million British thermal units per hour (MMBtu/hr), exhausting to stack S10.
- (i) A stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.

A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:
  - (1) One (1) natural gas fired boiler rated at 0.2 MMBtu/hr, constructed after Sept. 21, 1983.
  - (2) Two (2) natural gas fired boilers, located in the office building, each rated at 1.5 MM Btu/hr, constructed in 2000.
  - (3) One (1) natural gas fired air make-up unit rated at 2.0 MMBtu/hr.
  - (4) One (1) a natural gas fired air make-up unit rated at 2.8 MMBtu/hr.
  - (5) One (1) natural gas fired reflow oven for paint booths, rated at 0.776 MMBtu/hr, and exhausting through stack S7.
  - (6) Two (2) natural gas fired space heaters, each rated at 0.225 MMBtu/hr.
  - (7) Two (2) natural gas fired space heaters, each rated at 0.125 MMBtu/hr.
  - (8) Two (2) natural gas fired infrared radiant heaters, each rated at 0.12 MMBtu/hr.
  - (9) One (1) natural gas fired infrared radiant heater rated at 0.04 MMBtu/hr.
  - (10) Three (3) natural gas fired infrared radiant heaters, each rated at 0.06 MMBtu/hr.
  - (11) Two (2) natural gas fired space heaters, each rated at 0.06 MMBtu/hr.

- (12) Four (4) natural gas fired space heaters with a total heat input rate of 0.525 MMBtu/hr.
  - (13) One (1) natural gas fired space heater rated at 0.285 MMBtu/hr.
  - (14) One (1) natural gas fired space heater rated at 0.175 MMBtu/hr.
  - (15) One (1) natural gas fired glue pot rated at 0.2 MM Btu/hr.
  - (16) Three (3) natural gas fired space heaters with a total heat input rate of 0.44 MMBtu/hr.
  - (17) Three (3) natural gas fired infrared radiant heaters with a total heat input rate of 0.1 MM Btu/hr.
  - (18) Eight (8) natural gas fired radiant heaters, each with a maximum heat input capacity of 0.12 MMBtu/hr.
  - (19) Twelve (12) natural gas fired radiant heaters, each with a maximum heat input capacity of 0.10 MMBtu/hr.
  - (20) One (1) natural gas fired oven, designated the Dry-off Oven, with a maximum heat input capacity of 4.4 MMBtu/hr, exhausting to stack S3.
  - (21) One (1) natural gas fired oven, designated the Quiet Oven, with a maximum heat input capacity of 8.8 MMBtu/hr, exhausting to stack S4.
  - (22) One (1) natural gas fired oven, designated the Bake Oven, with a maximum heat input capacity of 5.6 MMBtu/hr, exhausting to stack S5.
  - (23) One (1) air conditioner with an integral heating unit fired by natural gas which has a maximum heat input capacity of 0.56 MMBtu/hr, exhausting to stack S11.
  - (24) One (1) humidifier fired by natural gas with a maximum heat input capacity of 0.476 MMBtu/hr, exhausting to stack S12.
  - (25) One (1) evaporator unit fired by natural gas with a maximum heat input capacity of 0.1 MMBtu/hr, exhausting to stack S13.
- (b) Combustion source flame safety purging on startup.
- (c) The following VOC and HAP storage containers: Vessels storing lubricating oils, hydraulic oil, machining oil, and machining fluids.
- (d) One (1) powder coating stripper tank, constructed in 2006, with no controls and characterized as follows:
- (1) Having a vapor pressure equal to or less than 2 kPa; 15 mmHg; or 0.3 psi measured at 38 degrees C (100 deg F) or;
- The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

- (1) Eleven (11) metal inert gas (MIG) welding stations with a maximum wire consumption rate of 0.12 lb/hr each.
  - (2) One (1) TIG welding station with a maximum hourly metal consumption rate of 0.1 lb/hr, and
  - (3) Four (4) metal inert gas (MIG) weld stations using a combined maximum of 30.1 pounds of wire per hour.
- (f) Infrared cure equipment.
  - (g) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs: a manual degreasing operation for wiping down caskets.
  - (h) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs: bed and interior assembly areas with adhesive and silk screening application.
  - (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
  - (j) Paved and unpaved roads and parking lots with public access.
  - (k) 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.
  - (l) Gasoline emergency generators not exceeding 110 horsepower.
  - (m) Filter or coalescer media change-out.
  - (n) A unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP: interior department silk screening areas with annual toluene emissions < 100 lbs/year.
  - (o) Other categories with emissions below the insignificant thresholds:
    - (1) A 1,000 gallon capacity thinner storage tank, constructed in the mid 1970's, with annual throughput > 12,000 gal/year.
    - (2) sanding and grinding operations with belt sanders and/or for welding touch-up that have PM emissions < 5 lbs/hr and 25 lbs/day.
    - (3) Interior department spray adhesives with VOC emissions < 3 lbs/hr or 15 lbs/day.
    - (4) Interior department resin emulsion with VOC emissions < 3 lbs/hr or 15 lbs/day.
    - (5) Hardware department industrial adhesive with VOC emissions < 3 lbs/hr or 15 lbs/day.

A.5 FESOP Applicability [326 IAC 2-8-2]

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

## **SECTION B GENERAL CONDITIONS**

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

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

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

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- (a) This permit, F135-23570-00002, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
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, IDEM, OAQ, may require to determine the compliance status of the source.

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

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

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- (a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.12 Emergency Provisions [326 IAC 2-8-12]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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 Section), or  
Telephone Number: 317-233-0178(ask for Compliance Section)  
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 Branch, Office of Air Quality  
100 North Senate Avenue  
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 the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, 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.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

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- (a) All terms and conditions of permits established prior to F135-23570-00002 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)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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

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

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

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

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

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**  
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ 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.17 Permit Renewal** [326 IAC 2-8-3(h)]

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

Request for renewal shall be submitted to:

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

- (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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
  
Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
  - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, 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.20 Source Modification Requirement [326 IAC 2-8-11.1]**

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

**B.21 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]**

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

- (a) Enter upon the Permittee's premises where a 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.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

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

**C.3 Opacity [326 IAC 5-1]**

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

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

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

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

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval." All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

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

#### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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

### **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

---

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

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, 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 the certification 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.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

---

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

#### **C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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

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

**C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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

**C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.
- (f) For the purposes of this Condition:
  - (1) "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions are, or opacity is, greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement), consistent with any averaging period specified for averaging the results of the monitoring.

- (2) "Excursion" shall mean a departure from an indicator range established for monitoring under Section D of this permit, consistent with any averaging period specified for averaging the results of the monitoring.

**C.16 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by 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.17 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.18 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. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. 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.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

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

**SECTION D.1 FACILITY OPERATION CONDITIONS**

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

- (a) One (1) touch-up spray booth, equipped with air atomization spray applicators, identified as U1, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S1;
- (b) One (1) topcoat spray booth, equipped with airless spray applicators, identified as U3, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S3;
- (c) One (1) shading spray booth, equipped with air atomization spray applicators, identified as U4, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S4;
- (d) One (1) colorcoat spray booth, equipped with air atomization spray applicators, identified as U5, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S5;
- (e) One (1) prime spray booth, equipped with both airless and HVLP airless spray applicators, identified as U2, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S2;
- (f) One (1) sealer booth, equipped with air atomization spray applicators, identified as U8, constructed in 1996, with the maximum capacity of 5 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S8;
- (g) A casket assembly and powder coating operation, constructed in 2000, with an average maximum throughput of 120 caskets per hour, consisting of the following emission units:
  - (1) One (1) manual powder coat booth, identified as Versa Coat Booth, with dry filters for PM overspray control;
  - (2) Two (2) automated powder coat booths, identified as Powder Coat Booths 1 and 2, with integral dry filters for PM overspray control.
- (h) One (1) stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.
- (i) One (1) powder coating stripper tank, constructed in 2006, with no controls and characterized as follows:

The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (j) A unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP: interior department silk screening areas with annual toluene emissions < 100 lbs/year.
- (k) Interior department spray adhesives with VOC emissions < 3 lbs/hr or 15 lbs/day.
- (l) Interior department polyvinyl acetate resin emulsion with VOC emissions < 3 lbs/hr or 15 lbs/day.
- (m) Hardware department industrial adhesive with VOC emissions < 3 lbs/hr or 15 lbs/day.

(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.1.1 New Facilities, General Reduction Requirements [326 IAC 8-1-6]

The total VOC input to the sealer booth identified as U8 shall be limited to less than 25 tons per twelve (12) consecutive month period for this facility, with compliance determined at the end of each month. Compliance with this limit will render the requirements of 326 IAC 8-1-6 (BACT) not applicable to this facility.

