



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
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TO: Interested Parties / Applicant
DATE: April 21, 2006
RE: Jeld-Wen / 113-22426-00047
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 1/10/05



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

**JELD-WEN
200 Gerber Street
Ligonier, Indiana 46767**

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

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

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

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

Operation Permit No.: F113-10260-00047	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: May 15, 2002 Expiration Date: May 15, 2007

First Administrative Amendment No.: 113-15891-00047, issued on May 28, 2002
First Minor Permit Revision No.: 113-16069-00047, issued on December 13, 2002
First Significant Permit Revision No.: 113-18715-00047, issued on August 19, 2004

Second Significant Permit Revision No: 113-22426-00047	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: April 21, 2006 Expiration Date: May 15, 2007

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SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates an insulated fiberglass and steel door manufacturing facility.

Permittee Name:	JELD-WEN (formerly Challenge Door of Indiana)
Authorized Individual:	Tim Griewank, General Manager
Source Address:	200 Gerber Street, Ligonier, Indiana 46767
Mailing Address:	P.O. Box 259, Ligonier, Indiana 46767
SIC Code:	3086, 3442
Source Location Status:	Noble
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

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

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

- (a) One (1) surface coating operation, identified as P001, consisting of the following:
 - (1) One (1) surface coating spray booth, identified as Door Edge Paint Booth, constructed in 1978, utilizing a HVLP spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E1;
 - (2) One (1) surface coating touch-up spray booth, identified as Door Touch-up Booth, constructed in 1990, utilizing an air atomized spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E2;
- (b) One (1) solvent wiping operation, identified as P002, utilizing a solvent based cleaning solution to hand wipe a maximum of 175 door per hour and exhausting to general ventilation;
- (c) One (1) roll coating operation, identified as P003, consisting of the following:
 - (1) Two (2) roll coating units, identified as Adhesive Roll Coater 1 and Adhesive Roll Coater 2, constructed in 1978 and 1993, respectively, coating a maximum of 175 doors per hour on a daily average, and exhausting to two (2) stacks, identified as E3 and E4, utilizing solvent for roller cleaning;

- (d) One (1) core burning operation, identified as P004, consisting of the following:
- (1) Two (2) core burn units, identified as Core Burn Unit 1 and Core Burn Unit 2, constructed in 1981 and 1997, respectively, for processing a maximum of 175 doors per hour on a daily average, with particulate matter controlled by dry filters with an overall control efficiency of 95%, and exhausting to two (2) stacks, identified as E5 and E6;
- (e) One (1) woodworking operation, identified as P005, utilizing a baghouse, identified as dust collector DC7, for particulate matter control with a control efficiency of 99.9%, and exhausting to one (1) stack, identified as DC7, consisting of the following:
- (1) One (1) table saw (M1);
 - (2) One (1) Miter saw (M2);
 - (3) One (1) rail machine (M4);
 - (4) One (1) Lockstile machine (M6);
 - (5) One (1) Hingestile machine (M7);
 - (6) One (1) tilting table saw (M9);
 - (7) One (1) planer (M13);
 - (8) One (1) beltsander (M14);
 - (9) One (1) lock block boring machine (M15), controlled by baghouse DC7 when boring wood materials and controlled by a cyclone, identified as CYC1, which vents to atmosphere, when boring polystyrene lock blocks;
 - (10) One (1) stile and rail machine (M16);
 - (11) One (1) Alterna door sizer (M17);
- (f) One (1) expandable polystyrene (EPS) block molding operation, identified as P006, consisting of the following:
- (1) One (1) batch polystyrene beads pre-expander system, constructed in 1997, including one (1) pre-expander machine and six (6) steel pipe frame supported polyester storage bags for aging newly pre-expanded bead, capable of processing a maximum average of 1,200 pounds per hour of polystyrene beads, containing a maximum average of 7% pentane by weight, two (2) steel pipe frame supported polyester storage bags for holding reground bead, and the mix metering bags;
 - (2) One (1) block molding press, constructed in 1997, for molding pre-expanded polystyrene bead to the desired block size, utilizing steam to heat the pre-expanded beads;
 - (3) One (1) block conditioning room, constructed in 1997;
 - (4) One (1) pentane emissions collection system, constructed in 1997 and to be modified in 2006, connected to a 12,000 standard cubic feet per minute (scfm) regenerative thermal oxidizer (RTO);
- The collection system consists of:
- (a) Ductwork conveying process emissions and ventilation air from two permanent total enclosures, one enclosure containing the bead aging bags, and one enclosure containing the block conditioning room;
 - (b) Ductwork conveying block molder bead filling pneumatic transfer air and pre-expander pneumatic transfer air;

- (5) One (1) boiler, identified as P009, to be constructed in 2006, , equipped with a natural gas burner rated at 5 million British thermal units per hour, for producing steam used in bead expansion; and
- (6) One (1) regenerative thermal oxidizer (RTO), to be constructed in 2006, equipped with a burner rated at 2.785 million British thermal units per hour, using a mixture of pentane-laden process and ventilation air and natural gas as combustion fuel, and exhausting to one (1) stack, identified as 97-1.
- (g) One (1) polystyrene block cutting operation, consisting of two (2) hot wire cutting lines, identified as Wire Cutting Lines 1 and 2, each constructed in 1997, used for cutting of polystyrene blocks, each with a maximum throughput rate of 30 blocks per hour, and exhausting to general ventilation.
- (h) One (1) fiberglass door assembly operation, with a maximum design production rate of 175 doors per hour, using wood products from the woodworking operation (P005) and adhesive coated door skins from the roll coating operation (P003), consisting of the following:
 - (1) One (1) fiberglass door groove forming system, identified as P008, constructed in 2002, forming grooves in the door cores via heat, and exhausting to general ventilation; and
 - (2) One (1) glaze application area, identified as P007, constructed in 2002, applying glaze to the door fiberglass skin, and exhausting to general ventilation.

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, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour;
- (b) Closed loop heating and cooling systems;
- (c) Noncontact cooling tower systems with either of the following:
 - (1) Forced and induced draft cooling tower system not regulated under a NESHAP;
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (e) Paved or unpaved roads and parking lots with public access;
- (f) Conveyors as follows:
 - (1) Enclosed systems for conveying plastic raw materials and plastic finished goods;
- (g) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations;

- (h) Other activities or categories not previously identified:
- (1) Two (2) industrial shop vacuums; Potential PM emissions are estimated at 0.48 lb/hr or 2.1 tons per year;
 - (2) Maintenance/cleaning/repair chemical use (general venting); Maximum potential VOCs for products identified below is 0.14 tons per year. Products: Lucite acrylic lacquer, lacquer thinners and cleaning solvents (maintenance use), butylgrip sealant, X-433 aerosol, strippable wall coating, Mautz industrial enamel, rigid dark thread cutting oil, and WD-40 bulk liquid, etc;
 - (3) Coiled sheet metal cold stamping, punching, bending, and forming operations using non-volatile oil based lubricants;
 - (4) Polystyrene Scrap Grinding in an enclosed grinder;
 - (5) One Torit dust collector for collection of fiberglass skin door residuals; and
 - (6) Woodworking waste collection, transfer, and disposal activities.

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

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

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, F113-10260-00047, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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]

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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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

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

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

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

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

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

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

B.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 Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

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

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

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

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

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

The notification which shall be submitted by the Permittee does not require the certification by 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) All terms and conditions of permits established prior to F035-21872-00076 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 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

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

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

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

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

- (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 the certification 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.17 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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Permits Branch, Office of Air Quality
100 North Senate Avenue
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Any such application shall be certified 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.19 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-17-3-2] [IC13-30-3-1]

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

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

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

The application which shall be submitted by the Permittee does require the certification by 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.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]

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

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

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

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

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

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

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

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no often less than once an hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

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

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

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 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.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

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

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

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

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

Stratospheric Ozone Protection

C.20 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 the standards for recycling and emissions reduction.

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

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) One (1) surface coating operation, identified as P001, consisting of the following:
 - (1) One (1) surface coating spray booth, identified as Door Edge Paint Booth, constructed in 1978, utilizing a HVLP spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E1;
 - (2) One (1) surface coating touch-up spray booth, identified as Door Touch-up Booth, constructed in 1990, utilizing an air atomized spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E2;
- (b) One (1) solvent wiping operation, identified as P002, utilizing a solvent based cleaning solution to hand wipe a maximum of 175 doors per hour and exhausting to general ventilation; and
- (c) One (1) roll coating operation, identified as P003, consisting of the following:
 - (1) Two (2) roll coating units, identified as Adhesive Roll Coater 1 and Adhesive Roll Coater 2, constructed in 1978 and 1993, respectively, coating a maximum of 175 doors per hour on a daily average, and exhausting to two (2) stacks, identified as E3 and E4, utilizing solvent for roller cleaning.

(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 Particulate Matter (PM) [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the Door Edge Paint Booth shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, at all times that the Door Edge Paint Booth is in operation, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.1.2 Volatile Organic Compounds (VOCs) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal door frames in P003 shall be limited to 3.0 pounds of VOC per gallon of coating less water delivered to the applicator for all other coatings and coating application systems.
- (b) Solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.1.3 Volatile Organic Compounds (VOCs) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to the wood doors in P001 shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the surface coating emission operation (P001) and any control devices.

