



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: August 9, 2011

RE: Astral Industries, Inc / 135-30295-00002

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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**Federally Enforceable State Operating Permit
Renewal
OFFICE OF AIR QUALITY**

Astral Industries, Inc.
Plant 1: 502 East Sherman Street, Lynn, IN 47355
Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355
Lynn, Indiana 47335

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F135-30295-00002	
Issued by:  Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 9, 2011 Expiration Date: August 9, 2021

TABLE OF CONTENTS

A. SOURCE SUMMARY	5
A.1 General Information [326 IAC 2-8-3(b)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]	
A.4 FESOP Applicability [326 IAC 2-8-2]	
B. GENERAL CONDITIONS	9
B.1 Definitions [326 IAC 2-8-1]	
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]	
B.16 Permit Renewal [326 IAC 2-8-3(h)]	
B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.19 Source Modification Requirement [326 IAC 2-8-11.1]	
B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2] [IC 13-30-3-1]	
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]	
B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	19
Emission Limitations and Standards [326 IAC 2-8-4(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Overall Source Limit [326 IAC 2-8]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.8 Performance Testing [326 IAC 3-6]	

Compliance Requirements [326 IAC 2-1.1-11]

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

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

- C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

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

- C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

- C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

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

SECTION D.1 FACILITY OPERATION CONDITIONS -.....25

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

- D.1.1 New Facilities, General Reduction Requirements [326 IAC 8-1-6]
- D.1.2 VOC, PM, PM10, and PM2.5 Limits [326 IAC 2-8-4][326 IAC 2-2]
- D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]
- D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
- D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]
- D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.7 Volatile Organic Compounds (VOC) and HAP [326 IAC 8-1-2] [326 IAC 8-1-4]
- D.1.8 Particulate Matter (PM)

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

- D.1.9 Monitoring

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

- D.1.10 Record Keeping Requirements
- D.1.11 Reporting Requirements

SECTION D.2 FACILITY OPERATION CONDITIONS –31

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

- D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

SECTION E.1 NEW SOURCE PERFORMANCE STANDARDS..... 32

- E.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]
- E.1.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam
Generating Units [40 CFR Part 60, Subpart Dc]

Certification Form 33
Emergency Occurrence Form 34
Quarterly Report Forms 36
Quarterly Deviation and Compliance Monitoring Report Form 39

Attachment A: New Source Performance Standards for Small Industrial-Commercial-Institutional Steam
Generating Units [40 CFR 60, Subpart Dc]

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary metal casket manufacturing plant.

Source Address:	Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN
General Source Phone Number:	(765) 874-2525
SIC Code:	3995
County Location:	Randolph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) 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.

Under 40 CFR 60, Subpart Dc, the natural gas fired boiler is considered to be an affected facility.
- (i) A stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.

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

This stationary source also includes the following insignificant activities:

- (a) 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 having a vapor pressure equal to or less than 2 kPa, 15 mmHg, or 0.3 psi measured at 38 degrees C (100 degrees F) 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.4 FESOP Applicability [326 IAC 2-8-2]

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

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, F135-30295-00002, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

- (a) All terms and conditions of permits established prior to F135-30295-00002 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)]

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

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

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

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

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

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

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

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

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

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).
- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit greenhouse gasses (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) per twelve (12) consecutive month period.

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

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

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

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

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

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

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

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

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

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

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

SECTION D.1 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.
- (i) One (1) stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.

Insignificant Activities:

- (d) One (1) powder coating stripper tank, constructed in 2006, with no controls and characterized as having a vapor pressure equal to or less than 2 kPa, 15 mmHg, or 0.3 psi measured at 38 degrees C (100 degrees F) the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (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.
- (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:

- (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.