#### D.1.2 FESOP Limit [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, the following conditions shall apply:

- (a) The total volatile organic compounds (VOC) input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper tank (identified as U6), Powder Coating Stripper tank, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The amount of single and total HAPs input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper tank (identified as U6), Powder Coating Stripper tank, Adhesive, and Silk Screening shall be limited such that the source wide single HAP and total HAPs emissions shall not exceed 9.0 and 23.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Compliance with above conditions will limit the source-wide VOC, single HAP, and total HAPs emissions including insignificant activities to less than 100, 10 and 25 tons per twelve (12) consecutive month period, respectively. Therefore, the requirements of 326 IAC 2-7 (Part 70) do not apply.

#### D.1.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

- (a) Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) from the surface coating booths, identified as U1, U2, U3, U4, and U5, and sealer booth, identified as U8, shall be controlled by a dry particulate filter and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) The particulate matter (PM) from the two (2) automated powder coat booths and one (1) manual powder coat booth (Versa) shall be limited as specified in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)
Automated Powder Coat Booth	0.1107	0.93
Manual Powder Coat Booth	0.0092	0.177

The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:

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

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

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

- (c) The particulate matter emissions rate from the insignificant grinding, sanding, and welding activities, each with process weight rate less than 100 pounds per hour, shall not exceed 0.551 pounds per hour.

#### D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility 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.

#### D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

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The stripper tanks are subject to this rule. These degreasing operations shall comply with the following requirements.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### **Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

##### **D.1.6 Volatile Organic Compounds (VOC) and HAP [326 IAC 8-1-2] [326 IAC 8-1-4]**

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Compliance with the VOC and HAP usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

##### **D.1.7 Particulate Matter (PM)**

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The dry filters for particulate matter overspray control shall be properly in place and maintained to ensure integrity and particulate loading of the filters at all times when the paint booths are in operation.

#### **Compliance Monitoring Requirements [326 IAC 2-8-4] [ 326 IAC 2-8-5(a)(1)]**

##### **D.1.8 Monitoring**

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (S1, S3, S4, S5, S2, and S8) while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

- (b) Monthly inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

### **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

#### **D.1.9 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records of in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC and HAP emission limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) The amount and VOC/HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
  - (2) The total VOC and HAPs usage for each month; and
  - (3) The weight of VOC and VOC usage for each compliance period.
- (b) To document compliance with Condition D.1.9, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.1.10 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter month period being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

**SECTION D.2 FACILITY OPERATION CONDITIONS**

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

- (a) An insignificant natural gas fired boiler rated at 0.2 MMBtu/hr, constructed after Sept. 21, 1983.
- (b) Two (2) insignificant natural gas fired boilers, located in the office building, each rated at 1.5 MMBtu/hr, constructed in 2000.

(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 Particulate Matter Limitation (PM) [326 IAC 6-2-4]**

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Pursuant to 326 IAC 6-2-4(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), particulate emissions from the insignificant 0.2 MM Btu/hr and two 1.5 MM Btu/hr boilers used for indirect heating purposes and which were constructed after September 21, 1983, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

## SECTION D.3 FACILITY OPERATION CONDITIONS

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

- (a) One (1) natural gas fired boiler, constructed in 2000, with a maximum heat input capacity of 15 million British thermal units per hour (MMBtu/hr), exhausting to stack S10.

Under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units NSPS (40 CFR 60, Subpart Dc), this boiler is considered a new source

(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.3.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), particulate emissions from the 15 MMBtu/hr boiler used for indirect heating purposes and which was constructed after September 21, 1983, shall in no case exceed 0.51 pounds of particulate matter per million British thermal units heat input. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

$$Pt = 1.09/Q^{0.26}$$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input  
Q = total source max. operation capacity rating (at the time when the boilers were constructed)

#### D.3.2 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart Dc.

#### D.3.3 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of the National Source Performance Standards for Small Industrial-Commercial- Institutional Steam Generating Units, as specified as follows.

#### § 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

#### § 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388-77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR--see Sec. 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Cogeneration steam generating unit* means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference -- see § 60.17).

*Dry flue gas desulfurization technology* means a sulfur dioxide (SO<sub>2</sub>) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any SO<sub>2</sub> control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835-86, 87, 91, or 97, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference -- see § 60.17).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical SO<sub>2</sub> emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference -- see § 60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO<sub>2</sub>.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

#### § 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.
- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
- (4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/MMBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.

(h) The owner or operator of each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of each reporting period.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

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

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street *and* 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

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

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street and 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, 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 <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

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

A certification is not required for this report.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### FESOP Quarterly Report

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street and 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002  
**Facility:** Sealer coating booth U8  
**Parameter:** VOC input usage  
**Limit:** The total VOC input to the sealer booth identified as U8 shall be limited to less than 25 tons per twelve (12) consecutive month period for this facility, with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street and 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002  
**Facility:** Spray Booth (U1, U2, U3, U4, U5 and U8), Adhesives, Silk Screening, Powder Coating Stripper tank, and Stripping Tank Operations (U6)  
**Parameter:** VOC input usage  
**Limit:** The total volatile organic compounds (VOC) input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripping booth (identified as U6), Powder Coating Stripper tank, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### FESOP Quarterly Report

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street and 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002  
**Facility:** Spray Booth (U1, U2, U3, U4, U5 and U8), Adhesives, Silk Screening, Powder Coating Stripper tank, and Stripping Tank Operations (U6)  
**Parameter:** Single HAP and Total HAPs input usage  
**Limit:** The amount of single and total HAPs input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Powder Coating Stripper tank, Stripping booth (identified as U6), Adhesive, and Silk Screening shall be limited such that the source wide single HAP and total HAPs emissions shall not exceed 9.0 and 23.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

YEAR: \_\_\_\_\_

Month	Column 1		Column 2		Column 1 + Column 2	
	This Month		Previous 11 Months		12 Month Total	
	Single HAP	Total HAPs	Single HAP	Total HAPs	Single HAP	Total HAPs
Month 1						
Month 2						
Month 3						

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

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

Attach a signed certification to complete this report.

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

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

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street and 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002

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

Page 1 of 2

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

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

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

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

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

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

Attach a signed certification to complete this report.

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

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

**Source Background and Description**

<b>Source Name:</b>	<b>Astral Industries, Inc.</b>
<b>Source Location:</b>	<b>Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355</b>
<b>County:</b>	<b>Randolph</b>
<b>SIC Code:</b>	<b>3995</b>
<b>Operation Permit No.:</b>	<b>T135-7722-00002</b>
<b>Operation Permit Issuance Date:</b>	<b>January 23, 2001</b>
<b>Permit No.:</b>	<b>F135-23570-00002</b>
<b>Permit Reviewer:</b>	<b>Surya Ramaswamy/EVP</b>

The Office of Air Quality (OAQ) has reviewed a FESOP application from Astral Industries, Inc. relating to the operation of a metal casket manufacturing plant. The source was issued Title V Permit No. 135-7722-00002 issued on January 23, 2001.

**History**

On August 28, 2006, IDEM, OAQ received an application from Astral Industries, Inc. requesting a transition from their existing Title V Permit No. 135-7722-00002, issued on January 23, 2001 to a FESOP. Although the potential emissions exceed the Title V thresholds, actual emissions are well below these levels and the source has requested to limit the source wide emissions at FESOP levels. Therefore, this permit is being reviewed pursuant to the requirements of 326 IAC 2-8 (FESOP).

**Source Definition**

This Source Definition from the previous Part 70 Operating Permit was incorporated into this permit as follows:

This metal casket manufacturing company consists of two (2) plants:

- (a) Plant 1 is located at 502 East Sherman Street, Lynn, IN 47355; and
- (b) Plant 2 is located at 7375 South U.S. Highway 27, Lynn, IN 47355.

Since the two (2) plants are located in contiguous properties, have the same SIC codes and are owned by one (1) company, they will be considered one (1) source.

**Permitted Emission Units and Pollution Control Equipment**

This stationary source consists of the following emission units and pollution control devices at Plant 1 and Plant 2:

- (a) One (1) touch-up spray booth, equipped with air atomization spray applicators, identified as U1, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S1;

- (b) One (1) topcoat spray booth, equipped with airless spray applicators, identified as U3, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S3;
- (c) One (1) shading spray booth, equipped with air atomization spray applicators, identified as U4, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S4;
- (d) One (1) colorcoat spray booth, equipped with air atomization spray applicators, identified as U5, constructed in 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S5;
- (e) One (1) prime spray booth, equipped with both airless and HVLP airless spray applicators, identified as U2, constructed prior to 1970, with the maximum capacity of 30 steel burial caskets per hour, equipped with dry filters for PM overspray control, and exhausting through stack S2;
- (f) One (1) sealer booth, equipped with air atomization spray applicators, identified as U8, constructed in 1996, with the maximum capacity of 5 steel burial caskets per hour, equipped with dry filters for PM overspray control and exhausting through stack S8;
- (g) A casket assembly and powder coating operation, constructed in 2000, with an average maximum throughput of 120 caskets per hour, consisting of the following emission units:
  - (1) One (1) manual powder coat booth, identified as Versa Coat Booth, with dry filters for PM overspray control;
  - (2) Two (2) automated powder coat booths, identified as Powder Coat Booths 1 and 2, with integral dry filters for PM overspray control.
- (h) One (1) natural gas fired boiler, constructed in 2000, with a maximum heat input capacity of 15 million British thermal units per hour (MMBtu/hr), exhausting to stack S10.
- (i) A stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.