Compliance Determination Requirements

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

Compliance with the VOC content limitation contained in Condition 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.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limits in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = \frac{\sum_{i=1}^n (C_i \times U_i)}{\sum_{i=1}^n U_i}$$

where: A is the volume weighted average in pounds VOC per gallon less water and exempt solvents as applied;
C is the VOC content of the coating *i* in pounds VOC per gallon less water and exempt solvents as applied;
U is the usage rate of the coating *i* in gallons per day less water and exempt solvents as applied; and
n is the number of coatings being averaged

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

D.1.7 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 (E1 and E2) while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with

Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.1.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.1.2.
 - (1) The VOC content of each coating material and solvent used less water.
 - (2) The amount of each coating material and solvent used on a daily basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (3) The volume weighted average VOC content of the coatings used for each day;
 - (4) The daily cleanup solvent usage; and
 - (5) The total VOC usage for each day;
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (e) One (1) woodworking operation, identified as P005, utilizing a baghouse, identified as dust collector DC7, for particulate matter control with a control efficiency of 99.9%, and exhausting to one (1) stack, identified as DC7, consisting of the following:
- (1) One (1) table saw (M1);
 - (2) One (1) Miter saw (M2);
 - (3) One (1) rail machine (M4);
 - (4) One (1) Lockstile machine (M6);
 - (5) One (1) Hingestile machine (M7);
 - (6) One (1) tilting table saw (M9);
 - (7) One (1) planer (M13);
 - (8) One (1) beltsander (M14);
 - (9) One (1) lock block boring machine (M15), controlled by baghouse DC7 when boring wood materials and controlled by a cyclone, identified as CYC1, which vents to atmosphere, when boring polystyrene lock blocks;
 - (10) One (1) stile and rail machine (M16); and
 - (11) One (1) Alterna door sizer (M17).

(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 Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Particulate matter (PM) emissions from the woodworking operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This limit is required to limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period. Compliance with this limit will render the requirements of 326 IAC 2-2 (PSD) not applicable;
- (b) Particulate matter with a diameter less than ten (10) micrometers (PM10) emissions from the woodworking operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This limit is required to limit the source-wide total potential to emit PM10 to less than 100 tons per 12 consecutive month period. Compliance with this limit will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable;

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable PM emission rate from the woodworking operation (P005) shall not exceed 7.85 pounds per hour when operating at a process weight rate of 5268 pounds per hour.

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

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

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

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.2.4 Particulate

- (a) In order to comply with Condition D.2.1 and D.2.2, the baghouse for PM and PM10 control shall be in operation at all times that the woodworking operation (P005) is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the woodworking process stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.2.6 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the woodworking process, at least once weekly when the woodworking process is in operation when venting to the atmosphere. Unless operated under conditions for which the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances, the pressure drop across the baghouse shall be maintained within the range of 0.0 and 2.5 inches of water or a range established during the latest stack test. If a pressure drop reading is observed outside of the above mentioned range for any one reading, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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

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

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

D.2.8 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain records of daily visible emission notations of the woodworking process stack exhaust.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Pressure drop across the baghouse; and
 - (B) Verification of cleaning cycle operation.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

FACILITY OPERATION CONDITIONS

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

- (f) One (1) expandable polystyrene (EPS) block molding operation, identified as P006, consisting of the following:
- (1) One (1) batch polystyrene beads pre-expander system, constructed in 1997, including one (1) pre-expander machine and six (6) steel pipe frame supported polyester storage bags for aging newly pre-expanded bead, capable of processing a maximum average of 1,200 pounds per hour of polystyrene beads, containing a maximum average of 7% pentane by weight, two (2) steel pipe frame supported polyester storage bags for holding reground bead, and the mix metering bags;
 - (2) One (1) block molding press, constructed in 1997, for molding pre-expanded polystyrene bead to the desired block size, utilizing steam to heat the pre-expanded beads;
 - (3) One (1) block conditioning room, constructed in 1997;
 - (4) One (1) pentane emissions collection system, constructed in 1997 and to be modified in 2006, connected to a 12,000 standard cubic feet per minute (scfm) regenerative thermal oxidizer (RTO);
The collection system consists of:
 - (a) Ductwork conveying process emissions and ventilation air from two permanent total enclosures, one enclosure containing the bead aging bags, and one enclosure containing the block conditioning room;
 - (b) Ductwork conveying block molder bead filling pneumatic transfer air and pre-expander pneumatic transfer air;
 - (5) One (1) boiler, identified as P009, to be constructed in 2006, equipped with a natural gas burner rated at 5 million British thermal units per hour, for producing steam used in the bead expansion; and
 - (6) One (1) regenerative thermal oxidizer (RTO), to be constructed in 2006, equipped with a burner rated at 2.785 million British thermal units per hour, using a mixture of pentane-laden process and ventilation air and natural gas as combustion fuel, and exhausting to one (1) stack, identified as 97-1.

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

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

D.3.1 Volatile Organic Compound (VOC) Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.

D.3.2 New Facilities, General Reduction Requirements [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), the source shall install and maintain the Best Available Control Technology (BACT) for the one (1) expandable polystyrene block molding operation, identified as P006 in Section D.3 (f)(1), (2) and (3), as described below.

- (a) VOC (as pentane) emissions from the expandable polystyrene (EPS) block molding operation, identified as P006 in Section D.3 (f)(1), (2) and (3), shall be captured by the pentane emissions collection system and ducted to one (1) regenerative thermal oxidizer (RTO). The pentane emissions collection system and RTO shall achieve an overall VOC control efficiency of 78%.

- (b) The pentane emissions collection system will include two (2) permanent total enclosures, each vented to the RTO, to capture VOC (as pentane) emitted from the EPS block molding operation at:
- (1) The bead aging bags, and
 - (2) The block conditioning room.

D.3.3 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the particulate matter emissions from the natural gas-fired steam boiler (P009) shall not exceed 0.6 pounds per million British thermal unit.

D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the pentane emissions collection system and RTO.

Compliance Determination Requirements

D.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 2-8-4] [326 IAC 2-2]

In order to comply with Condition D.3.1 and D.3.2, the pentane emissions collection system and RTO shall be in operation at all times the one (1) expandable polystyrene block molding operation is in operation.

D.3.6 Volatile Organic Compound (VOC) Emissions

Compliance with the VOC emission limitations contained in Condition D.3.1 shall be determined for each month using the quarterly reporting form located at the end of this permit. Compliance shall be based on the VOC emitted for the previous month added to the total VOC emitted for the previous 11 months, so as to arrive at the total VOC emitted for the most recent 12 consecutive month period. The VOC emitted during a given time period shall be determined from the "as supplied" manufacturer's data sheets for the VOC content of the polystyrene beads (assuming 100% of the VOC is emitted during use), the polystyrene bead usage for that time period, and the overall VOC control efficiency from most recent valid stack test determined pursuant to Condition D.3.7, using the following equation:

$$\text{VOC Emissions} = f_{\text{VOC}} * U * (1 - \text{CEF})$$

where f_{VOC} = The VOC content of the polystyrene beads used (fraction by weight);
U = The polystyrene bead usage by weight; and
CEF = The overall control efficiency determined pursuant to Condition D.3.7.

IDEM, OAQ reserves the authority to determine compliance using methods contained in 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

D.3.7 Testing Requirements [326 IAC 3-6] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

- (a) The Permittee shall perform initial compliance testing on the pentane emissions collection system and RTO within 180 days after initial start-up of the RTO. The following shall be conducted in order to demonstrate compliance with Conditions D.3.1 and D.3.2:
- (1) The Permittee shall demonstrate compliance for the two permanent total enclosures using methods specified in 40 CFR 51, Appendix M, Method 204, or other methods as specified by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

The enclosure differential pressure measured during enclosure capture verification testing shall be recorded.

- (2) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO, utilizing methods as approved by the Commissioner, to determine the overall VOC control efficiency. The overall VOC control efficiency for the pentane emissions collection system and RTO will be determined from a weighted average of two control efficiency tests conducted during the same 24 hour bead expansion and aging cycle:
- (A) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO exhaust during operation of the pre-expander and block molder.
 - (B) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO exhaust during the bead and block aging period when pre-expansion and block molding are not conducted.

The weighted average VOC control efficiency used for compliance demonstration will be determined from the following equation:

$$CEF = \left[\frac{\left(T_{pa} * t_a * \frac{CapEF_a}{100\%} * \frac{DesEF_a}{100\%} \right) + \left(T_{pb} * t_b * \frac{CapEF_b}{100\%} * \frac{DesEF_b}{100\%} \right)}{\left(T_{pa} * t_a + T_{pb} * t_b \right)} \right] * 100\%$$

$$CapEF_a = (VOC_a / T_{pa}) * 100\%$$

$$DesEF_a = (1 - (VOC_{ca} / VOC_a)) * 100\%$$

$$CapEF_b = (VOC_b / T_{pb}) * 100\%$$

$$DesEF_b = (1 - (VOC_{cb} / VOC_b)) * 100\%$$

- Where
- CEF = Weighted average VOC control efficiency (%)
 - T_{pa} = Total pentane available to lose in the process during the pre-expansion and molding operations (lbs/hr)
 - t_a = Average time (in hours) that the pre-expansion and molding operations are in operation
 - CapEF_a = Capture efficiency during the pre-expansion and molding operations (%)
 - VOC_a = VOC capture rate (before RTO) during pre-expansion and molding operations (lbs/hr)
 - DesEF_a = Destruction efficiency during the pre-expansion and molding operations (%)
 - VOC_{ca} = VOC controlled emission rate (after RTO) during the pre-expander and block molder (lbs/hr)
 - T_{pb} = Total pentane available to lose in the process during the pre-expansion and molding shutdown (lbs/hr)
 - t_b = Average time (in hours) that the pre-expansion and molding operations are shutdown
 - CapEF_b = Capture efficiency during the pre-expansion and molding shutdown (%)
 - VOC_b = VOC capture rate (before RTO) during pre-expansion and molding shutdown (lbs/hr)
 - DesEF_b = Destruction efficiency during the pre-expansion and molding shutdown (%)
 - VOC_{cb} = VOC controlled emission rate (after RTO) during the pre-expander and block molder shutdown (lbs/hr)

The operating temperature of the RTO shall be measured during VOC testing and an average operating temperature for the RTO shall be determined. Testing shall be conducted in accordance with Section C - Performance Testing.

- (b) The test required in (a)(2) shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

D.3.8 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1500°F.
- (b) The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.

D.3.9 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2, as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.