(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 Volatile Organic Compounds (VOC) Limit [326 IAC 8-1-6]

The total VOC input to the sealer booth, identified as U8, including clean up solvents shall be less than 25 tons per twelve (12) consecutive month period, 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 VOC, PM, PM10, and PM2.5 Limits [326 IAC 2-8-4][326 IAC 2-2]

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

- (a) The PM, PM10 and PM2.5 emissions from the powder coating operations, comprised of two (2) automated powder coat booths and one (1) manual powder coat booth (Versa), shall be limited to a combined total of 2.037 pounds per hour.
- (b) 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 98.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) The input of each single HAP 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 9.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (d) The input of 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 23.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit VOC and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period, each single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

- (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)	326 IAC 6-3-2 Allowable Particulate 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:

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

- (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.

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

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.

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

A Preventive Maintenance Plan is required for the spray booths, identified as U1 through U5, the sealer booth, identified as U8, the powder coating booths, identified as Versa Coat Booth and Powder Coat Booths 1 and 2, the stripper tank, identified as U6, and the powder coating stripper tank, and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

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

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.1.8 Particulate Matter (PM)

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.1.9 Monitoring

- (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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.10 Record Keeping Requirements

- (a) To document the compliance status 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 and HAP input 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 the compliance status with Condition D.1.9, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.
- (c) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.11 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1 and D.1.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

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

- (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.

Under 40 CFR 60, Subpart Dc, the natural gas fired boiler is considered to be an affected facility.

Insignificant Activities:

- (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]

- (a) 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)

- (b) Pursuant to 326 IAC 6-2-4(a), 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 E.1

FACILITY OPERATION CONDITIONS

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

- (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.

Under 40 CFR 60, Subpart Dc, the natural gas fired boiler is considered to be an affected facility.

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

E.1.1 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.

E.1.2 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 following provisions of the New Source Performance Standards for Small Industrial-Commercial- Institutional Steam Generating Units (included as Attachment A), which are incorporated by reference as 326 IAC 12, for the 15 MMBtu/hr natural gas-fired boiler as follows:

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Astral Industries, Inc.
Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
Plant 2: 7375 South U.S. Highway 27, Lynn, IN
FESOP Permit No.: F135-30295-00002

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

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

Source Name: Astral Industries, Inc.
Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
Plant 2: 7375 South U.S. Highway 27, Lynn, IN
FESOP Permit No.: F135-30295-00002

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• 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 ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Astral Industries, Inc.
Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
Plant 2: 7375 South U.S. Highway 27, Lynn, IN
FESOP Permit No.: F135-30295-00002
Facility: Sealer coating booth U8
Parameter: VOC input
Limit: The total VOC input to the sealer booth, identified as U8, including clean up solvents shall be less than 25 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: _____

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

FESOP Quarterly Report

Source Name: Astral Industries, Inc.
 Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
 Plant 2: 7375 South U.S. Highway 27, Lynn, IN
 FESOP Permit No.: F135-30295-00002
 Facility: Spray booths (U1, U2, U3, U4, U5 and U8), stripping tank (identified as U6), powder coating stripper tank, adhesive applicators, and silk screening applicators.
 Parameter: VOC input
 Limit: The total volatile organic compounds (VOC) input to the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), stripping tank (identified as U6), powder coating stripper tank, adhesive applicators, and silk screening applicators, including clean up solvents, shall be less than 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: _____

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

FESOP Quarterly Report

Source Name: Astral Industries, Inc.
 Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
 Plant 2: 7375 South U.S. Highway 27, Lynn, IN
 FESOP Permit No.: F135-30295-00002
 Facility: Spray booths (U1, U2, U3, U4, U5 and U8), stripping tank (identified as U6), powder coating stripper tank, adhesive applicators, and silk screening applicators.
 Parameter: Single HAP and Total HAPs input
 Limit: (a) The input of each single HAP 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 9.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 (b) The input of 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 23.7 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	
	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: _____

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

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

Source Name: Astral Industries, Inc.
Source Address: Plant 1: 502 East Sherman Street, Lynn, IN 47355
Plant 2: 7375 South U.S. Highway 27, Lynn, IN
FESOP Permit No.: F135-30295-00002