### **Unpermitted Emission Units and Pollution Control Equipment**

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

### **Insignificant Activities**

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:
  - (1) One (1) natural gas fired boiler rated at 0.2 MMBtu/hr, constructed after Sept. 21, 1983.
  - (2) Two (2) natural gas fired boilers, located in the office building, each rated at 1.5 MM Btu/hr, constructed in 2000.
  - (3) One (1) natural gas fired air make-up unit rated at 2.0 MMBtu/hr.

- (4) One (1) a natural gas fired air make-up unit rated at 2.8 MMBtu/hr.
- (5) One (1) natural gas fired reflow oven for paint booths, rated at 0.776 MMBtu/hr, and exhausting through stack S7.
- (6) Two (2) natural gas fired space heaters, each rated at 0.225 MMBtu/hr.
- (7) Two (2) natural gas fired space heaters, each rated at 0.125 MMBtu/hr.
- (8) Two (2) natural gas fired infrared radiant heaters, each rated at 0.12 MMBtu/hr.
- (9) One (1) natural gas fired infrared radiant heater rated at 0.04 MMBtu/hr.
- (10) Three (3) natural gas fired infrared radiant heaters, each rated at 0.06 MMBtu/hr.
- (11) Two (2) natural gas fired space heaters, each rated at 0.06 MMBtu/hr.
- (12) Four (4) natural gas fired space heaters with a total heat input rate of 0.525 MMBtu/hr.
- (13) One (1) natural gas fired space heater rated at 0.285 MMBtu/hr.
- (14) One (1) natural gas fired space heater rated at 0.175 MMBtu/hr.
- (15) One (1) natural gas fired glue pot rated at 0.2 MM Btu/hr.
- (16) Three (3) natural gas fired space heaters with a total heat input rate of 0.44 MMBtu/hr.
- (17) Three (3) natural gas fired infrared radiant heaters with a total heat input rate of 0.1 MM Btu/hr.
- (18) Eight (8) natural gas fired radiant heaters, each with a maximum heat input capacity of 0.12 MMBtu/hr.
- (19) Twelve (12) natural gas fired radiant heaters, each with a maximum heat input capacity of 0.10 MMBtu/hr.
- (20) One (1) natural gas fired oven, designated the Dry-off Oven, with a maximum heat input capacity of 4.4 MMBtu/hr, exhausting to stack S3.
- (21) One (1) natural gas fired oven, designated the Quiet Oven, with a maximum heat input capacity of 8.8 MMBtu/hr, exhausting to stack S4.
- (22) One (1) natural gas fired oven, designated the Bake Oven, with a maximum heat input capacity of 5.6 MMBtu/hr, exhausting to stack S5.
- (23) One (1) air conditioner with an integral heating unit fired by natural gas which has a maximum heat input capacity of 0.56 MMBtu/hr, exhausting to stack S11.
- (24) One (1) humidifier fired by natural gas with a maximum heat input capacity of 0.476 MMBtu/hr, exhausting to stack S12.
- (25) One (1) evaporator unit fired by natural gas with a maximum heat input capacity of 0.1 MMBtu/hr, exhausting to stack S13.

- (b) Combustion source flame safety purging on startup.
- (c) The following VOC and HAP storage containers: Vessels storing lubricating oils, hydraulic oil, machining oil, and machining fluids.
- (d) One (1) powder coating stripper tank, constructed in 2006, with no controls and characterized as follows:
  - (1) Having a vapor pressure equal to or less than 2 kPa; 15 mmHg; or 0.3 psi measured at 38 degrees C (100 deg F) or;

The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
  - (1) Eleven (11) metal inert gas (MIG) welding stations using 0.03 L-50 RRB weld wire with a maximum wire consumption rate of 0.12 lb/hr each.
  - (2) One (1) TIG welding station with a maximum hourly metal consumption rate of 0.1 lb/hr, and
  - (3) Four (4) metal inert gas (MIG) weld stations using a combined maximum of 30.1 pounds of wire per hour.
- (f) Infrared cure equipment.
- (g) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs: a manual sponge-applied degreasing operation for wiping down caskets.
- (h) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs: bed and interior assembly areas with adhesive and silk screening application.
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (j) Paved and unpaved roads and parking lots with public access.
- (k) 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.
- (l) Gasoline emergency generators not exceeding 110 horsepower.
- (m) Filter or coalescer media change-out.
- (n) A unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP: interior department silk screening areas with annual toluene emissions < 100 lbs/year.
- (o) Other categories with emissions below the insignificant thresholds:
  - (1) A 1,000 gallon capacity thinner storage tank, constructed in the mid 1970's, with annual throughput > 12,000 gal/year.

- (2) sanding and grinding operations with belt sanders and/or for welding touch-up that have PM emissions < 5 lbs/hr and 25 lbs/day.
- (3) Interior department spray adhesives with VOC emissions < 3 lbs/hr or 15 lbs/day.
- (4) Interior department polyvinyl acetate resin emulsion with VOC emissions < 3 lbs/hr or 15 lbs/day.
- (5) Hardware department industrial adhesive with VOC emissions < 3 lbs/hr or 15 lbs/day.

### **Existing Approvals**

The source has constructed or has been operating under the following previous approvals:

- (a) Part 70 Operating Permit, T135-7722-00002, issued on January 23, 2001; and
- (b) Administrative Amendment, AA135-19759-00002, issued on December 6, 2004.

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.

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

The following justification was incorporated into this permit from the previous Part 70 No. 135-7722-00002, issued on January 23, 2001:

The company has submitted the following justification such that the dry filters on the automated Powder Coat Booths 1 and 2 for particulate matter control be considered as an integral part of the automated powder coat booths because:

- (a) The controls are primarily utilized to recover powder that does not adhere to the parts in the coating booth. It is estimated that the dry filters will yield a recovery of almost forty percent (40%) of the powder sprayed.
- (b) The cost savings from the recovered powder is considerably greater than the cost of purchasing and maintaining the dry filters. Based on information submitted by Astral Industries, the annualized cost of the filters is \$8,400 per year, which is very small compared with the cost of the recovered powder coating which would total \$234,023 per year. The cost figures were based on projected actual operation.

IDEM, OAQ has evaluated the justifications and agreed that the dry filters will be considered as an integral part of the automated powder coat booths. Therefore, the permitting level will be determined using the potential to emit after the dry filters. Operating conditions in the proposed permit will specify that the dry filters shall be in place and maintained at all times when the automated powder coat booths are in operation.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Recommendation**

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

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

An administratively complete FESOP application for the purposes of this review was received on August 28, 2006.

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

### Emission Calculations

See Appendix A of this document for detailed emission calculations, pages one (1) through eight (8).

### Potential to Emit of the Source

Pursuant to 326 IAC 2-7-1(29), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential to Emit (tons/yr)
PM	132.48
PM-10	133.40
SO <sub>2</sub>	0.10
VOC	628.31
CO	13.44
NO <sub>x</sub>	16.00

HAPs	Potential to Emit (tons/yr)
Toluene	143.09
Xylene	33.23
Glycol Ethers	22.31
MEK	19.53
Methyl Alcohol	1.08
<b>Total</b>	<b>&gt; 25</b>

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC and PM<sub>10</sub> are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.