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

D.3.10 Compliance Schedule

- (a) The source has 240 days from the date of issuance of this permit to install the RTO (rated at 2.785 MMBtu/hr) and the two permanent total enclosures and begin full operation.
- (b) Within 180 days of installing the RTO and the two permanent total enclosures, the source shall perform initial VOC testing as specified in Condition D.3.7(a).

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

D.3.11 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.3.1.
 - (1) The pounds of polystyrene beads used on a monthly basis;
 - (2) The VOC content of the polystyrene beads used (fraction by weight);

- (b) To document compliance with Condition D.3.5, D.3.8, and D.3.9, the Permittee shall maintain records of the following operational parameters for the pentane emissions collection system and RTO:
- (1) Data verifying that the permanent total enclosure meet the design criteria of EPA Method 204; or capture efficiency for those processes that are located in an enclosure unable to meet the design criteria of EPA Method 204;
 - (2) Data used to develop the overall control efficiency for the pentane emissions collection system and RTO;
 - (3) The continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.
 - (4) Daily records of the duct pressure or fan amperage.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.12 Reporting Requirements

A quarterly summary of the information to document compliance with the VOC emission limit in Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.4

FACILITY OPERATION CONDITIONS

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

- (d) One (1) core burning operation, identified as P004, consisting of the following:
 - (1) Two (2) core burn units, identified as Core Burn Unit 1 and Core Burn Unit 2, constructed in 1981 and 1997, respectively, for processing a maximum of 175 doors per hour on a daily average, with particulate matter controlled by dry filters with an overall control efficiency of 95%, and exhausting to two (2) stacks, identified as E5 and E6;
- (g) One (1) polystyrene block cutting operation, consisting of the following:
 - (1) Two (2) hot wire cutting lines, identified as Wire Cutting Lines 1 and 2, each constructed in 1997, used for cutting of polystyrene blocks, each with a maximum throughput rate of 30 blocks per hour, and exhausting to general ventilation.
- (h) One (1) fiberglass door assembly operation, with a maximum design production rate of 175 doors per hour, using wood products from the woodworking operation (P005) and adhesive coated door skins from the roll coating operation (P003), consisting of the following:
 - (1) One (1) fiberglass door groove forming system, identified as P008, constructed in 2002, forming grooves in the door cores via heat, and exhausting to general ventilation; and
 - (2) One (1) glaze application area, identified as P007, constructed in 2002, applying glaze to the door fiberglass skin, and exhausting to general ventilation.

(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.4.1 Particulate Matter (PM) [326 IAC 6-3-2(e)]

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

- (a) the allowable particulate emission rate for each of the two (2) core burn units (Core Burn Unit 1 and Core Burn Unit 2) shall each not exceed 1.48 pounds per hour when operating at a process weight rate of 438 pounds of polystyrene sheets per hour;
- (b) the allowable particulate emission rate for each of the two (2) hot wire cutting lines (Wire Cutting Lines 1 and 2) shall each not exceed 7.06 pounds per hour when operating at a process weight rate of 4500 pounds of polystyrene block per hour; and
- (c) the allowable particulate emission rate from the door groove forming system (P008) shall not exceed 1.72 pounds per hour when operating at a process weight rate of 546 pounds of polystyrene sheets per hour.

The pounds per hour limitations were calculated with the following equation:

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:

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

Compliance Determination Requirements

D.4.2 Particulate Matter (PM)

In order to comply with Condition D.4.1(a), the dry filters controlling particulate from Core Burn Unit 1 shall be in operation at all times that Core Burn Unit 1 is in operation, and the dry filters for controlling particulate from Core Burn Unit 2 shall be in operation at all times that Core Burn Unit 2 is in operation.

D.4.3 Testing Requirements

- (a) Within 24 months of May 15, 2002, the Permittee shall perform PM and PM10 emission testing on one of the two (2) units of the core burning operation (P004), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration, with each subsequent test performed on the unit not tested in the most recent prior performance test conducted. PM-10 includes filterable and condensable PM-10.
- (b) Within one hundred and eighty (180) days after issuance of Significant Permit Revision No. 113-22426-00047, the Permittee shall perform an initial one time performance test for the uncontrolled emissions of VOCs and styrene from one of the two (2) units of the core burning operation (P004) in order to verify the emission factors.
- (c) The Permittee shall determine the average volume loss of the cores associated with the core burning operation and the average volume loss for the wire cutting operation, and the groove forming system. The Permittee shall then calculate the emission factors for the wire cutting operation and the groove forming system using the following equation:

$$EF_x = \left(\frac{V_x}{V_{core}} \right) * EF_{core}$$

- where: EF_x = the emission factor for either the hot wire cutting operation or the groove forming system.
 V_x = the volume loss for either the hot wire cutting operation or the groove forming system.
 V_{core} = the volume loss associated with the core burning operation.
 EF_{core} = the emission factor for the core burning operation determined by the source test.

Testing shall be conducted in accordance with Section C - Performance Testing.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: JELD-WEN
Source Address: 200 Gerber Street, Ligonier, Indiana 46767
Mailing Address: P.O. Box 259, Ligonier, Indiana 46767
FESOP No.: F113-10260-00047

**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:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-5674
Fax: 317-233-5967**

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

Source Name: JELD-WEN
Source Address: 200 Gerber Street, Ligonier, Indiana 46767
Mailing Address: P.O. Box 259, Ligonier, Indiana 46767
FESOP No.: F113-10260-00047

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 317-233-5674, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

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

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO 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: _____

A certification is not required for this report.

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

Quarterly Report

Source Name: JELD-WEN
 Source Address: 200 Gerber Street, Ligonier, IN 46767
 Mailing Address: P.O. Box 259, Ligonier, IN 46767
 FESOP Permit No.: F113-10260-00047
 Facility: Expandable Polystyrene Block Molding Operation (P006)
 Parameter: VOC emissions
 Limit: Less than 18.94 tons VOC per year, with compliance determined at the end of each month

$$\text{VOC Emissions} = f_{\text{VOC}} * U * (1 - \text{CEF})$$

where f_{VOC} = VOC content of beads (fraction by weight)
 U = polystyrene bead usage
 CEF = overall control efficiency determined pursuant to Condition D.3.7

Quarter: _____ Year: _____

Month	(1) Tons VOC This Month	(2) Tons VOC Past 11 Months	(1) + (2) Rolling Total VOC Emissions (Tons)

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Name: JELD-WEN
Source Address: 200 Gerber Street, Ligonier, IN 46767
Mailing Address: P.O. Box 259, Ligonier, IN 46767
FESOP No.: F113-10260-00047

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Background and Description

Source Name:	JELD-WEN
Source Location:	200 Gerber Street, Ligonier, IN 46767
County:	Noble
SIC Code:	3086, 3442
Application No.:	113-22426-00047
Permit Reviewer:	Nathan C. Bell

On March 8, 2006, the Office of Air Quality (OAQ) had a notice published in Kendallville News-Sun, Kendallville, Indiana, stating that JELD-WEN had applied for a Significant Permit Revision (SPR) to their Federally Enforceable State Operating Permit (FESOP) issued on May 15, 2002. The notice also stated that the OAQ proposed to issue a FESOP SPR 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.

Background Information

During a phone call on February 28, 2006, JELD-WEN requested that Condition D.4.3 of the FESOP contain only one performance test for just core embossing (instead of individual performance tests for core embossing, hot wire cutting, and door grooving). JELD-WEN anticipates that each process will have similar emissions, since each process uses heating (at approximately 600°F) of polystyrene to either emboss, cut, or groove the polystyrene cores. Potential emissions from core embossing were determined using emission factors for core embossing obtained from testing at a JELD-WEN facility located in Chiloquin, Oregon on May 22, 2002. Emission factors for hot wire cutting and door grooving were calculated using the emission factors for core embossing and the volume loss ratio between each of the processes and the core embossing process. In order to determine the adequacy of these emission factors and to respond to JELD-WEN's request for one performance test, the Office of Air Quality requested that JELD-WEN submit for review the Source Test Report from testing at a JELD-WEN facility located in Chiloquin, Oregon on May 22, 2002. On March 2, 2006, JELD-WEN submitted the above test report for review. On March 22, 2006, the Office of Air Quality completed their review of the test report and sent an email to JELD-WEN containing the following text:

"The Compliance Data Section (CDS) has completed their review of the source test report for the core embossing at the JELD-WEN facility located in Chiloquin, Oregon on May 22, 2002. For the most part, the source test for the core embossing unit was adequate, although there were a few uncertainties raised regarding the test methods and quality control measures employed. The CDS was more concerned with the way the emission factors (EFs) for hot wire cutting and door grooving were calculated. Based on the calculations provided in the application, the EFs for hot wire cutting and door grooving were calculated by multiplying the EF for core embossing by the volume loss ratio. This calculation method assumes that the mass loss per volume loss for each of the processes is the same. The CDS is concerned that the mass loss per volume loss of the hot wire cutting and door grooving could be higher than that of the core embossing. If this were true, then the EFs for the hot wire cutting and door grooving would be greater than currently assumed and the VOC emission limits would need to be revised as appropriate to keep the source-wide total potential to emit of VOCs to less than 100 tons per year (tpy).

The CDS would be willing to only require one stack test (instead of three) for just the core embossing unit(s), if JELD-WEN can provide sufficient rationale explaining why the volume loss ratio method used to calculate the EFs for the hot wire cutting and door grooving is appropriate and whether the mass loss per volume loss for each of the processes is the same. If available, please provide any testing data that have determined that mass loss per volume loss, mass loss per core, or other sufficient parameter for each of the processes. IDEM OAQ will determine the adequacy of the documentation and rationale presented.