Months: _____ to _____ Year: _____

Page 1 of 2

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

to

**Federally Enforceable State Operating Permit (FESOP)
Renewal F135-30295-00002**

**Astral Industries
Plant 1: 502 East Sherman Street
Plant 2: 7375 South U.S. Highway 27
Lynn, IN 47355**

Title 40: Protection of the Environment

**PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY
SOURCES**

**Subpart Dc—Standards of Performance for Small Industrial-Commercial-
Institutional Steam Generating Units**

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c *Applicability and delegation of authority.*

(a) Except as provided in paragraphs (d), (e), (f), and (g) 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 British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/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 that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) 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/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) 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 subject 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 subject by this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 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 (incorporated by reference, see §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 not meeting the definition of natural gas, 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 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO₂ 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 reagent and water, whether introduced separately or as a premixed 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 SO₂ 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 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 (incorporated by reference, see §60.17); or
- (3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

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 SO₂ emissions (nanograms per joule (ng/J) or lb/MMBtu 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 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any 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 SO₂ 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 PM or SO₂.

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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.42c Standard for sulfur dioxide (SO₂).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause

to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO₂ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO₂ emissions limit or the 90 percent SO₂ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO₂ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 50 percent (0.50) of the potential SO₂ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO₂ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the following:

(1) The percent of potential SO₂ emission rate or numerical SO₂ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

- (i) Combusts coal in combination with any other fuel;
- (ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and
- (iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s = SO₂ emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a = 520 ng/J (1.2 lb/MMBtu);

K_b = 260 ng/J (0.60 lb/MMBtu);

K_c = 215 ng/J (0.50 lb/MMBtu);

H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO₂ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

- (1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO₂ emission rate; and
- (2) Emissions from the pretreated fuel (without either combustion or post-combustion SO₂ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

- (1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).
- (2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
- (3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this

section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO₂ emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO₂ emission limits under §60.42c is based on the average percent reduction and the average SO₂ emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO₂ emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO₂ emission rate (E_{ho}) and the 30-day average SO₂ emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} (E_{ho}O) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} (E_{ao}O). The E_{ho}O is computed using the following formula:

$$E_{hoO} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho}O = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho} = Hourly SO₂ emission rate, ng/J (lb/MMBtu);

E_w = SO₂ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO₂ emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO₂ emission rate is computed using the following formula:

$$\%P_s = 100 \left(1 - \frac{\%R_g}{100} \right) \left(1 - \frac{\%R_f}{100} \right)$$

Where:

$\%P_s$ = Potential SO₂ emission rate, in percent;

$\%R_g$ = SO₂ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO₂ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_{g0}$) is computed from E_{ao0} from paragraph (e)(1) of this section and an adjusted average SO₂ inlet rate (E_{ai0}) using the following formula:

$$\%R_{g0} = 100 \left(1 - \frac{E_{w0}}{E_{ai0}} \right)$$

Where:

$\%R_{g0}$ = Adjusted $\%R_g$, in percent;

E_{ao0} = Adjusted E_{ao} , ng/J (lb/MMBtu); and

E_{ai0} = Adjusted average SO₂ inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai0} , an adjusted hourly SO₂ inlet rate (E_{hi0}) is used. The E_{hi0} is computed using the following formula:

$$E_{hi0} = \frac{E_{hi} - E_w(1 - X_1)}{X_1}$$

Where:

E_{hi0} = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A–2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A–3 of this part or 17 of appendix A–6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O₂) or carbon dioxide (CO₂) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O₂ or CO₂ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A–4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

- (6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.
- (7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.
- (i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
- (ii) [Reserved]
- (8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.
- (9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.
- (10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.
- (11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O₂(or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.
- (i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and
- (ii) For O₂ (or CO₂), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.
- (12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.
- (13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.
- (14) After July 1, 2011, within 90 days after the date of completing each performance evaluation required by paragraph (c)(11) of this section, the owner or operator of the affected facility must either submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main> or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.
- (d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).
- [72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 60.46c Emission monitoring for sulfur dioxide.