- (c) **Fugitive Emissions**  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

**Potential to Emit After Issuance**

The source has opted to be 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	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Powder Coating <sup>(2)</sup>	32.8	32.8	0.0	0.0	0.0	0.0	--
Surface Coating <sup>(1)</sup>	2.14	2.14	0.0	<b>98.1</b>	0.0	0.0	Single HAP < <b>9.0</b> Total HAPs < <b>23.7</b>
Stripper Tank (U6) <sup>(1)</sup>	0.00	0.00	0.00		0.00	0.00	
Adhesive <sup>(1)</sup>	0.0	0.0	0.0		0.0	0.0	
Silk Screening <sup>(1)</sup>	0.0	0.0	0.0		0.0	0.0	
Powder Coating Stripper Tank <sup>(1)</sup>	0.0	0.0	0.0		0.0	0.0	
Grinding & Sanding <sup>(2)</sup>	4.20	4.20	0.0	0.0	0.0	0.0	--
Welding <sup>(2)</sup>	2.18	2.18	0.0	0.0	0.0	0.0	Negligible
Combution <sup>(2)</sup>	0.31	1.25	0.10	0.90	13.81	16.44	Hexane = 0.29 Total HAPs = 0.3
<b>Total Emissions</b>	<b>41.63</b>	<b>42.57</b>	<b>0.10</b>	<b>99.0</b>	<b>13.81</b>	<b>16.44</b>	<b>Total &lt; 25</b>

Notes:

- 1) Pursuant to 326 IAC 2-8-4, the total volatile organic compounds (VOC) delivered to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper Tank (identified as U6), Powder Coating Stripper Tank, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- 2) Uncontrolled/Unlimited potential to emit.

**County Attainment Status**

The source is located in Randolph County.

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

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx are considered when evaluating the rule applicability relating to ozone. Randolph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Randolph County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.
- (c) Randolph County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (d) On August 7, 2006, a temporary emergency rule took effect revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate this change into 326 IAC 1-4-1. A permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule.

### Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	Less than 100
PM-10	Less than 100
SO <sub>2</sub>	Less than 100
VOC	Less than 100
CO	Less than 100
NO <sub>x</sub>	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.
- (b) These emissions are based on FESOP application submitted by the source.

### Federal Rule Applicability

- (a) The one (1) 15 MMBtu/hr boiler, burning natural gas, constructed in 2000, is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c - 60.48c, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) because it is being constructed after June 9, 1989, and has a maximum design heat input capacity greater than 10 MMBtu per hour and less than 100 MMBtu per hour. Therefore, the requirements of 40 CFR 60.40c, Subpart Dc are included in the permit.

Non applicable portions of the NSPS will not be included in the permit. The boiler is subject to the following portions of Subpart Dc:

- (a) 40 CFR 60.40c
- (b) 40 CFR 60.41c
- (c) 40 CFR 60.48c (a), (g), (h), (i) & (j)

The requirements of New Source Performance Standard (NSPS), 326 IAC 12 and 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in the permit for the insignificant natural gas fired boilers. This NSPS applies only to boilers or process heaters with a maximum heat input capacity greater than ten (10) MMBtu per hour. The insignificant natural gas-fired boilers at the source operate at a maximum heat input capacity of less than 10 MMBtu per hour each.

- (b) The requirements of New Source Performance Standard, 326 IAC 12 and 40 CFR 60.110, Subpart K (Standards of Performance for Storage Vessels for Petroleum Liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978) or 40 CFR 60.110a, Subpart Ka (Standards of Performance for Storage Vessels for Petroleum Liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984) are not included in the permit for the thinner storage tank (listed under insignificant activities), constructed in the mid 1970's because it does not have a storage capacity greater than 40,000 gallons.
- (c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Coating Manufacturing (40 CFR 63, Subpart HHHHH), because this source is not a major source of HAP. The source has chosen to limit the source wide emissions of any combination of HAPs and any single HAP to less than 25 and 10 tons per twelve (12) consecutive month period, respectively. See the State Rule Applicability – Entire Source 326 IAC 2-8 Section below.
- (d) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing (40 CFR 63, Subpart FFFF), because this source is not a major source of HAP. The source has chosen to limit the source wide emissions of any combination of HAPs and any single HAP to less than 25 and 10 tons per twelve (12) consecutive month period, respectively. See the State Rule Applicability – Entire Source 326 IAC 2-8 Section below.
- (e) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart MMMM (National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products) are not included in this permit because this source is not a major source of HAP. The source has chosen to limit the source wide emissions of any combination of HAPs and any single HAP to less than 25 and 10 tons per twelve (12) consecutive month period, respectively. See the State Rule Applicability – Entire Source 326 IAC 2-8 Section below.
- (f) The requirements of the National Emission Standards for Halogenated Solvent Cleaning, Subpart T, 40 CFR 63 are not included in the permit for the degreasing operation because the source does not use any regulated halogenated solvents in the degreasing operation.
- (g) The requirements of 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, are not included in this permit for the boiler rated at a capacity of 15 MMBtu/hr because this source is not a major source of HAPs.

- (h) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 326 IAC 20; 40 CFR Part 61 and 40 CFR Part 63) included in this permit.

### State Rule Applicability – Entire Source

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

This existing source was constructed prior to the August 7, 1977 rule applicability date. This source is not considered a major source because it is not one of the 28 listed source categories and it has the potential to emit after controls of less than 250 tons per year of any criteria pollutant. There has been no major modification to this source since the original construction date. As a FESOP source, the total source wide PM<sub>10</sub>, VOC, single HAP and total HAP emissions shall be limited to less than 100, 100, 10 and 25 tons per year, respectively (see 326 IAC 2-8-4 (FESOP) below for details of emission limits). Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration, PSD) shall not apply.

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

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

#### 326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, the following conditions shall apply:

- (a) The total volatile organic compounds (VOC) delivered to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper Tank (identified as U6), Powder Coating Stripper Tank, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The amount of single and total HAPs delivered to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper Tank (identified as U6), Powder Coating Stripper Tank, Adhesive, and Silk Screening shall be limited such that the source wide single HAP and total HAPs emissions shall not exceed 9.0 and 23.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Compliance with above conditions will limit the source-wide VOC, single HAP, and total HAPs emissions including insignificant activities to less than 100, 10 and 25 tons per twelve (12) consecutive month period, respectively. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 40 CFR Part 63 (NESHAP) does not apply.

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

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). All current operations at this plant were constructed before the rule applicability date of July 27, 1997. Therefore, these facilities are not subject to the requirements of 326 IAC 2-4.1-1.

326 IAC 8-6 (Organic Solvent Emission Limitations)

Since the source has the potential to emit more than 100 tons per year of VOC, 326 IAC 8-6 could be applicable. However, the source was not constructed after October 7, 1974 and prior to January 1, 1980, so 326 IAC 8-6 does not apply.

**State Rule Applicability – Individual Facilities**

326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating)

The four (4) natural gas fired boilers, each constructed after 1983 and rated at 15, 1.5, 1.5 and 0.2 MMBtu per hour, is subject to the particulate matter limitations of 326 IAC 6-2-4. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

$$Pt = 1.09/Q^{0.26}$$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input  
Q = total source max. operation capacity rating (at the time when the boilers were constructed)

For insignificant boilers, all three constructed after 1983 ( $Q = 1.5 + 1.5 + 0.2 = 3.2$ )  
 $Pt = 1.09/3.2^{0.26} = 0.80$  lbs PM/MMBtu

However, because the maximum heat input capacity is less than 10 MMBtu/hr, the boilers are limited to less than 0.6 lbs PM/MMBtu.

For 15 MMBtu/hr boiler, constructed in 2000 ( $Q = 15 + 1.5 + 1.5 + 0.2 = 18.2$ )  
 $Pt = 1.09/18.2^{0.26} = 0.51$  lbs PM/MMBtu

Compliance calculation:

Potential PM emissions for all four boilers =  $1.9 \text{ lb PM/mmCF} * (1/1000) \text{ (mmCF/MMBtu)} = 0.0019 \text{ lbs PM/MMBtu}$ .

Potential PM emissions for insignificant boilers (0.0019 lbs PM/MMBtu) are less than allowable 0.60 lbs PM/MMBtu, therefore, the boilers will be able to comply with the requirements of 326 IAC 6-2-4.

Potential PM emissions for boiler constructed in 2000 (0.0019 lb/MMBtu) are less than allowable 0.51 lb/MMBtu, therefore the boiler will be able to comply with the requirements of 326 IAC 6-2-4.

326 IAC 6-3-2 (Process Operations)

- (a) Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) from the surface coating booths, identified as U1, U2, U3, U4, and U5, and sealer booth, identified as U8, shall be controlled by a dry particulate filter and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) The particulate matter (PM) from the two (2) automated powder coat booths and one (1) manual powder coat booth (Versa) shall be limited as specified in the following table:

<b>Emission Unit</b>	<b>Process Weight Rate</b>	<b>Allowable PM Emission Rate</b>
	<b>(tons per hour)</b>	<b>(pounds per hour)</b>
Automated Powder Coat Booth	0.1107	0.93
Manual Powder Coat Booth	0.0092	0.177

The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:

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

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

- (c) The particulate matter emissions rate from the insignificant grinding, sanding, and welding activities, each with process weight rate less than 100 pounds per hour, shall not exceed 0.551 pounds per hour.

The PTE (PM) from the welding, sanding and grinding activities is calculated as 0.31 pounds per hour, which is less than 0.551 pounds per hour, so the operations will be able to comply with the rule.