The CDS would also be willing to only require one stack test (instead of three) for just the core embossing unit(s), if the permit would also contain a testing requirement for determining the mass loss per volume loss, mass loss per core, or other sufficient parameter for each of the processes. However, if the testing showed EFs for the hot wire cutting and door grooving were greater than currently assumed, then the VOC emission limits would need to be revised as appropriate to keep the source-wide total potential to emit of VOCs to less than 100 tpy. Revising the VOC limits would require a Significant Permit Revision (SPR) to your FESOP, which has a SPR permitting fee of \$3,500.00 and requires a 30-day public notice.

One other thing to consider is lowering the VOC limit for the EPS Block Molding Operation (P006) or adding new production limit(s) to the permit for the hot wire cutting and/or door grooving in order to leave some spare room for additional potential emissions (e.g., limit the source-wide total potential to emit of VOCs to 90 tpy instead of 99 tpy) in case the EFs for the hot wire cutting and door grooving are later determined to be greater than currently assumed.”

Comments and Responses

During the public notice period, the following comments were submitted to IDEM, OAQ on the draft FESOP SPR. The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

On March 29, 2005, Bonnie J. Basden of JELD-WEN provided the following comment on the draft FESOP SPR in response to the email sent by the Office of Air Quality on March 22, 2006:

Rational for emission factors:

Below is the rationale for using the volume loss ratios and the EFs from the core embossing source test for determining the EFs for the wire cutting and grooving operations.

Density is a measure of mass per unit volume; therefore, the average density of an object equals its total mass divided by its total volume using the following equation:

$$\rho = m/V$$

Where: ρ is the objects density (measured in kg/m³ or lbs/ft³).

m is the objects total mass (measured in kg or lbs).

V is the objects total volume (measured in m³ or ft³)

Table 1 shows the average mass and volume for each of the raw materials prior to the cutting, embossing or grooving. The average density was calculated using the formula stated above.

Table 1: Raw Material Average Specifications

Description	Block	Core	Groove
Average Mass (lbs)	70	3.1	3.1
Average Volume (ft ³)	67.5	2.92	2.92
Average Density (lbs/ft ³)	1.04	1.06	1.06

Since the average density of each of the raw materials are approximately equal ($\pm 2\%$), as shown in Table 1, then the assumption can be made that the mass per volume ratio for each of the materials are equal. The block material, once cut, is the same material used in the core embossing and grooving operations. The assumption can also be made that the mass loss per volume loss at each of the processes are equal. The systems are designed to remove only as much material as necessary to achieve the desired size or shape. Table 2 shows the average volume loss and estimated mass loss for each of the processes using the following equation to calculate the estimated mass loss for the block (wire cutting) and grooving.

$$m_{lc}/V_{lc} = m_{lx}/V_{lx}$$

Where: m_{lc} is the average mass loss from core embossing (measured in lbs).
 m_{lx} is the estimated average mass loss for either hot wire cutting or grooving (measured in lbs).
 V_{lc} is the average volume loss from core embossing (measured ft³).
 V_{lx} is the average volume loss from either hot wire cutting or grooving (measured ft³).

Table 2: Average Mass and Volume Loss

Description	Wire Cutting	Embossing	Grooving
Average Volume Loss (ft ³)	0.024	1.98	0.185
Average Mass Loss (lbs)	0.00045	0.038	0.0036

Since the average volume loss for each operation was determined by using the dimensions of either the hot wires or the embossing plate that comes in contact with the core material for material removal and is a constant, it is the more accurate method to use for determining the difference in emission factors. The reason why the mass loss is less accurate than the volume loss is that when the core material is touched with something hot the material has a tendency to absorb moisture in the air, resulting in a mass gain instead of a mass loss.

Proposed Permit Wording:

With the information presented above JELD-WEN requests the following changes to the draft revised permit:

Revised permit condition D.4.3 is revised to state the following:

- (b) Within one hundred and eighty (180) days after issuance of Significant Permit Revision No. 113-22426-00047, the Permittee shall perform an initial one time performance test for the uncontrolled emissions of VOCs and styrene from one of the two (2) units of the core burning operation (P004).
- (c) The Permittee shall determine the average volume loss of the cores associated with the core burning operation and the average volume loss for the wire cutting operation, and the groove forming system. The Permittee shall then calculate the emission factors for the wire cutting operation and the groove forming system using the following equation:

$$EF_x = (V_x / V_{core}) * EF_{core}$$

Where: EF_x is the emission factor for either the hot wire cutting operation or the groove forming system.

V_x is the volume loss for either the hot wire cutting operation or the groove forming system.

V_{core} is the volume loss associated with the core burning operation.

EF_{core} is the emission factor for the core burning operation determined by the source test.

On April 12, 2005, Peter J. Brewer of JELD-WEN amended their comment to include the following additional information:

The primary mechanism for embossing, cutting or grooving the polystyrene is through the application of heat via a hot surface. The design temperature of the hot surface for these systems is approximately 600°F. The polystyrene material is flashed off, leaving the desired pattern or shape of the unit. As stated previously, the design is to only remove as much material as needed to have a smooth surface, desired pattern or clean cut. This enables the polystyrene material to fit into the intended space or be of appropriate size for the next processing step.

The anticipated volatile emissions from the embossing process are summarized in the source test report document from our Chiloquin, Oregon facility (Tables 1-4). This document was previously submitted in March. I have enclosed a copy of these tables for your convenience. The mechanism for the reaction and emissions is heat and oxidation, or the application of enough heat to volatilize and oxidize off the polystyrene material and residual solvent (pentane). Often the term 'burn off' is used for the embossing, yet as you can see from the emissions table the majority of the emissions are pentane and iso-pentane, with some styrene and then lesser amounts of other various compounds. The expandable polystyrene beads are comprised of the polystyrene material and pentane as the blowing agent, so from this data one can conclude that actually much of the material is volatilized, or flashed off, as opposed to truly combusted. Observation of the embossed cores will reveal that there are some areas that are darkened due to oxidation. This effect is not seen on the grooving or wire cutting system. The polystyrene material remains white in appearance after these treatments, indicating that there is less combustion/oxidation and more volatilization of the material.

I would like to re-iterate that the hot wire cutting line and the grooving system are both fugitive emissions points vented inside the manufacturing building. These processes have been permitted in the past without the requirement for emissions testing. These are minor sources of emissions and also are difficult processes to isolate and test for emissions. On a potential to emit basis (higher than actual operations) the estimated VOC and total HAP emissions from the grooving system are 2.6 tons/yr and 0.4 tons/yr respectively. The estimated potential VOC and total HAP emissions from the hot wire cutting line are 0.3 tons/yr and 0.05 tons/yr respectively. The grooving system is actually being phased out over time and was used seldom or not at all in the past year, so the potential maximum emissions from this process are truly hypothetical at this point. The emissions from each of these operations are not significant and the rationale for potentially requiring specific emissions source tests is questionable.

The previously submitted source testing language for Condition D.4.3 will require emissions testing of an embossing unit and subsequent development of the emission factors for the grooving and wire cutting. With the information submitted in March, (source testing information and emission factor development method (March 29, 2006 letter to you) and comments on the proposed permit (March 21, 2006 letter to you)), as well as the rationale presented above, we trust that IDEM can feel satisfied with the proposed approach to bring this issue of emissions testing on the wire cutting and grooving process to a close. We look forward to receiving the permit modification, operating our new systems with the fewer emissions and taking another step towards resolution of past issues.

Response to Comment 1:

IDEM OAQ has made the following site specific determination:

Since the core embossing, hot wire cutting, and door grooving units each apply heat to the polystyrene cores via a hot surface using the same approximate surface temperature (600°F), IDEM OAQ agrees that it is appropriate to assume that each process will have similar VOC emissions. In addition, based on the rationale provided by JELD-WEN in comment 1 above, IDEM OAQ has determined that the emission factors for hot wire cutting and door grooving can be calculated using the emission factors for core embossing and the volume loss ratio between each of the processes and the core embossing process. IDEM OAQ will only require one stack test (instead of three) for only the core embossing unit(s). The permit has been revised as follows:

D.4.3 Testing Requirements

-
- (a) Within 24 months of May 15, 2002, the Permittee shall perform PM and PM10 emission testing on one of the two (2) units of the core burning operation (P004), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration, with each subsequent test performed on the unit not tested in the most recent prior performance test conducted. PM-10 includes filterable and condensable PM-10.
- (b) Within one hundred and eighty (180) days after issuance of Significant Permit Revision No. 113-22426-00047, the Permittee shall perform an initial one time performance test for the uncontrolled emissions of VOCs and styrene from ~~each of the following~~ **one of the two (2) units of the core burning operation (P004)** in order to verify the emission factors.:
- (1) ~~one of the two (2) units of the core burning operation (P004);~~
 - (2) ~~one of the two (2) hot wire cutting lines; and~~
 - (3) ~~the fiberglass door groove forming system (P008)~~
- (c) **The Permittee shall determine the average volume loss of the cores associated with the core burning operation and the average volume loss for the wire cutting operation, and the groove forming system. The Permittee shall then calculate the emission factors for the wire cutting operation and the groove forming system using the following equation:**

$$EF_x = \left(\frac{V_x}{V_{core}} \right) * EF_{core}$$

- where: EF_x = the emission factor for either the hot wire cutting operation or the groove forming system.
 V_x = the volume loss for either the hot wire cutting operation or the groove forming system.
 V_{core} = the volume loss associated with the core burning operation.
 EF_{core} = the emission factor for the core burning operation determined by the source test.

Testing shall be conducted in accordance with Section C - Performance Testing.

Comment 2:

On March 29, 2005, Bonnie J. Basden of JELD-WEN provided the following comment on the draft FESOP SPR in response to the email sent by the Office of Air Quality on March 22, 2006:

JELD-WEN would like to propose a permit limit on the VOC emissions from the wire cutting operation. The suggested limit would be 1.05 lbs/hr and 2.0 tpy. The revised draft FESOP Technical Support Document (TSD) has the VOC emissions from wire cutting at 4.61 tpy. The TSD used the hourly cutting rate of 2,880 cuts/hr multiplied by 8,760 hours/yr to achieve 25,228,800 cuts/yr. Since the EPS System can only expand a limited amount of bead on an annual basis, the wire cutting system is limited by the expansion system. Therefore, the 25,228,800 cuts/yr an over estimate for the total number of cuts that could be done on the wire cutting lines.