- (a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO₂emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO₂concentrations and either O₂or CO₂concentrations at the outlet of the SO₂control device (or the outlet of the steam generating unit if no SO₂control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO₂concentrations and either O₂or CO₂concentrations at both the inlet and outlet of the SO₂control device.
- (b) The 1-hour average SO₂emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO₂emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2).

Hourly SO₂ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO₂ CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according to the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO₂ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO₂ at the inlet or outlet of the SO₂ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO₂ and CO₂ measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data

requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS

"Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO₂ or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO₂, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part is not required to operate a COMS.

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 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 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 SO₂ 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.

(b) The owner or operator of each affected facility subject to the SO₂ emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property 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 the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

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

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

Source Background and Description

Source Name:	Astral Industries, Inc.
Source Location:	Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355
County:	Randolph County
SIC Code:	3995
Permit Renewal No.:	F135-30295-00002
Permit Reviewer:	Summer Keown

On June 30, 2011, the Office of Air Quality (OAQ) had a notice published in the News-Gazette, Winchester, Indiana, stating that Astral Industries, Inc. had applied for a FESOP renewal for their stationary metal casket manufacturing plant. The notice also stated that the OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO₂ equivalent emissions (CO₂e). Therefore, CO₂e emissions have been calculated for this source. Based on the calculations, the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO₂e per year (see ATSD Appendix A for detailed calculations).

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

...

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) **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) **The potential to emit greenhouse gasses (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) per twelve (12) consecutive month period.**
- ...

IDEM Contact

- (a) Questions regarding this proposed FESOP Significant Permit Revision can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

Company Name: Astral Industries, Inc.
Source Location: Plant 1: 502 East Sherman St., Lynn IN 47355
 Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355
Permit Number: F135-30295-00002
Reviewer: Summer Keown
Date: August 5, 2011

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	26,988	0.52	0.49
Summed Potential Emissions in tons/yr	26,989		
CO2e Total in tons/yr	27,152		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Astral Industries, Inc.
Source Location:	Plant 1: 502 East Sherman Street, Lynn, IN 47355 Plant 2: 7375 South U.S. Highway 27, Lynn, IN 47355
County:	Randolph County
SIC Code:	3995
Permit Renewal No.:	F135-30295-00002
Permit Reviewer:	Summer Keown

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Astral Industries, Inc. relating to the operation of a stationary metal casket manufacturing plant. On March 1, 2011, Astral Industries, Inc. submitted an application to the OAQ requesting to renew its operating permit. Astral Industries, Inc. was issued FESOP No. F135-23570-00002 on December 27, 2006.

Source Definition

This Source Definition from FESOP No. F135-23570-00002, issued on December 27, 2006, 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

The source consists of the following permitted emission units:

- (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.

Under 40 CFR 60, Subpart Dc, the natural gas fired boiler is considered to be an affected facility.
- (i) A stripper tank, identified as U6, constructed in 1989, and exhausting through stack S6.

Insignificant Activities

The source also consists of the following insignificant activities:

- (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 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) 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.

Air Pollution Control Justification as an Integral Part of the Process

The following justification was incorporated into this permit from the previous FESOP No. F135-23570-00002, issued on December 27, 2006:

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.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Randolph County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Randolph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM_{2.5}

Randolph County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants

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.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC, PM₁₀, and PM_{2.5} are each greater than 100 tons per year. However, the Permittee has agreed to limit the sourcewide VOC, PM₁₀, and PM_{2.5} emissions to less than Title V levels, therefore the Permittee will be issued a FESOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) 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/or 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. However, the Permittee has agreed to limit the source's single HAP emissions and total HAP emissions below Title V levels. Therefore, the Permittee will be issued a FESOP Renewal.