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

Pursuant to 326 IAC 8-1-6, new facilities located anywhere in the state that were constructed on or after January 1, 1980, which have a potential to emit (PTE) VOC at 25 tons or more per year, and which are not otherwise regulated by another provision of Article 8, are subject to the requirements of this rule.

- (a) Potential VOC emissions from the sealer booth U8 are greater than 25 tons per year and it was constructed in 1996. Therefore the Best Available Control Technology (BACT) requirements under 326 IAC 8-1-6 are potentially applicable to this facility. Pursuant to T135-7722-00002, issued on January 23, 2001, Astral Industries, Inc. has opted and continue to limit the VOC input to less than twenty-five (25) tons per twelve (12) consecutive month period for this facility, with compliance determined at the end of each month.
- (b) No other facility at the source is subject to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) due to construction date prior to January 1, 1980.

**326 IAC 8-2-9 (Miscellaneous Metal Coating)**

Pursuant to 326 IAC 8-2-9(c)(10), none of the facilities at the source are subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating), because the facilities coat burial caskets (SIC code 3995) and are not located in or adjacent to a county designated as nonattainment for ozone.

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

The stripper tanks are subject to this rule because the facilities are constructed after 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility 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)

The stripper tanks are subject to this rule because it was constructed after July 1, 1990 in Randolph County. This degreasing operation shall comply with the following requirements.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.

- (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

### **Compliance Requirements**

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

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

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

1. Spray booths identified as U1, U2, U3, U4, and U5, Sealer Booth, identified as U8, Powder Coat Booths 1 and 2 and the manual Powder Coat Booth (Versa) have applicable compliance monitoring conditions as specified below:
  - (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (S1, S2, S3, S4, S5 and S8) while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
  - (b) Monthly inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

These monitoring conditions are necessary because the spray coating booths equipped with dry filters must operate properly to ensure compliance with 326 IAC 6-3 (Particulate emission limitations, work practices, and control technologies) and 326 IAC 2-8 (FESOP).

## **Conclusion**

The operation of this casket production plant shall be subject to the conditions of this FESOP 135-23570-00002.

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

Addendum to the  
Technical Support Document for Federally Enforceable State Operating Permit

<b>Source Name:</b>	<b>Astral Industries, Inc.</b>
<b>Source Location:</b>	<b>Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355</b>
<b>County:</b>	<b>Randolph</b>
<b>SIC Code:</b>	<b>3995</b>
<b>Permit No.:</b>	<b>F135-23570-00002</b>
<b>Permit Reviewer:</b>	<b>Surya Ramaswamy/EVP</b>

On November 20, 2006, the Office of Air Quality (OAQ) had a notice published in the News-Gazette, Lynn, Indiana, stating that Astral Industries, Inc. had applied for a Federally Enforceable Source Operating Permit (FESOP) to operate a metal casket manufacturing facility. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 13, 2006, John Iwanski at Trinity Consultants submitted comments on the proposed FESOP. The summary of the comments and corresponding responses is as follows (bolded language has been added and the language with a line through it has been deleted):

#### **Comment 1**

In Condition A.4 (e) (1) - delete "0.03L-50 RRB" in describing the weld wire. Dictating a specific type of weld wire prevents Astral from using a better, less polluting wire in the future. Please delete the reference to the specific wire.

In Condition A.4 (g) - delete "sponge applied degreasing". This language limits Astral too stringently and specifically on methods of wiping caskets.

In Condition A.4 (o) (4) - delete "polyvinyl acetate". This language limits Astral too stringently and specifically on resins emulsion used.

#### **Response 1**

The following changes have been made to Condition A.4 of the permit as requested.

#### **A.4 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, as defined in 326 IAC 2-7-1(21) at Plant 1 and Plant 2:

.....

(e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(1) Eleven (11) metal inert gas (MIG) welding stations ~~using 0.03 L-50 RRB weld wire~~ with a maximum wire consumption rate of 0.12 lb/hr each.

.....

- (g) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs: a manual sponge-applied degreasing operation for wiping down caskets.

.....

- (o) Other categories with emissions below the insignificant thresholds:

.....

- (4) Interior department polyvinyl acetate resin emulsion with VOC emissions < 3 lbs/hr or 15 lbs/day.

## Comment 2

The date of the annual certification - per Condition B.10 (a) - April 15 - should be changed to correspond to the date that currently exists in the Title V permit (July 1). This allows for a consistent date for this report as is presently established.

## Response 2

The submittal date for annual certification has been changed to July 1 as requested.

### B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

Upon further review IDEM has decided to make further changes to the permit as follow:

1. Condition A.2 has been revised as follows to refer to the original source definition determine in Title V permit, T135-7722-00002 for the source definition.

### A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

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This metal casket manufacturing company consists of two (2) plants:

- (a) Plant 1: 502 East Sherman Street, Lynn, IN 47355; and
- (b) Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355.

Since the two (2) plants are located on contiguous or adjacent properties belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of ~~this FESOP~~ **the original Title V permit, T135-7722-00002.**

2. The burn-off oven was never constructed and will not be constructed at Astral's Lynn Facility. Therefore, the description of the burn-off oven and associated requirements has been removed in Sections A.4 and D.2 of the permit.
3. Stripper tank, identified as U6, was inadvertently omitted from the permit. Therefore the description of the stripper tank and associated requirements has been added in Sections A.3 and D.1 and associated requirements in Conditions D.1.4 and D.1.5 of the permit. Condition D.1.2 (FESOP Limit) and FESOP quarterly report have also been revised to include the stripper tank and one (1) powder coating stripper tank, which was also inadvertently omitted.

4. Maximum production rate for each emission unit has been incorporated in Condition A.3 and Section D.1.
5. Condition D.1.3 has been revised to include the 326 IAC 6-3-2 allowable limits which were inadvertently omitted from the permit. Also, the rule non applicability language has been deleted for the welding, sanding and grinding operations.

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

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This stationary source consists of the following emission units and pollution control devices **at Plant 1 and Plant 2:**

~~(Units located at Plant 2 are so noted, all other units are located at Plant 1. Units may be moved between the two plants without prior notification to OAQ, IDEM, but notification shall be made upon such moves.)~~

- (a) One (1) touch-up spray booth, equipped with air atomization spray applicators, identified as U1, constructed prior to 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S1;
- (b) One (1) topcoat spray booth, equipped with airless spray applicators, identified as U3, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S3;
- (c) One (1) shading spray booth, equipped with air atomization spray applicators, identified as U4, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S4;
- (d) One (1) colorcoat spray booth, equipped with air atomization spray applicators, identified as U5, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S5;
- (e) ~~Plant 2:~~ One (1) prime spray booth, equipped with both airless and HVLP airless spray applicators, identified as U2, constructed prior to 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S2;
- (f) ~~Plant 2:~~ One (1) sealer booth, equipped with air atomization spray applicators, identified as U8, constructed in 1996, **with the maximum capacity of 5 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S8;
- (g) ~~Plant 2:~~ A casket assembly and powder coating operation, constructed in 2000, with an average maximum throughput of 120 caskets per hour, consisting of the following emission units:
  - (1) One (1) manual powder coat booth, identified as Versa Coat Booth, with dry filters for PM overspray control;
  - (2) Two (2) automated powder coat booths, identified as Powder Coat Booths 1 and 2, with integral dry filters for PM overspray control.
- (h) One (1) natural gas fired boiler, constructed in 2000, with a maximum heat input capacity of 15 million British thermal units per hour (MMBtu/hr), exhausting to stack S10.
- (i) **A stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.**

A.4 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, as defined in 326 IAC 2-7-1(21) **at Plant 1 and Plant 2:** ~~(Activities located at Plant 2 are so noted, all other activities are located at Plant 1)~~

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

.....  
~~(26) Plant 2: One (1) hook burn-off oven fired by natural gas, constructed in 2000, with a maximum heat input capacity of 1.0 MMBtu/hr, exhausting to stack S14.~~

- (d) **One (1) powder coating stripper tank** ~~One (1) stripper tank, identified as U6, constructed in 2006, with no controls and exhausting through stack S6; and characterized as follows:~~

...

- (h) ~~Plant 1 & 2:~~ Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs: bed and interior assembly areas with adhesive and silk screening application.

....

- (n) ~~Plant 1 & 2:~~ A unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP: interior department silk screening areas with annual toluene emissions < 100 lbs/year.