Response to Comment 2:

JELD-WEN withdrew their request to add an emissions limit on wire cutting in an email submitted to IDEM OAQ on April 7, 2006. No change to the permit was made.

Comment 3:

On March 29, 2005, Bonnie J. Basden of JELD-WEN provided the following comment on the draft FESOP SPR in response to the email sent by the Office of Air Quality on March 22, 2006:

JELD-WEN would also like to propose that the facility have annual Plant Site Emission Limits (PSELs) for the facility-wide emissions instead of individual limits placed on each of the sources. This would allow the facility to make changes without having to submit a SPR application, provided the changes do not violate any additional regulations that might apply to the operation.

This concept is currently utilized by many different states and has proven to save both the agency and permittee valuable resources. Besides the PSEL (which is federally enforceable) the permits contain any emission limits, which are applicable due to a source-specific requirement, such as RACT, BACT, NSPS, etc. This concept would like require a rule making effort for IDEM yet overall prove to be a resource-saving change for the future. This is something for IDEM to consider for future permitting efforts.

Response to Comment 3:

IDEM OAQ will consider these ideas and any additional information provided to IDEM by the Permittee for future permitting efforts. No change to the permit was made.

Additional Changes To Permit

IDEM, OAQ has decided to make the following additional revisions to the permit:

- (a) Upon further review, IDEM has decided to include the following updates to further address and clarify the permit term and the term of the conditions. This includes the addition of the condition: Term of Conditions [326 IAC 2-1.1-9.5] and changes to the following conditions: Permit Term, Prior Permits Superseded, Termination of Right to Operate, and Permit Renewal. Please note that some of the conditions have been renumbered and some have been added.
- (b) In Nonrule Policy Document No. AIR 007 NPD, revised September 6, 2002, a table is given as an example for how sources can submit annual compliance certifications. Condition B.10 (previously B.11) Annual Compliance Certification is being revised to remove "in letter form" so that it does not contradict the guidance.

- (c) Condition B.20 (previously B.19) has been renamed from "Permit Revision Requirement" to "Source Modification Requirement", which is a more appropriate condition title and will be consistent with Title V language.
- (d) Clarification of applicable requirements, correction of typographical errors, revision of the permit language to be consistent with Title V language, and renumbering of conditions as necessary;

The permit is revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**.

Cover Page:

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

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

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.

...

Second Significant Permit Revision No: 113-22426-00047	
Issued by: Nisha Sizemore, Chief Permits Branch Paul Dubenetzky, Assistant Commissioner Office of Air Quality	Issuance Date: Expiration Date: May 15, 2007

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

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

~~B.1 — Permit No Defense [IC 13]~~

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

~~B.12 Definitions [326 IAC 2-8-1]~~

...

B.23 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5] **[IC 13-15-3-6(a)]**

- (a) This permit, **F113-10260-00047**, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date **of this permit**.
- (b) **If IDEM, OAQ upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.**

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

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.5~~ ~~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.56 Severability [326 IAC 2-8-4(4)]

...

B.67 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

...

B.78 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. The submittal by the Permittee does require the certification by ~~an~~ ~~the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. ~~When~~ ~~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.89~~ Compliance Order Issuance [326 IAC 2-8-5(b)]

...

B.940 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

B.1011 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted ~~in letter form~~ no later than July 1 of each year to:
- (c) The annual compliance certification report shall include the following:
- (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 notification** which shall be submitted by the Permittee does require the certification by **an** ~~the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.1112 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- The PMP extension notification does not require the certification by **an** ~~the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1)..
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by **an** ~~the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.1213 Emergency Provisions [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** ~~describes~~ the following:
- (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**~~No.:~~ 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or,
Telephone **Number**~~No.:~~ 317-233-5674 (ask for Compliance Section)
Facsimile **Number**~~No.:~~ 317-233-5967
- (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:

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

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

- (a) All terms and conditions of permits established prior to F035-21872-00076 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.1544 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

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

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

B.1645 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 FESOP** modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by ~~an the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.1746 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 the certification by ~~an the~~ "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

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

(1A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2B) 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.

(2) — ~~If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.~~

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

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as **being** needed to process the application.

B.1847 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

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

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

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

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

B.1948 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at ~~the~~ **this** 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:

B.2049 Source Modification Permit Revision Requirement [326 IAC 2-8-11.1]

...

B.2120 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-17-3-2] [IC13-30-3-1]

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:

- (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;

B.2224 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

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

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

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

B.2322 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) Failure to pay may result in administrative enforcement action, or revocation of this permit.

B.2423 Credible Evidence [326 IAC 2-8-4(3)] [326 IAC 2-8-5] [62 FR 8314] [326 IAC 1-1-6]

...

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

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

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

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

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

- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

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

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

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

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

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

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

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

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

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

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

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

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

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days ~~from~~ **after** the date of issuance of this permit.

The ERP does require the certification by ~~an the~~ “authorized individual” as defined by 326 IAC 2-1.1-1(1).

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by ~~an the~~ “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance ~~Data Section~~ Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by ~~an the~~ “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (e) The first report ~~shall cover covered~~ the period commencing on the date of issuance of ~~this permit the original FESOP and ending ended~~ on the last day of the reporting period. ~~Reporting All subsequent reporting periods are shall be~~ based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

C.20 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 the standards for recycling and emissions reduction.:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.

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

Technical Support Document (TSD) for a
Significant Permit Revision to a
Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	JELD-WEN
Source Location:	200 Gerber Street, Ligonier, IN 46767
County:	Noble
SIC Code:	3086, 3442
Operation Permit No.:	F113-10260-00047
Operation Permit Issuance Date:	May 15, 2002
Significant Permit Revision No.:	113-22426-00047
Permit Reviewer:	Nathan C. Bell

The Office of Air Quality (OAQ) has reviewed a Significant Permit Revision (SPR) permit application from JELD-WEN (previously Challenge Door of Indiana), relating to the replacement of the existing Boiler Oxidation Steam System (BOSS) with a new boiler and a new regenerative thermal oxidizer (RTO) at their existing stationary insulated steel door manufacturing operation. The SPR permit application was submitted as required by Agreed Order No. 200-9530-A paragraph II.2.A.ii.

Upon consultation with OAQ, JELD-WEN has agreed with OAQ that the permit also required revising for the following reasons:

- (a) To change the company name from Challenge Door of Indiana to JELD-WEN, and the Authorized Individual from Bill O'Dell to Tim Griewank, General Manager;
- (b) After extensive evaluation and deliberation, IDEM has concluded that certain permit conditions that are routinely appealed in FESOPs could be altered in a manner that would be less burdensome on the Permittee but would still ensure that sources can demonstrate compliance with State and Federal Regulations on a continual basis. JELD-WEN has agreed that such changes can be made to their existing permit. These changes, including the relaxation of compliance monitoring frequency, are being made, pursuant to 326 IAC 2-8-11.1(f). Additional changes have been made to the permit as a result of administrative changes and changes to federal and state regulations;
- (c) To clarify the facility descriptions, emission limitations and standards, and applicable requirements for all emission units, to correct any typographical errors, and renumber conditions as necessary throughout the permit;
- (d) To revise the compliance determination and record keeping requirements of Section D.1 for surface coating of metal door frames in P003, since the adhesive remover used in P003 has a VOC content greater than 3.0 pounds of VOC per gallon of coating less water.
- (e) To move the requirements for the Core Burning Operation (P004) from Section D.2 to Section D.4 of the permit;
- (f) To add PM and PM10 limits for the Woodworking Operation (P005) in Section D.2 in order to limit source-wide total potential to emit of PM10 and PM to less than 100 and 250 tons per 12 consecutive month period, respectively. JELD-WEN has requested that the PM and PM10 each be limited to 7.85 pounds per hour, which is equivalent to 34.4 tons per year;

- (g) To change the Expandable Polystyrene (EPS) Block Molding Operation (P006) bead usage limit of 15,000 pounds of bead per day in Section D.3 to a VOC emission limit in order to limit source-wide total potential to emit of VOC to less than 100 tons per 12 consecutive month period;
- (h) To add a description and applicable requirements for the existing permitted polystyrene block cutting operation to Section A.2 and Section D.4 of the permit;
- (i) To add a description of the existing permitted woodworking waste collection, transfer, and disposal activities to Section A.3 of the permit;
- (j) To remove redundant requirements for woodworking from Section D.4 of the permit;
- (k) To remove volatile organic compound (VOC) usage limit for the Fiberglass Door Glaze Application Area (P007) in Section D.4 of the permit. The VOC usage limit of P007 was no longer needed, since VOC emissions from the EPS Block Molding Operation (P006) in Section D.3 are now limited so that the source-wide total PTE of VOC shall be less than 100 tons per 12 consecutive month period;
- (l) To add a requirement for a one time performance test to Section D.4 for the uncontrolled emissions of VOCs and styrene from each of the following in order to verify the emission factors provided by JELD-WEN in the application:
 - (1) one of the two (2) units of the core burning operation (P004);
 - (2) one of the two (2) hot wire cutting lines; and
 - (3) the fiberglass door groove forming system (P008); and
- (m) To add a description and applicable requirements for the dry filters that control particulate emissions from the core burning units of P004 to Section D.4;

History

Challenge Door of Indiana was issued a Federally Enforceable State Operating Permit (FESOP) No. 113-10260-00047 on May 15, 2002 for a stationary insulated steel door manufacturing operation located at 200 Gerber Street, Ligonier, IN 46767.