Potential to Emit After Issuance

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Powder Coating, including Versa Coat Booth and Powder Coat Booths 1 and 2	32.80	32.80	32.80	0.00	0.00	0.00	0.00	0.00	
Surface Coating, including U1, U2, U3, U4, U5 and U8	2.14	2.14	2.14	0.00	0.00	<98.1	0.00	<23.7	<9.00
Stripper Tank (U6)	0.00	0.00	0.00	0.00	0.00		0.00		
Adhesive Application	0.00	0.00	0.00	0.00	0.00		0.00		
Silk Screening Application	0.00	0.00	0.00	0.00	0.00		0.00		
Powder Coating Stripper Tank	0.00	0.00	0.00	0.00	0.00		0.00		
Grinding & Sanding	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00
Welding	2.18	2.18	2.18	0.00	0.00	0.00	0.00	negl.	negl.
Combustion	0.31	1.25	1.25	0.10	16.44	0.90	13.81	0.30	0.29 (hexane)
Total PTE of Entire Source	41.63	42.57	42.57	0.10	16.44	<99.0	13.81	<25.0	<10.00
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

(a) FESOP Status and Prevention of Significant Deterioration (PSD) Applicability

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. Therefore, this source is subject to the provisions of 326 IAC 2-8 (FESOP).

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

- (A) The input of 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 98.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (B) The input of each single HAP 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 9.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (C) The input of 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 applicators, and silk screening applicators, including clean up solvents, shall be less than 23.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit VOC and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period, each single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

- (3) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:
 - (A) PM, PM10, and PM2.5 emissions from the powder coating operations, comprised of two (2) automated powder coat booths and one (1) manual powder coat booth (Versa), operations, controlled by dry filters, shall each not exceed 2.037 pounds per hour.
 - (B) VOC emissions from the six (6) spray booths (identified as U1, U2, U3, U4, U5 and U8), stripper tank (identified as U6), powder coating stripper tank, adhesive application, and silk screening applicators, including clean up solvents, shall be less than 98.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM, PM10, PM2.5, and VOC from all other emission units at this source, shall limit the source-wide total emissions of PM, PM10, PM2.5, and VOC to less than 250 tons per 12 consecutive month period, each, and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.
- (b) 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.

- (c) 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.
- (d) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (e) 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 does not manufacture coatings and it 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) 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 does not manufacture chemicals or coatings and it 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.
- (g) 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.

- (h) 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.
- (i) 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 boilers at this source, because this source is not a major source of HAPs.
- (j) The requirements of 40 CFR 63, Subpart HHHHHH (Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources) are not included in this permit because the source does not:
 - (1) conduct paint stripping operations that involve the use of chemical strippers that contain methylene chloride;
 - (2) conduct autobody refinishing operations; or
 - (3) conduct spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63.11193, Subpart JJJJJJ (326 IAC 20-1), are not included in the permit boilers at this source, because they each are a gas-fired boiler, as defined by 40 CFR 63.11237, and are each specifically exempted under 40 CFR 63.11195(e).
- (l) 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)

Applicability of Prevention of Significant Deterioration (PSD) is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

326 IAC 2-8-4 (FESOP)

FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is not located in a nonattainment area for particulate matter, nor does it have potential fugitive particulate matter emissions of twenty-five (25) tons per year or more. Therefore, this source is not subject to 326 IAC 6-5.

326 IAC 6.5 PM Limitations Except Lake County

This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

State Rule Applicability – Individual Facilities

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

- (a) 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 the 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 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 are 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 are able to comply with the requirements of 326 IAC 6-2-4.

- (b) The other insignificant natural-gas fired units located at the source are not subject to 326 IAC 6-2-4 because they are not sources of indirect heating.

326 IAC 6-3-2 (Particulate Emission Limitations, Work Practices, and Control Technologies)

- (a) Pursuant to 326 IAC 6-3-2(d), spray booths U1, U2, U3, U4, U5, and sealer booth U8 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device and the source shall operate the control device in accordance with manufacturer's specifications.

- (b) Pursuant to 326 IAC 6-3-2(e), 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)	326 IAC 6-3-2 Allowable Particulate 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:

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

The dry filters associated with the two (2) automated powder coat booths are considered integral to the process and thus their potential to emit is considered after controls for the purpose of this rule applicability determination. The potential to emit PM from the two (2) automated powder coat booth combined are 0.09 pounds per hour, which is less than the allowable PM emission rate. Because the dry filters are integral to the process, they must be in operation at all times that the two (2) automated powder coat booths are in operation.