**SECTION D.1 FACILITY OPERATION CONDITIONS**

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

~~(Units/activities located at Plant 2 are so noted, all other units/activities are located at Plant 1)~~

- (a) One (1) touch-up spray booth, equipped with air atomization spray applicators, identified as U1, constructed prior to 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S1;
- (b) One (1) topcoat spray booth, equipped with airless spray applicators, identified as U3, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S3;
- (c) One (1) shading spray booth, equipped with air atomization spray applicators, identified as U4, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S4;
- (d) One (1) colorcoat spray booth, equipped with air atomization spray applicators, identified as U5, constructed in 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S5;
- (e) ~~Plant 2:~~ One (1) prime spray booth, equipped with both airless and HVLP airless spray applicators, identified as U2, constructed prior to 1970, **with the maximum capacity of 30 steel burial caskets per hour**, equipped with dry filters for PM overspray control, and exhausting through stack S2;

- (f) ~~Plant 2:~~ One (1) sealer booth, equipped with air atomization spray applicators, identified as U8, constructed in 1996, **with the maximum capacity of 5 steel burial caskets per hour**, equipped with dry filters for PM overspray control and exhausting through stack S8;
- (g) ~~Plant 2:~~ A casket assembly and powder coating operation, constructed in 2000, with an average maximum throughput of 120 caskets per hour, consisting of the following emission units:
- (1) One (1) manual powder coat booth, identified as Versa Coat Booth, with dry filters for PM overspray control;
  - (2) Two (2) automated powder coat booths, identified as Powder Coat Booths 1 and 2, with integral dry filters for PM overspray control.
- (h) **One (1) stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.**
- ~~(h)(i)~~ ~~One (1) stripper tank, identified as U6,~~ **One (1) powder coating stripper tank**, constructed in 2006, with no controls and characterized as follows:
- (1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100 deg F);
- The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- ~~(j)(j)~~ ~~Plant 1 & 2:~~ A unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP: interior department silk screening areas with annual toluene emissions < 100 lbs/year.
- ~~(j)(k)~~ Interior department spray adhesives with VOC emissions < 3 lbs/hr or 15 lbs/day.
- ~~(k)(l)~~ Interior department polyvinyl acetate resin emulsion with VOC emissions < 3 lbs/hr or 15 lbs/day.
- ~~(j)(m)~~ Hardware department industrial adhesive with VOC emissions < 3 lbs/hr or 15 lbs/day.
- (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.2 FESOP Limit [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, the following conditions shall apply:

- (a) The total volatile organic compounds (VOC) input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), ~~Stripping booth~~ **Stripper tank** (identified as U6), **Powder Coating Stripper tank**, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The amount of single and total HAPs input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), ~~Stripping booth~~ **Stripper tank** (identified as U6), **Powder Coating Stripper tank**, Adhesive, and Silk Screening shall be limited such that the source wide single HAP and total HAPs emissions shall not exceed 9.0 and 23.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

Compliance with above conditions will limit the source-wide VOC, single HAP, and total HAPs emissions including insignificant activities to less than 100, 10 and 25 tons per twelve (12) consecutive month period, respectively. Therefore, the requirements of 326 IAC 2-7 (Part 70) do not apply.

**D.1.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

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- (a) Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) from the surface coating booths, identified as U1, U2, U3, U4, and U5, and sealer booth, identified as U8, shall be controlled by a dry particulate filter and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) The particulate matter (PM) from the two (2) automated powder coat booths and one (1) manual powder coat booth (**Versa**) shall be limited **as specified in the following table** by the following:

<b>Emission Unit</b>	<b>Process Weight Rate (tons per hour)</b>	<b>Allowable PM Emission Rate (pounds per hour)</b>
Automated Powder Coat Booth	0.1107	0.93
Manual Powder Coat Booth	0.0092	0.177

**The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:**

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

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

- (c) The particulate matter emissions rate from the insignificant grinding, sanding, and welding activities, each with process weight rate less than 100 pounds per hour, shall not exceed 0.551 pounds per hour.

~~The PTE (PM) from the welding, sanding and grinding activities is calculated as 0.31 pounds per hour, which is less than 0.551 pounds per hour, so the operations will be able to comply with the rule.~~

**D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]**

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Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility 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.

#### **D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]**

The stripper tanks are subject to this rule. These degreasing operations shall comply with the following requirements.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

- (1) **Close the cover whenever articles are not being handled in the degreaser.**
- (2) **Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.**
- (3) **Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.**

**Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

D.1.46 Volatile Organic Compounds (VOC) and HAP [326 IAC 8-1-2] [326 IAC 8-1-4]

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D.1.57 Particulate Matter (PM)

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**Compliance Monitoring Requirements [326 IAC 2-8-4] [ 326 IAC 2-8-5(a)(1)]**

D.1.68 Monitoring

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6. There is no requirement for Astral Industries to specifically track cleanup solvent usage, therefore, the requirement related to clean up solvent in Condition D.1.7 (now renumbered as D.1.9) has been removed.

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.1.79 Record Keeping Requirements

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- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records of in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC **and HAP** emission limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) The amount and VOC/HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. ~~Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;~~
  - ~~(2) The cleanup solvent usage for each month;~~
  - ~~(2)(3)~~ The total VOC and HAPs usage for each month; and
  - ~~(3)(4)~~ The weight of VOC and VOC usage for each compliance period.
- (b) To document compliance with Condition ~~D.1.6~~ **D.1.9**, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.

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D.1.810 Reporting Requirements

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**SECTION D.2 FACILITY OPERATION CONDITIONS**

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

*(Units/activities located at Plant 2 are so noted, all other units/activities are located at Plant 1)*

- (a) An insignificant natural gas fired boiler rated at 0.2 MMBtu/hr, constructed after Sept. 21, 1983.

(b) Two (2) insignificant natural gas fired boilers, located in the office building, each rated at 1.5 MMBtu/hr, constructed after Sept. 21, 1983.

~~(c) Plant 2: One (1) hook burn-off oven fired by natural gas, constructed in 2000, with a maximum heat input capacity of 1.0 MMBtu/hr, exhausting to stack S14.~~

(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 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), particulate emissions from the insignificant 0.2 MM Btu/hr and two 1.5 MM Btu/hr boilers used for indirect heating purposes and which were constructed after September 21, 1983, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

#### ~~D.2.2 Incineration [326 IAC 4-2-2]~~

~~The natural gas fired hook burn-off oven is subject to the requirements of 326 IAC 4-2-1. Pursuant to 326 IAC 4-2-2 (Incinerators), the natural gas fired hook burn-off oven shall comply with the following:~~

~~(a) The incinerator shall comply with the following requirements:~~

~~(1) Consist of primary and secondary chambers or the equivalent.~~

~~(2) Be equipped with a primary burner unless burning only wood products.~~

~~(3) Comply with 326 IAC 5-1 and 326 IAC 2.~~

~~(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in paragraph (c) of this condition.~~

~~(5) Not emit particulate matter in excess of five tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.~~

~~(6) If any of the requirements of (1) through (5) are not met, then the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.~~

~~(b) An incinerator is exempt from paragraph (a)(5) of this condition if subject to a more stringent particulate matter emission limit in 40 CFR 52 Subpart P, State Implementation Plan for Indiana.~~

~~(c) A Permittee developing an operation and maintenance plan pursuant to paragraph (a)(4) of this condition must comply with the following:~~

~~(1) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in paragraph (a)(5) above and include the following:~~

~~(A) Procedures for receiving, handling, and charging waste.~~

- ~~(B) — Procedures for incinerator startup and shutdown.~~
  - ~~(C) — Procedures for responding to a malfunction.~~
  - ~~(D) — Procedures for maintaining proper combustion air supply levels.~~
  - ~~(E) — Procedures for operating the incinerator and associated air pollution control systems.~~
  - ~~(F) — Procedures for handling ash.~~
  - ~~(G) — A list of wastes that can be burned in the incinerator.~~
- ~~(2) — Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.~~
  - ~~(3) — The operation and maintenance plan must be readily accessible to incinerator operators.~~
  - ~~(4) — The Permittee shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.~~
  - ~~(d) — The Permittee shall make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.~~

~~D.2.3 — Carbon monoxide Emission Limits [326 IAC 9-1-2]~~

~~Pursuant to 326 IAC 9-1-2(a)(3), the Permittee shall not operate natural gas fired hook burn off oven unless the waste gas stream is burned in one (1) of the following:~~

- ~~(a) Direct flame afterburner.~~
- ~~(b) Secondary chamber.~~

**SECTION E.1 FACILITY OPERATION CONDITIONS**

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

*(Units/activities located at Plant 2 are so noted, all other units/activities are located at Plant 1)*

- (a) *Plant 2:* One (1) natural gas fired boiler, constructed in 2000, with a maximum heat input capacity of 15 million British thermal units per hour (MMBtu/hr), exhausting to stack S10.