The Office of Air Quality (OAQ) received a letter from JELD-WEN on January 3, 2006 notifying OAQ that the company name had changed from Challenge Door of Indiana to JELD-WEN, the Authorized Individual was Tim Griewank, and that, pursuant to Agreed Order No. 200-9530-A paragraph II.2.A, the source will be replacing the existing Boiler Oxidation Steam System (BOSS) with a new boiler and a new regenerative thermal oxidizer (RTO) and making improvements to the pentane emissions collection system in order to better control pentane emissions from the expandable polystyrene block molding operation.

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

The application includes information relating to the construction and operation of the following:

- (a) One (1) pentane emissions collection system, constructed in 1997 and to be modified in 2006, connected to a 12,000 standard cubic feet per minute (scfm) regenerative thermal oxidizer (RTO);
The collection system consists of:
 - (1) Ductwork conveying process emissions and ventilation air from two permanent total enclosures, one enclosure containing the bead aging bags, and one enclosure containing the block conditioning room;

- (2) Ductwork conveying block molder bead filling pneumatic transfer air and pre-expander pneumatic transfer air;
- (b) One (1) boiler, identified as P009, to be constructed in 2006, equipped with a natural gas burner rated at 5 million British thermal units per hour, for producing steam used in the bead expansion; and
- (c) One (1) regenerative thermal oxidizer (RTO), to be constructed in 2006, equipped with a burner rated at 2.785 million British thermal units per hour, using a mixture of pentane-laden process and ventilation air and natural gas as combustion fuel, and exhausting to one (1) stack, identified as 97-1.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) FESOP No. 113-10260-00047, issued on May 15, 2002;
- (b) Administrative Amendment No. 113-15891-00047, issued on May 28, 2002;
- (c) Minor Permit Revision No. 113-16069-00047, issued on December 13, 2002;
- (d) Significant Permit Revision No. 113-18715-00047, issued on August 19, 2004;

Enforcement Issue

There are no enforcement actions pending. This Significant Permit Revision (SPR) incorporates the terms of Agreed Order No. 200-9530-A, issued September 13, 2005. Pursuant to Agreed Order No. 200-9530-A paragraph II.4, JELD-WEN (previously Challenge Door of Indiana) shall withdraw with prejudice each of its appeals pending before the Office of Environmental Adjudication no later than ten (10) days subsequent to the issuance by IDEM of this final and effective FESOP SPR.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision, 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 January 3, 2006.

Emission Calculations

- (a) Core Burning Operation (P004), Polystyrene Block Wire Cutting, and Fiberglass Door Groove Forming System (P008)

Based on information provided in the application, these operations emit volatile organic compounds (VOCs), particulate matter (PM/PM10), and hazardous air pollutants (HAPs). However, there are no AP-42 Emission Factors (EF) specific to this process to determine potential emissions at the maximum production rate.

Potential emissions of VOCs and HAPs were estimated by the source using emission factors generated from data obtained from stack testing performed May 22, 2002 on similar equipment processing similar materials at the JELD-WEN Exterior Door plant in Chiloquin, Oregon (see Appendix A). Potential emissions of PM/PM10 was estimated using a mass

balance approach and process knowledge of the mass and volumes of wastes generated during processing of the polystyrene cores in each of the operations (see Appendix A).

Since there are no AP-42 Emission Factors (EF) specific to each of these process for VOCs and HAPs, the source shall perform a one time stack test for each of these operations to verify the emission factors for VOCs and HAPs provided by JELD-WEN in the application (See Testing Requirements).

- (b) For detailed emissions calculations for this modification (i.e., replacement of the existing Boiler Oxidation Steam System (BOSS) with a new boiler and a new regenerative thermal oxidizer (RTO)), see Appendix A.

Potential To Emit of Modification After Issuance

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

This table reflects the potential to emit (PTE) after controls, reflecting all limits of the emission units, for the modification. Any control equipment is considered enforceable only after issuance of the FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Expandable Polystyrene (EPS) Block Molding Operation (P006)	Potential to Emit (PTE) (tons/year) After Limits/Controls							
	Criteria Pollutants						HAPs	
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	Worst HAP
Pentane Emissions (existing) (using BOSS for pollution control)	0	0	0	0	20.48	0	0	0
Natural Gas Combustion (existing) (BOSS steam boiler + RTO)	0.12	0.46	0.04	6.09	0.33	5.11	0.06	0.05 (hexane)
Total PTE (existing)	0.12	0.46	0.04	6.09	20.81	5.11	0.06	0.05 (hexane)
Pentane Emissions (after modification) (using new RTO for pollution control) ⁽¹⁾	0	0	0	0	18.94	0	0	0
Natural Gas Combustion (after modification) (new steam boiler + new RTO)	0.06	0.26	0.02	3.41	0.19	2.86	0.02	0.02 (hexane)
Total PTE (after modification)	0.06	0.26	0.02	3.41	19.13	2.86	0.02	0.02 (hexane)
Net Emission Increase for Modification	-0.05	-0.20	-0.02	-2.68	-1.68	-2.25	-0.03	-0.03 (hexane)
(1) The EPS Block Molding Operation (P006) shall comply with the following: <ul style="list-style-type: none"> (a) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period. (b) In order to comply with 326 IAC 8-1-6 (BACT), the EPS capture system shall achieve an overall VOC control efficiency of 78%. 								

Justification for Modification

The FESOP is being modified through a Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(g)(3). Any modifications that change any existing requirements for the units or processes under an emission cap limitation(s) shall be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f).

County Attainment Status

The source is located in Noble County.

Pollutant	Status
PM10	Attainment or Unclassifiable
PM2.5	Attainment or Unclassifiable
SO ₂	Attainment
NO ₂	Attainment or Unclassifiable
1-Hour Ozone	Attainment or Unclassifiable
8-Hour Ozone	Attainment or Unclassifiable
CO	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

- (a) 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 the ozone standard. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_x were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Noble County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.
- (c) Noble County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (d) Fugitive Emissions
This source is a stationary source category that, as of August 7, 1980, is being regulated under Section 111 or 112 of the Clean Air Act. Therefore, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

Potential to Emit of Source After Issuance for Entire 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 the 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 After Issuance (tons/year)							
	PM	PM10	SO ₂	NO _x	VOC	CO	Total HAPs	Worst HAP
Door Edge Paint Booth of P001 ⁽¹⁾	19.49	19.49	0	0	16.77	0	0	0
Door Touch-Up Booth of P001 ⁽¹⁾	0.29	0.29	0	0	0.63	0	0.18	0.18 (MEK)
Solvent Wiping (P002) ⁽¹⁾	0	0	0	0	8.65	0	0	0
Adhesive Roll Coaters 1 & 2 and Cleanup (P003) ⁽¹⁾	0	0	0	0	6.53	0	negl.	negl.
Core Burning Units 1 & 2 (P004)	12.98 ⁽²⁾	22.23 ⁽¹⁾	0	0	23.54	0	3.41	2.76 (styrene)
Woodworking Operation (P005) ⁽⁴⁾⁽⁵⁾	34.4 ⁽⁴⁾	34.4 ⁽⁵⁾	0	0	0	0	0	0
Woodworking waste collection, transfer, disposal activities ⁽¹⁾	1.50	1.50	0	0	0	0	0	0
Expandable Polystyrene (EPS) Block Molding Operation (P006) ⁽³⁾	0	0	0	0	18.94 ⁽³⁾	0	0	0
Polystyrene Block Wire Cutting Lines 1 & 2 ⁽¹⁾	0.34	0.34	0	0	4.60	0	0.67	0.54 (styrene)
Fiberglass Door Glaze Application Area (P007) ⁽¹⁾	0	0	0	0	16.94	0	1.22	0.63 (methanol)
Fiberglass Door Core Groover (P008) ⁽¹⁾	2.08	2.08	0	0	2.20	0	0.32	0.26 (styrene)
Natural Gas Combustion (RTO and P009) ⁽¹⁾	0.06	0.26	0.02	3.41	0.19	2.86	0.06	0.06 (hexane)
Total PTE After Issuance	71.14	80.58	0.02	3.41	99.00	2.86	5.86	3.56 (styrene)
Title V Major Threshold Level	NA	100	100	100	100	100	25	10
PSD Major Threshold Level	250	250	250	250	250	250	NA	NA

NA = Not applicable

- (1) Uncontrolled/Unlimited potential to emit.
- (2) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate for each of the two (2) core burn units (Core Burn Unit 1 and Core Burn Unit 2) shall each not exceed 1.48 pounds per hour when operating at a process weight rate of 438 pounds of polystyrene sheets per hour;
- (3) The EPS Block Molding Operation (P006) shall comply with the following:
 - (a) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.
 - (b) In order to comply with 326 IAC 8-1-6 (BACT), the EPS capture system shall achieve an overall VOC control efficiency of 78%.
- (4) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, PM emissions from the Woodworking Operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This will limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period.
- (5) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, PM10 emissions from the Woodworking Operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This will limit the source-wide total potential to emit of PM10 to less than 100 tons per 12 consecutive month period.

- (a) This modification to an existing minor Title V stationary source would not change the minor status because the emissions from the entire source would still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).
- (b) This modification to an existing minor PSD stationary source will not change the PSD minor status because the emissions from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability (Modification)

- (a) This source is not subject to the requirements of 40 CFR 63, Subpart DDDDD, (63.7480 through 63.7575), NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the source is not a major source of HAPs.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included for this modification.
- (c) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this modification.

State Rule Applicability

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

This minor PSD stationary source was constructed in 1996, after the applicability date of August 7, 1977, and it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1). This modification to an existing minor PSD stationary source will not change the PSD minor status because the emissions from the entire source will continue to be less than the PSD major source threshold levels (see Potential to Emit of Source After Issuance for Entire Source Table above). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply to this modification.

- (a) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.
- (b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, PM emissions from the Woodworking Operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This will limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period.

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

The requirements of 326 IAC 2-4.1 are not applicable to this modification, since the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Noble County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year.

326 IAC 2-8-4 (FESOP)

- (a) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.
- (b) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, PM10 emissions from the Woodworking Operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This will limit the source-wide total potential to emit of PM10 to less than 100 tons per 12 consecutive month period.