The uncontrolled potential PM from the manual powder coat booth (Versa) is 7.86 pounds per hour. This is greater than the allowable PM emission rate. Therefore, the dry filters associated with this unit must be in operation at all times that the manual powder coat booth (Versa) is in operation.

- (b) 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. In order to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable, the VOC input to the sealer booth, identified as U8, including clean up solvents shall be less than twenty-five (25) tons per twelve (12) consecutive month period, 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(b)(6), the spray booths are not subject to 326 IAC 8-2-9 because they apply coatings to burial caskets and the source is not located in or adjacent to a county designated as nonattainment for ozone or Clark County or Floyd County.

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 Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps 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 2-2 (Prevention of Significant Deterioration), 326 IAC 6-3 (Particulate emission limitations, work practices, and control technologies) and 326 IAC 2-8 (FESOP).

Recommendation

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

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

An application for the purposes of this review was received on March 1, 2011.

Conclusion

The operation of this metal casket manufacturing plant shall be subject to the conditions of the attached FESOP Renewal No. F135-30295-00002.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Summer Keown at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5175 or toll free at 1-800-451-6027 extension 4-5175.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emission Calculations

Company Name: Astral Industries, Inc.
Source Location: Plant 1: 502 East Sherman St., Lynn IN 47355
 Plant 2: 7357 S. U.S. Hwy. 27, Lynn IN 47355
Permit Number: F135-30295-00002
Reviewer: Summer Keown
Date: June 7, 2011

Uncontrolled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Powder Coating/ Versa Coat*	Surface Coating + Stripper Tank U6	Natural Gas Combustion	Insignificant Activities	TOTAL
PM	420.48	93.00	0.43	6.38	520.29
PM10	420.48	93.00	1.71	6.38	521.57
PM2.5	420.48	93.00	1.71	6.38	521.57
SO2	0.00	0.00	0.13	0.00	0.13
NOx	0.00	0.00	22.49	0.00	22.49
VOC	0.00	608.13	1.24	19.31	628.67
CO	0.00	0.00	18.89	0.00	18.89
Total HAPs	0.00	206.49	0.40	4.12	211.01
Worst case single HAP	0.00	143.09 (Toluene)	0.40 (Hexane)	4.12 (Hexane)	143.09 (Toluene)
Total emissions based on rated capacity at 8,760 hours/year.					
Controlled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Powder Coating/ Versa Coat	Surface Coating + Stripper Tank U6	Natural Gas Combustion	Insignificant Activities	TOTAL
PM	0.71	2.14	0.43	6.38	9.66
PM10	0.71	2.14	1.71	6.38	10.94
PM2.5	0.71	2.14	1.71	6.38	10.94
SO2	0.00	0.00	0.13	0.00	0.13
NOx	0.00	0.00	22.49	0.00	22.49
VOC	0.00	< 98.1	1.24	**	< 99.0
CO	0.00	0.00	18.89	0.00	18.89
Total HAPs	0.00	< 23.7	0.40	**	< 25.00
Worst case single HAP	0.00	< 9.0	0.40 (Hexane)	** (Hexane)	< 10.00
Total emissions based on rated capacity at 8,760 hours/year, after control.					

Limited Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Powder Coating/ Versa Coat	Surface Coating + Stripper Tank U6	Natural Gas Combustion	Insignificant Activities	TOTAL
PM	32.80	2.14	0.43	6.38	41.75
PM10	32.80	2.14	1.71	6.38	43.03
PM2.5	32.80	2.14	1.71	6.38	43.03
SO2	0.00	0.00	0.13	0.00	0.13
NOx	0.00	0.00	22.49	0.00	22.49
VOC	0.00	< 98.1	1.24	**	< 99.0
CO	0.00	0.00	18.89	0.00	18.89
Total HAPs	0.00	< 23.7	0.40	**	< 25.00
Worst case single HAP	0.00	< 9.0	0.40 (Hexane)	** (Hexane)	< 10.00
Total emissions based on rated capacity at 8,760 hours/year, after control.					