Under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units NSPS (40 CFR 60, Subpart Dc), this boiler is considered a new source

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

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

FESOP Quarterly Report

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street *and* 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002  
**Facility:** Spray Booth (U1, U2, U3, U4, U5 and U8), Adhesives, Silk Screening, **Powder Coating Stripper tank**, and Stripping Tank Operations (U6)  
**Parameter:** VOC input usage  
**Limit:** The total volatile organic compounds (VOC) input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripping booth (identified as U6), **Powder Coating Stripper tank**, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

**FESOP Quarterly Report**

**Source Name:** Astral Industries, Inc.  
**Source Address:** 502 E. Sherman Street *and* 7375 S. U.S. Hwy. 27, Lynn, IN  
**Mailing Address:** 7375 South U.S. Highway 27, Lynn, IN 47355  
**FESOP No.:** 135-23570-00002  
**Facility:** Spray Booth (U1, U2, U3, U4, U5 and U8), Adhesives, Silk Screening, **Powder Coating Stripper tank**, and Stripping Tank Operations (U6)  
**Parameter:** Single HAP and Total HAPs input usage  
**Limit:** The amount of single and total HAPs input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), **Powder Coating Stripper tank**, Stripping booth (identified as U6), Adhesive, and Silk Screening shall be limited such that the source wide single HAP and total HAPs emissions shall not exceed 9.0 and 23.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, respectively.

## Appendix A: Emission Calculations

**Company Name:** Astral Industries, Inc.  
**Source Location:** Plant 1: 502 East Sherman St., Lynn IN 47355  
**Source Location:** Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355  
**Permit Number:** T135-23570-00002  
**Plant I.D.:** 135-00002  
**Reviewer:** Surya Ramaswamy/EVP  
**Date:** October 2, 2006

<b>Uncontrolled Potential Emissions (tons/year)</b>					
Emissions Generating Activity					
Pollutant	Powder Coating/ Versa Coat	Surface Coating + Stripper Tank	Natural Gas Combustion	Insignificant Activities	<b>TOTAL</b>
PM	32.80	93.00	0.30	6.38	132.48
PM10	32.80	93.00	1.22	6.38	133.40
SO2	0.00	0.00	0.10	0.00	0.10
NOx	0.00	0.00	16.00	0.00	16.00
VOC	0.00	608.13	0.88	19.30	628.31
CO	0.00	0.00	13.44	0.00	13.44
Total HAPs	0.00	219.03	0.30	4.12	223.45
Worst case single HAP	0.00	143.09 (Toluene)	0.29 (Hexane)	4.12 (Hexane)	143.09 (Toluene)
Total emissions based on rated capacity at 8,760 hours/year.					
<b>Controlled Potential Emissions (tons/year)</b>					
Emissions Generating Activity					
Pollutant	Powder Coating/ Versa Coat	Surface Coating + Stripper Tank	Natural Gas Combustion	Insignificant Activities	<b>TOTAL</b>
PM	0.42	2.14	0.31	6.38	9.25
PM10	0.42	2.14	1.25	6.38	10.19
SO2	0.00	0.00	0.10	0.00	0.10
NOx	0.00	0.00	16.44	0.00	16.44
VOC	0.00	< 98.1	0.90	*	< 99.0
CO	0.00	0.00	13.81	0.00	13.81
Total HAPs	0.00	< 23.7	0.30	0.96	< 23.7
Worst case single HAP	0.00	< 9.0	0.29 (Hexane)	0.96 (Hexane)	< 9.0
Total emissions based on rated capacity at 8,760 hours/year, after control.					

\* Note:

Pursuant to 326 IAC 2-8-4, the total volatile organic compounds (VOC) delivered to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), Stripper Tank (identified as U6), Powder Coating Stripper Tank, Adhesive, and Silk Screening shall be limited such that the VOC emissions from these operations shall not exceed 98.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

**Company Name:** Astral Industries, Inc.  
**Source Location:** Plant 1: 502 East Sherman St., Lynn IN 47355  
**Source Location:** Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355  
**Permit Number:** T135-23570-00002  
**Plant I.D.:** 135-00002  
**Permit Reviewer:** Surya Ramaswamy/EVP  
**Date:** October 2, 2006

Emission Unit	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
U1	P-5028 touch up	7.1	92.97%	0.0%	93.0%	0.0%	5.07%	0.01000	30.00	6.60	6.60	1.98	47.53	8.67	0.49	130.19	25%	
U3	AM-9135 top	7.8	77.05%	0.0%	77.1%	0.0%	22.95%	0.28475	30.00	6.01	6.01	51.34	1232.15	224.87	50.23	26.19	25%	
U4	P-5028 shade	7.1	92.97%	0.0%	93.0%	0.0%	5.07%	0.01200	30.00	6.60	6.60	2.38	57.03	10.41	0.59	130.19	25%	
U5	P-5028 colorcoat	7.1	92.97%	0.0%	93.0%	0.0%	5.07%	0.32275	30.00	6.60	6.60	63.91	1533.91	279.94	15.88	130.19	25%	
U2	P-5015 prime (bottom)	8.7	61.66%	0.0%	61.7%	0.0%	23.76%	0.01675	30.00	5.36	5.36	2.70	64.69	11.81	3.67	22.58	50%	
U2	P-5085 prime (top/sides)	10.1	58.80%	48.3%	10.5%	58.4%	27.40%	0.06700	30.00	2.55	1.06	2.13	51.16	9.34	18.32	3.87	50%	
U8	Antique copper/worst case	7.3	88.06%	0.0%	88.1%	0.0%	7.18%	0.50000	4.00	6.43	6.43	12.86	308.56	56.31	3.82	89.53	50%	
<b>Potential to Emit</b>												<b>137.29</b>	<b>3295.03</b>	<b>601.34</b>	<b>93.00</b>			

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)

One unit = one casket

PM controlled by dry filters with 97.7% efficiency **2.14**

**Appendix A: Emission Calculations**

**HAP Emission Calculations**

**Company Name:** Astral Industries, Inc.  
**Source Location:** Plant 1: 502 East Sherman St., Lynn IN 47355  
**Source Location:** Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355  
**Permit Number:** T135-23570-00002  
**Plt ID:** 135-00002  
**Permit Reviewer:** Surya Ramaswamy/EVP  
**Date:** October 2, 2006

Emission Unit	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % MEK	Weight % Glycol Ethers	Weight % Methyl Alcohol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MEK Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methyl Alcohol Emissions (ton/yr)
U2	P-5015 prime (bottom)	8.7	0.01675	30.00	3.00%	32.00%	18.00%	0.00%	0.00%	0.57	6.13	3.45	0.00	0.00
U2	P-5085 prime (top/sides)	10.1	0.06700	30.00	0.00%	0.00%	0.00%	7.00%	0.00%	0.00	0.00	0.00	6.22	0.00
U5	P-5028 colorcoat	7.1	0.32275	30.00	2.00%	40.00%	5.00%	5.00%	0.00%	6.02	120.44	15.06	15.06	0.00
U4	P-5028 shade	7.1	0.01200	30.00	2.00%	40.00%	5.00%	5.00%	0.00%	0.22	4.48	0.56	0.56	0.00
U3	AM-9135 top	7.8	0.28475	30.00	0.00%	0.00%	0.00%	0.00%	0.37%	0.00	0.00	0.00	0.00	1.08
U1	P-5028 touch up	7.1	0.01000	30.00	2.00%	40.00%	5.00%	5.00%	0.00%	0.19	3.73	0.47	0.47	0.00
U8	Antique copper/worst case	7.3	0.50000	4.00	41.00%	13.00%	0.00%	0.00%	0.00%	26.22	8.31	0.00	0.00	0.00

Total State Potential Emissions

**33.23      143.09      19.53      22.31      1.08**

**METHODOLOGY**

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

Insignificant Activities

Particulate Matter and Volatile Organic Compound Emissions

Company Name: Astral Industries, Inc.