326 IAC 5-1 (Opacity Limitations)

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

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

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

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

JELD-WEN has chosen to comply with Agreed Order No. 200-9530-A paragraph II.2.A, which requires that the source achieve a 78% overall VOC control efficiency for the portions of the expandable polystyrene block molding operation identified as P006 in Operation Permit No. F113-10260-00047, Section A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)] (f)(1), (2), and (3). Pursuant to Agreed Order No. 200-9530-A paragraph II.2.A, the source will be replacing the existing Boiler Oxidation Steam System (BOSS) with a new boiler and a new regenerative thermal oxidizer (RTO).

State Rule Applicability – Steam Boiler (P009)

326 IAC 4-2-2 (Incinerators)

The natural gas-fired steam boiler (P009) is not an incinerator, as defined by 326 IAC 1-2-34, since it does not burn waste substances. Therefore, the natural gas-fired steam boiler (P009) is not subject to 326 IAC 4-2-2.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The 5.0 MMBtu/hr natural gas-fired steam boiler (P009) is subject to the requirements of 326 IAC 6-2-4, since it is a source of indirect heating, was installed after September 21, 1983, and is located in Noble County. Pursuant to 326 IAC 6-2-4(a), the particulate matter emissions from the natural gas-fired steam boiler (P009) shall not exceed 0.6 lb/MMBtu, since it has a maximum operating capacity rating of less than 10 MMBtu/hr. The steam boiler (P009) has a potential to emit particulate matter as follows:

$$\text{PTE} = (0.042 \text{ ton/yr PM}) * (2000 \text{ lb/ton}) / (8760 \text{ hr/yr}) * (5.0 \text{ MMBtu/hr}) = 0.002 \text{ lb/MMBtu PM}$$

Therefore, the steam boiler (P009) will comply with this rule.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired steam boiler (P009) is not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

State Rule Applicability – Regenerative Thermal Oxidizer (RTO)

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired burner of the RTO system is not subject to 326 IAC 6-2 as it is not a source of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired burner of the RTO system is exempt from the requirements of 326 IAC 6-3 because it has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired burner of the RTO system is not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

Testing Requirements (Entire Source)

- (a) The Permittee shall perform initial compliance testing on the pentane emissions collection system and RTO within 180 days after initial start-up. The following shall be conducted in order to demonstrate compliance with Conditions D.3.1 and D.3.2 of the permit:
 - (1) The Permittee shall demonstrate compliance for the two permanent total enclosures using methods specified in 40 CFR 51, Appendix M, Method 204, or other methods as specified by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

The enclosure differential pressure measured during enclosure capture verification testing shall be recorded.
 - (2) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO, utilizing methods as approved by the Commissioner, to determine the overall VOC control efficiency. The overall VOC control efficiency for the pentane emissions collection system and RTO will be determined from a

weighted average of two control efficiency tests conducted during the same 24 hour bead expansion and aging cycle:

- (A) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO exhaust during operation of the pre-expander and block molder.
- (B) The Permittee shall perform VOC testing on the pentane emissions collection system and RTO exhaust during the bead and block aging period when pre-expansion and block molding are not conducted.

The weighted average VOC control efficiency used for compliance demonstration will be determined from the following equation:

$$CEF = \left[\frac{\left(T_{pa} * t_a * \frac{CapEF_a * DesEF_a}{100\% * 100\%} \right) + \left(T_{pb} * t_b * \frac{CapEF_b * DesEF_b}{100\% * 100\%} \right)}{\left(T_{pa} * t_a + T_{pb} * t_b \right)} \right] * 100\%$$

$$CapEF_a = (VOC_a/T_{pa}) * 100\%$$

$$DesEF_a = (1 - (VOC_{ca}/VOC_a)) * 100\%$$

$$CapEF_b = (VOC_b/T_{pb}) * 100\%$$

$$DesEF_b = (1 - (VOC_{cb}/VOC_b)) * 100\%$$

- Where
- CEF = Weighted average VOC control efficiency (%)
 - T_{pa} = Total pentane available to lose in the process during the pre-expansion and molding operations (lbs/hr)
 - t_a = Average time (in hours) that the pre-expansion and molding operations are in operation
 - CapEF_a = Capture efficiency during the pre-expansion and molding operations (%)
 - VOC_a = VOC capture rate (before RTO) during pre-expansion and molding operations (lbs/hr)
 - DesEF_a = Destruction efficiency during the pre-expansion and molding operations (%)
 - VOC_{ca} = VOC controlled emission rate (after RTO) during the pre-expander and block molder (lbs/hr)
 - T_{pb} = Total pentane available to lose in the process during the pre-expansion and molding shutdown (lbs/hr)
 - t_b = Average time (in hours) that the pre-expansion and molding operations are shutdown
 - CapEF_b = Capture efficiency during the pre-expansion and molding shutdown (%)
 - VOC_b = VOC capture rate (before RTO) during pre-expansion and molding shutdown (lbs/hr)
 - DesEF_b = Destruction efficiency during the pre-expansion and molding shutdown (%)
 - VOC_{cb} = VOC controlled emission rate (after RTO) during the pre-expander and block molder shutdown (lbs/hr)

The operating temperature of the RTO shall be measured during VOC testing and an average operating temperature for the RTO shall be determined. Testing shall be conducted in accordance with Section C - Performance Testing.

The test required in (a)(2) shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

- (b) Within 24 months of May 15, 2002, the Permittee shall perform PM and PM10 emission testing on one of the two (2) units of the core burning operation (P004), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration, with each subsequent test performed on the unit not tested in the most recent prior performance test conducted. PM-10 includes filterable and condensable PM-10.
- (c) Within one hundred and eighty (180) days after issuance of this permit, the Permittee shall perform an initial one time performance test for the uncontrolled emissions of VOCs and styrene from each of the following in order to verify the emission factors:
 - (1) one of the two (2) units of the core burning operation (P004);
 - (2) one of the two (2) hot wire cutting lines; and
 - (3) the fiberglass door groove forming system (P008)

Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Requirements (Modification)

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

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also 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 determination requirements applicable to the polystyrene block molding operation are as follows:

- (a) In order to comply with Condition D.3.1 and D.3.2 of the permit, the pentane emissions collection system and RTO shall be in operation at all times the one (1) expandable polystyrene block molding operation is in operation.
- (b) Compliance with the VOC emission limitations contained in Condition D.3.1 of the permit shall be determined for each month using the quarterly reporting form located at the end of the permit. Compliance shall be based on the VOC emitted for the previous month added to the total VOC emitted for the previous 11 months, so as to arrive at the total VOC emitted for the most recent 12 consecutive month period. The VOC emitted during a given time period shall be determined from the "as supplied" manufacturer's data sheets for the VOC content of the polystyrene beads (assuming 100% of the VOC is emitted during use), the polystyrene bead usage for that time period, and the overall VOC control efficiency from most recent valid stack test determined pursuant to Condition D.3.7, using the following equation:

$$\text{VOC Emissions} = f_{\text{VOC}} * U * (1 - \text{CEF})$$

where f_{VOC} = The VOC content of the polystyrene beads used (fraction by weight);
U = The polystyrene bead usage by weight; and
CEF = The overall control efficiency determined pursuant to Condition D.3.7 of the permit.

IDEM, OAQ reserves the authority to determine compliance using methods contained in 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

- (c) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1500°F. The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2 of the permit, as approved by IDEM. On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.
- (d) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2 of the permit, as approved by IDEM. The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.

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

- (e) The source has 240 days from the date of issuance of this permit to install the RTO (rated at 2.785 MMBtu/hr) and the two permanent total enclosures and begin full operation. Within 180 days of installing the RTO and the two permanent total enclosures, the source shall perform initial VOC testing as specified in Condition D.3.7(a).

The above compliance requirements are necessary because the pentane emissions collection system and RTO must be installed and operated properly to ensure compliance with 326 IAC 8-1-6 (BACT), and 326 IAC 2-8 (FESOP), and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

Changes to the FESOP Due to This Revision:

The changes made to permit are described below:

- (a) The facility descriptions, emission limitations and standards, and applicable requirements in Section D.4 of the permit have been updated to reflect the replacement of the existing Boiler Oxidation Steam System (BOSS) with a new boiler and a new regenerative thermal oxidizer (RTO) and changes to the pentane emissions collection system.

Upon consultation with OAQ, JELD-WEN has agreed with OAQ that the permit also required revising for the following reasons:

- (a) To change the company name from Challenge Door of Indiana to JELD-WEN, and the Authorized Individual from Bill O'Dell to Tim Griewank, General Manager;
- (b) After extensive evaluation and deliberation, IDEM has concluded that certain permit conditions that are routinely appealed in FESOPs could be altered in a manner that would be less burdensome on the Permittee but would still ensure that sources can demonstrate

compliance with State and Federal Regulations on a continual basis. JELD-WEN has agreed that such changes can be made to their existing permit. These changes, including the relaxation of compliance monitoring frequency, are being made, pursuant to 326 IAC 2-8-11.1(f). Additional changes have been made to the permit as a result of administrative changes and changes to federal and state regulations;

- (c) To clarify the facility descriptions, emission limitations and standards, and applicable requirements for all emission units, to correct any typographical errors, and renumber conditions as necessary throughout the permit;
- (d) To revise the compliance determination and record keeping requirements of Section D.1 for surface coating of metal door frames in P003, since the adhesive remover used in P003 has a VOC content greater than 3.0 pounds of VOC per gallon of coating less water.
- (e) To move the requirements for the Core Burning Operation (P004) from Section D.2 to Section D.4 of the permit;
- (f) To add PM and PM10 limits for the Woodworking Operation (P005) in Section D.2 in order to limit source-wide total potential to emit of PM10 and PM to less than 100 and 250 tons per 12 consecutive month period, respectively. JELD-WEN has requested that the PM and PM10 each be limited to 7.85 pounds per hour, which is equivalent to 34.4 tons per year;
- (g) To change the Expandable Polystyrene (EPS) Block Molding Operation (P006) bead usage limit of 15,000 pounds of bead per day in Section D.3 to a VOC emission limit in order to limit source-wide total potential to emit of VOC to less than 100 tons per 12 consecutive month period;
- (h) To add a description and applicable requirements for the existing permitted polystyrene block cutting operation to Section A.2 and Section D.4 of the permit;
- (i) To add a description of the existing permitted woodworking waste collection, transfer, and disposal activities to Section A.3 of the permit;
- (j) To remove redundant requirements for woodworking from Section D.4 of the permit;
- (k) To remove volatile organic compound (VOC) usage limit for the Fiberglass Door Glaze Application Area (P007) in Section D.4 of the permit. The VOC usage limit of P007 was no longer needed, since VOC emissions from the EPS Block Molding Operation (P006) in Section D.3 are now limited so that the source-wide total PTE of VOC shall be less than 100 tons per 12 consecutive month period;
- (l) To add a requirement for a one time performance test to Section D.4 for the uncontrolled emissions of VOCs and styrene from each of the following in order to verify the emission factors provided by JELD-WEN in the application:
 - (1) one of the two (2) units of the core burning operation (P004);
 - (2) one of the two (2) hot wire cutting lines; and
 - (3) the fiberglass door groove forming system (P008); and
- (m) To add a description and applicable requirements for the dry filters that control particulate emissions from the core burning units of P004 to Section D.4.