*The dry filters for the powder coating have been determined by IDEM, OAQ to be integral to the process. However, the uncontrolled potential PM/PM10/PM2.5 emissions are included here for purposes of PSD (326 IAC 2-2)

**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 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
From Surface Coating Booths U1, U2, U3, U4, U5 and U8
VOC and Particulate

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

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%	
Potential to Emit												137.29	3295.03	601.34	93.00			

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
From Surface Coating Booths U1, U2, U3, U4, U5 and U8
Hazardous Air Pollutants (HAP)

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

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

Total State Potential Emissions **33.23 143.09 22.31 1.08**

METHODOLOGY **Potential to Emit Total HAPs (tons/year) = 199.70**

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

**Appendix A: Emissions Calculations
Insignificant Activities - Stripper Tank U6
Volatile Organic Compound Emissions**

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

Potential VOC Emission from Stripper Tank, U6

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

Methodology

Potential emissions (lbs/day) = Usage (gal/day) * Density (lb/gal)

Potential emissions (tons/year) = Potential emissions (lbs/day) * 365 days/year * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Powder Coating Operations
Particulate Matter

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

Potential to Emit (PTE) of PM/PM10/PM2.5

Powder Coating (total maximum to Versa Coat Booth and Automated Powder Coat Booths combined = 2.0 pounds powder used per casket, 120 casket per hour

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

Uncontrolled PTE of PM/PM10/PM2.5 (without dry filters) = maximum powder delivery rate (lbs/hr) x (1 - transfer efficiency) x 1 ton/2000 pounds x 8760 hours operation/yr

Uncontrolled PTE of PM/PM10/PM2.5 = 18.5 lb/hr x (1 - 0.60) x 1 ton/2000 lbs x 8760 hrs/yr

Uncontrolled PTE of PM/PM10/PM2.5 = 32.4 tons/year

Controlled PTE (with dry filters) = Uncontrolled PTE x (1 - control efficiency)

Controlled PTE of PM/PM10/PM2.5 = 32.4 ton/yr x (1 - 0.99)

Controlled PTE of PM/PM10/PM2.5 = 0.324 tons/year

Automated Powder Coat Booths (1 & 2)

Uncontrolled PTE of PM/PM10/PM2.5 (without dry filters) = maximum powder delivery rate (lbs/hr) x (1 - transfer efficiency) x 1 ton/2000 pounds x 8760 hours operation/yr

Uncontrolled PTE of PM/PM10/PM2.5 = 221.5 lb/hr x (1 - 0.60) x 1 ton/2000 lbs x 8760 hrs/yr

Uncontrolled PTE of PM/PM10/PM2.5 = 388.07 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

Controlled PTE (with dry filters) = Uncontrolled PTE x (1 - control efficiency)

Controlled PTE of PM/PM10/PM2.5 = 388.07 tons/yr x (1 - 0.999)

Controlled PTE of PM/PM10/PM2.5 = 0.388 tons/year

Total PTE for the powder coating and versa coating booths combined = 32.8 tons/year

Note: 240 pounds of powder coating is the total amount combined between the Versa Coat Booth and the Automated Coat Booth. The automated Coat Booth has a maximum usage of 221.5 pounds per hour and the Versa Coat Booth has a maximum usage of 18.5 pounds per hour.