Source Location: 7375 S. US 27 and 502 E. Sherman Street, Lynn, IN 47355

Permit Number: 135-23570-00032

Plt ID: 135-00032

Reviewer: Surya Ramaswamy/EVP

Date: October 2, 2006

Potential VOC Emission from Stripper Tank, U6

Product Name	Usage	VOC Density	VOC PTE	
	Gallons/day		lb/gal	lbs/day
Coating #1	4.2	8.5	35.70	6.52
Coating #2	0.17	8.59	1.46	0.27
<b>Total</b>				<b>6.78</b>

Appendix A: Emissions Calculations  
Powder Coating Operations  
Particulate Matter and Volatile Organic Compound Emissions

Company Name: Astral Industries, Inc.  
Source Location: 7375 S. US 27 and 502 E. Sherman Street, Lynn, IN 47355  
Permit Number: 135-23570-00032  
Plt ID: 135-00032  
Reviewer: Surya Ramaswamy/EVP  
Date: October 2, 2006

**Powder Coating (total maximum of 2.0 pounds powder used per casket, 120 casket per hour)**

Versa Coat Booth (manual reinforcement approximated by 10 sqft/130 sqft per casket)

Potential emissions without dry filters = maximum powder delivery rate (lbs/hr) x (1-transfer eff.) x 1 ton/2000 pounds x 8760 hours operation/yr

$$= 18.5 \text{ lb/hr} \times (1-0.60) \times 1 \text{ ton/2000 lbs} \times 8760 \text{ hrs/yr}$$

$$\text{PTE} = 32.412 \text{ ton/yr} \quad ((\text{After controls (99.9\%)} = 0.0324 \text{ tpy})$$

Automated Powder Coat Booths ( 1 & 2)

Potential emissions without dry filters = maximum powder delivery rate (lbs/hr) x (1-transfer eff.) x 1 ton/2000 pounds x 8760 hours operation/yr

$$= 221.5 \text{ lb/hr} \times (1-0.60) \times 1 \text{ ton/2000 lbs} \times 8760 \text{ hrs/yr}$$

$$= 388.068 \text{ tons/yr}$$

The Potential to Emit (PTE) of the automated booths shall be calculated after controls based on the determination that the dry filters are integral to the powder coating operation. The controls in this case are considered integral to the process because they are primarily utilized to recover powder that does not adhere to the parts in the coating booth. The cost savings from the recovered powder is considerably greater than the cost of purchasing and maintaining the dry filters. It is estimated that the dry filters will yield a recovery of almost forty percent (40%) of the powder sprayed

Potential emissions with dry filters = Potential emissions before controls x (1 - control efficiency)

$$= 388.068 \text{ tons/yr} \times (1-0.999)$$

$$\text{PTE} = 0.388068 \text{ tons/yr}$$

Total PTE for the powder coating and versa coating booths combined = **32.8 tpy**

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

**Company Name:** Astral Industries, Inc.  
**Source Location:** Plant 1: 502 East Sherman St., Lynn IN 47355  
**Source Location:** Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355  
**Permit Number:** T135-23570-00002  
**Plant I.D.:** 135-00002  
**Permit Reviewer:** Surya Ramaswamy/EVP  
**Date:** October 2, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
36.53	320.0

Heat input capacity includes the following: one (1) 15 MMBtu/hr boiler, eight (8) 120,000 Btu/hr radiant heaters, twelve (12) 100,000 Btu/hr radiant heaters, one (1) 0.56 MMBtu/hr ac/heater, one (1) 0.1 MMBtu/hr evaporator, one (1) 0.476 MMBtu/hr humidifier, one (1) 4.4 MMBtu/hr dry off oven, one (1) 8.8 MMBtu/hr quiet oven, one (1) 5.6 MMBtu/hr bake oven, (2) 1.5 MMBtu/hr boilers, one (1) 0.2 MMBtu/hr boiler, one (1) 2.0 MMBtu/hr air make-up unit, one (1) 2.8 MMBtu/hr air make-up unit, one (1) 0.776 MMBtu/hr reflow oven, two (2) 0.225 MMBtu/hr space heaters, two (2) 0.125 MMBtu/hr space heaters, two (2) 0.12 MMBtu/hr infrared radiant heaters, one (1) 0.04 MMBtu/hr infrared radiant heater, three (3) 0.06 MMBtu/hr infrared radiant heaters, two (2) 0.06 MMBtu/hr infrared space heaters, four (4) 0.525 MMBtu/hr space heaters, one (1) 0.285 MMBtu/hr space heater, one (1) 0.175 MMBtu/hr space heater, one (1) 0.02 MMBtu/hr glue pot, three (3) 0.44 MMBtu/hr space heaters and three (3) 0.1 MMBtu/hr infrared radiant heaters.

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.30	1.22	0.10	16.00	0.88	13.44

\*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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.360E-04	1.920E-04	1.200E-02	2.880E-01	5.440E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	8.001E-05	1.760E-04	2.240E-04	6.080E-05	3.360E-04

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: Emissions Calculations

Welding and Thermal Cutting

Company Name: Astral Industries, Inc.  
 Source Location: 7375 S. US 27 and 502 E. Sherman Street, Lynn, IN 47355  
 Permit Number: 135-23570-00032  
 Pit ID: 135-00032  
 Reviewer: Surya Ramaswamy/EVP  
 Date: October 2, 2006

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Metal Inert Gas (MIG)(carbon steel)	3	30.12	0.0055	0.0005			0.497	0.045	0.000	0	0.045
<b>EMISSION TOTALS</b>											
Potential Emissions lbs/hr							0.50				0.05
Potential Emissions lbs/day							11.93				1.08
Potential Emissions tons/year							2.18				0.20

METHODOLOGY

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

\*\*Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick r

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lb

**Appendix A: Emissions Calculations  
Insignificant Activities  
Particulate Matter and Volatile Organic Compound Emissions**

**Company Name:** Astral Industries, Inc.  
**Source Location:** 7375 S. US 27 and 502 E. Sherman Street, Lynn, IN 47355  
**Permit Number:** 135-23570-00032  
**Plt ID:** 135-00032  
**Reviewer:** Surya Ramaswamy/EVP  
**Date:** October 2, 2006

**Estimated Potential to Emit of the New Powder Coating Stripper Tank**

Specific Gravity		1.03
Density (lbs/gallon)		8.5902
VOC (Percent by Weight)		100.00%
Maximum Usage of Solvent (gallons/hr)		0.075
Maximum Usage of Solvent (gallons/year)		657
Total VOC (tpy)		<b>2.82</b>

The Powder Coating Stripping solvent does not contain HAPs.

**Grinding & Sanding (Plant 1 & Plant 2)**

Based on combined maximum process rate of 150 caskets fabricated per hour, estimated grinding of 0.064 pounds of metal per casket to touch up the parts welded, and an estimated 10% of grindings emitted as particulate based on the Table 12.10-7 of AP-42 Section 12.10

Number of Caskets/hour	=	150.00 Caskets
Estimated Grinding of Metal/Caskets	=	0.064 lbs/casket
Grinded Metal emitting as Particulate	=	0.1 lb PM / lb grinded
Hours of Operation	=	8760 Hours
PTE in TPY	=	<b>4.20 TPY</b>

**Silk Screening (Only in Plant 2)**

The maximum amount of silk screen material used per casket is 0.0024 gallons of material. The material weighs 6.4 pounds per gallon and has a VOC content of 79.7% by weight. The model which uses silk screen is currently less than 4% of the total product mix, but a worst case estimate will be made by assuming that all caskets made are of this type.

120 caskets/hour * 0.0024 gal material/casket * 6.4 lb/gal * 0.797 lb VOC/lb material =	1.47 lbs VOC/hr
* 24 hrs/day =	35.26 lbs VOC/day
* 365 days/yr * 1 ton/2000 lbs =	<b>6.43 tons VOC/yr</b>

**Interior Department Spray Adhesive - Evans (Only in Plant 2)**

Maximum Glue Usage (lbs/casket) =	0.4225 Based on amount of glue applied for full couch models
Maximum Casket Production (casket/hour) =	120
VOC Content (% by weight) =	0.70% Bases on MSDS
VOC (lbs/hr) =	0.35
VOC (tpy) =	<b>1.55</b>

This material does not contain HAPs.

**Interior Department Spray Adhesive - Bostik Findley**

These are hand-held aerosol containers used for touch-up that are not generally used in large amounts per casket.

Estimated Usage (cans/month) =	72
Vol. in Can (gal/can) =	0.1875
Density of Adhesive (lb/gal) =	5.84
Weight of Can (lb/can) =	1.095 Vol. in Can (gal/can) * Density of Adhesive (lbs/gal)
Estimated Usage (lbs/month) =	78.84 Cans Used/Month * Weight of Can (lbs/can)
VOC (% by weight) =	30.00%
VOC (lbs/month) =	23.65
VOC (tpy) =	<b>0.14</b>

This material does not contain HAPs.

**Hardware Department Industrial Adhesive (Gasket Glue)**

Specific Gravity =	0.76
Density (lb/gal) =	6.34 lb/gal
Conversion Factor =	0.133681 cu.ft/gal
Density (lb/cu.ft) =	47.43 lb/cu.ft
Size of Bead =	0.01 ft
Length of Bead =	36.5 ft
Maximum Caskets/hour =	18.23 Gasketed
Maximum Caskets/yr =	159694.8 Gasketed
Adhesive Required/yr =	496.353 cu.ft
Adhesive Required/yr =	23540.20 lb/yr

Composition	% Weight	Emission in TPY
VOC	71.00%	<b>8.36</b>
n-Hexane	35.00%	4.12
Methanol	0.03%	0.00