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

Heat Input Capacity Potential Throughput
MMBtu/hr MMBtu/yr
51.35 449.8

Emission Unit	Heat Input Capacity
1 - 15 MMBtu/hr Boiler	15
8 - 120,000 Btu/hr radiant heaters	0.96
12 - 100,000 Btu/hr radiant heaters	1.2
1 - 0.56 MMBtu/hr ac/heater	0.56
1 - 0.1 MMBtu/hr evaporator	0.1
1 - 0.476 MMBtu/hr humidifier	0.476
1 - 4.4 MMBtu/hr dry off oven	4.4
1 - 8.8 MMBtu/hr quiet oven	8.8
1 - 5.6 MMBtu/hr bake oven	5.6
2 - 1.5 MMBtu/hr boilers	3.0
1 - 0.2 MMBtu/hr boiler	0.2
1 - 2.0 MMBtu/hr air make-up unit	2
1 - 2.8 MMBtu/hr air make-up unit	2.8
1 - 0.776 MMBtu/hr reflow oven	0.776
2 - 0.225 MMBtu/hr space heaters	0.45
2 - 0.125 MMBtu/hr space heaters	0.25
2 - 0.12 MMBtu/hr infrared radiant heaters	0.24
1 - 0.04 MMBtu/hr infrared radiant heater	0.04
3 - 0.06 MMBtu/hr infrared radiant heaters	0.18
2 - 0.06 MMBtu/hr infrared space heaters	0.12
4 - 0.525 MMBtu/hr space heaters	2.1
1 - 0.285 MMBtu/hr space heater	0.285
1 - 0.175 MMBtu/hr space heater	0.175
1 - 0.02 MMBtu/hr glue pot	0.02
3 - 0.44 MMBtu/hr space heaters	1.32
3 - 0.1 MMBtu/hr infrared radiant heaters	0.3
TOTAL	51.352

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx 100.0 **see below	VOC	CO
	1.9	7.6	0.6		5.5	84.0
Potential Emission in tons/	0.43	1.71	0.13	22.49	1.24	18.89

*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/MMc	HAPs - Organics				
	Benzene	Dichlorobenzen e	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/	4.723E-04	2.699E-04	1.687E-02	4.049E-01	7.647E-04

Emission Factor in lb/MMc	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/	1.125E-04	2.474E-04	3.149E-04	8.547E-05	4.723E-04

Potential to Emit Total HAPs (tons/year) = 0.405

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**

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Emission Factors* (lb pollutant/lb electrode)		Potential to Emit (lbs/hour)	
			PM/PM10/PM2.5	Manganese (HAP)	PM/PM10/PM2.5	Manganese (HAP)
WELDING						
Metal Inert Gas (MIG)(carbon steel)	3	30.12	0.0055	0.0005	0.497	0.045
					PM/PM10/PM2.5	Manganese (HAP)
Potential to Emit (lbs/day)					11.93	1.08
Potential to Emit (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 rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

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 lbs.

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

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: F135-30295-00002
Permit Reviewer: Summer Keown
Date: June 7, 2011

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)	2.82

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	=	4.20 TPY

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 =	6.43 tons VOC/yr

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) =	1.55

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) =	0.14

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%	8.36
n-Hexane	35.00%	4.12
Methanol	0.03%	0.0035
Total HAPs	35.03%	4.12



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
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Toll Free (800) 451-6027
www.idem.IN.gov

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

TO: Micah Stuckey
Astral Industries, Inc
P.O. Box 638
Lynn, IN 47355-0638

DATE: August 9, 2011

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

SUBJECT: Final Decision
FESOP - Renewal
135-30295-00002

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
David Hazelett (President – Astral Industries, Inc)
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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Toll Free (800) 451-6027
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August 9, 2011

TO: Washington Township Public Library

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

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

Applicant Name: Astral Industries, Inc
Permit Number: 135-30295-00002

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 8/9/2011 Astral Industries, Inc. 135-30295-00002 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Micah Y Stuckey Astral Industries, Inc. PO Box 638 Lynn IN 47355-0638 (Source CAATS) via confirm delivery										
2		David A Hazelett President Astral Industries, Inc. PO Box 638 Lynn IN 47355-0638 (RO CAATS)										
3		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)										
4		Washington Township Public Library 107 N. Main, Box 127 Lynn IN 47355-0127 (Library)										
5		Randolph County Commissioners 100 South Main Street Winchester IN 47394 (Local Official)										
6		Randolph County Health Department 325 S. Oak St Winchester IN 47394 (Health Department)										
7		Lynn Town Council P.O. Box 65, 103 South Main Lynn IN 47355 (Local Official)										
8		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
9												
10												
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