As described above, the following changes have been made to the permit, with deleted language as ~~strikeouts~~ and new language **bolded**

Title Page: ~~Challenge Door of Indiana~~ JELD-WEN

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

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

The Permittee owns and operates an insulated fiberglass and steel door manufacturing facility.

Permittee Name: JELD-WEN (formerly Challenge Door of Indiana)
Authorized Individual: ~~Bill O'Dell~~ Tim Griewank, General Manager

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) surface coating ~~emission unit~~ **operation**, identified as P001, consisting of the following:
 - (1) One (1) surface coating spray booth, identified as Door Edge Paint Booth, **constructed in 1978**, utilizing a HVLP spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E1;
 - (2) One (1) surface coating touch-up spray booth, identified as Door Touch-up Booth, **constructed in 1990**, utilizing an air atomized spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E2;
- (b) One (1) ~~emission unit~~ **solvent wiping operation**, identified as P002, utilizing a solvent based cleaning solution to hand wipe a maximum of 175 door per hour and exhausting to general ventilation;
- (c) One (1) roll coating ~~emission unit~~ **operation**, identified as P003, consisting of the following:
 - (1) Two (2) roll coating ~~operations~~ **units**, identified as Adhesive Roll Coater 1 and Adhesive Roll Coater 2, **constructed in 1978 and 1993, respectively**, coating a maximum of 175 doors per hour on a daily average, and exhausting to two (2) stacks, identified as E3 and E4, utilizing solvent for roller cleaning;
- (d) One (1) core burning ~~emission unit~~ **operation**, identified as P004, consisting of the following:
 - (1) Two (2) core burn units, identified as Core Burn Unit 1 and Core Burn Unit 2, **constructed in 1981 and 1997, respectively**, for processing a maximum of 438 ~~pounds of polystyrene sheet~~ **175 doors** per hour on a daily average, **with particulate matter controlled by dry filters with an overall control efficiency of 95%**, and exhausting to two (2) stacks, identified as E5 and E6;

- (e) One (1) woodworking ~~emission unit~~ **operation**, identified as P005, utilizing a baghouse, identified as dust collector DC7, for particulate matter control **with a control efficiency of 99.9%, and exhausting to one (1) stack, identified as DC7**, consisting of the following:
- (f) One (1) expandable polystyrene (**EPS**) block molding operation, identified as P006, consisting of the following:
- (1) One (1) batch polystyrene beads pre-expander system, **constructed in 1997**, including one (1) pre-expander machine and six (6) steel pipe frame supported polyester storage bags for aging **newly pre-expanded bead**~~expander beads~~, capable of processing a maximum average of 1,200 pounds per hour of polystyrene beads ~~and a maximum of 15,000 pounds per day of polystyrene beads~~, containing a maximum average of 7% pentane by weight, **two (2) steel pipe frame supported polyester storage bags for holding reground bead, and the mix metering bags**;
 - (2) One (1) block molding press, **constructed in 1997**, for molding pre-expanded polystyrene ~~bead~~**beads to the desired block size**~~final shapes~~, utilizing steam to heat the pre-expanded beads;
 - (3) One (1) **block conditioning**~~shaped products drying~~ room, **constructed in 1997**;
 - (4) One (1) pentane emissions collection system, **constructed in 1997 and to be modified in 2006**, connected to a ~~4,000~~**12,000** standard cubic feet per minute (scfm) ~~draft blower~~ **regenerative thermal oxidizer (RTO)**;

The collection system consists of:

- (a) Ductwork conveying process emissions and ventilation air from two permanent total enclosures, one enclosure containing the bead aging bags ~~and pre-expander~~, and one enclosure containing the block aging **conditioning** room;
- (b) Ductwork conveying block molder bead filling pneumatic transfer air **and pre-expander pneumatic transfer air**;
- (5) One (1) boiler, **identified as P009, to be constructed in 2006**, ~~oxidation steam system (BOSS) (thermal oxidizer) with heat recovery devices~~, equipped with a **natural gas** burner rated at ~~6.75~~ million British thermal units per hour, ~~using a mixture of pentane-laden process and ventilation air and natural gas as combustion fuel for producing steam used in bead expansion~~; and
- (6) One (1) regenerative thermal oxidizer (**RTO**), **to be constructed in 2006**, equipped with a burner rated at ~~7.2~~**7.785** million British thermal units per hour, using a mixture of pentane-laden process and ventilation air and natural gas as combustion fuel, **and exhausting to one (1) stack, identified as 97-1**.

(The BOSS and the one (1) regenerative thermal oxidizer are in parallel with one another, each controlling part of the process air and ventilation air from the permanent total enclosures).

- (g) **One (1) polystyrene block cutting operation, consisting of two (2) hot wire cutting lines, identified as Wire Cutting Lines 1 and 2, each constructed in 1997, used for cutting of polystyrene blocks, each with a maximum throughput rate of 30 blocks per hour, and exhausting to general ventilation.**

(gh) One (1) fiberglass door assembly operation, with a maximum design production rate of 175 doors per hour, **using wood products from the woodworking operation (P005) and adhesive coated door skins from the roll coating operation (P003), consisting of the following**including:

- (1) One (1) fiberglass door groove forming system, identified as P008, **constructed in 2002**, forming grooves in the door cores via heat, **and exhausting to general ventilation;** and
- ~~(2) The door adhesive roll coating application system identified in Part (c) of this condition,~~
- (23) One (1) glaze application area, identified as P007, **constructed in 2002**, applying glaze to the door fiberglass skin, **and exhausting to general ventilation.** and
- ~~(4) The woodworking process identified in Part (e) of this condition.~~

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, as defined in 326 IAC 2-7-1(21):

- (6) **Woodworking waste collection, transfer, and disposal activities.**

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

This permit is issued for a fixed term of five (5) years from the ~~issuance~~original date **of this permit**, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.8 Duty to Supplement and Provide Information ~~[326 IAC 2-8-3(f)]~~ [326 IAC 2-8-4(5)(E)]
[326 IAC 2-8-5(a)(4)]

- ~~(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:~~

~~Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015~~

~~The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

- (ab) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
~~or, for information claimed to be confidential, the Permittee may furnish such records directly to the U.S. EPA along with a claim of confidentiality. [326 IAC 2-8-4(5)(E)]~~

- (be) **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—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.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]~~

- (a) ~~The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:~~
- (1) ~~Enforcement action;~~
 - (2) ~~Permit termination, revocation and reissuance, or modification; and~~
 - (3) ~~Denial of a permit renewal application.~~
- (b) ~~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.~~
- (c) ~~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.~~

~~B.1014 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]~~

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. **One (1) certification may cover multiple forms in one (1) submittal.**

~~B.1142 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46204-2251
46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch—Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

~~B.1243 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]~~

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana **46204-2251**
~~46206-6015~~

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

~~(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.~~

- ~~(be)~~ 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 contributes to any violation **is the primary contributor to an exceedance of any limitation on emissions or potential to emit.** The PMPs does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- ~~(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.~~
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit**

B.1314 Emergency Provisions [326 IAC 2-8-12]

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
- (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 No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)
or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967
- ~~Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]~~
- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~ 46206-6015

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

~~B.1415~~ Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~ 46206-6015

- ~~(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.~~

~~B.1647~~ 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 the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~ 46206-6015

~~B.1748~~ Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

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

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~ 46206-6015

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

~~B.1819~~ Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
- (3) The changes do not result in emissions which exceed the **limitations provided in emissions allowable** under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~46206-6015
- (5) The Permittee maintains records on-site ~~which document~~, on a rolling five (5) year basis, **which document** all such changes and emissions trading trades that are subject to 326 IAC 2-8-15(b) through (d) ~~and makes~~. **The Permittee shall make** such records available, upon reasonable request, ~~for to~~ 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) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:~~
- ~~(1) A brief description of the change within the source;~~
- ~~(2) The date on which the change will occur;~~
- ~~(3) Any change in emissions; and~~
- ~~(4) Any permit term or condition that is no longer applicable as a result of the change.~~
- ~~The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.~~
- (be) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade **emissions** increases and decreases ~~in emissions in at~~ the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (cd) 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.2021 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [**IC 13-17-3-2**] [**IC13-30-3-1**]

- (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** 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** 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** 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** Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.2122 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

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

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~ ~~46206-6015~~

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-~~10~~44(b)(3)]

B.2223 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**]

- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-~~4230~~425 (ask for OAQ, **Billing, Licensing, Technical Support and Training/Modeling** 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.

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

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 **from the entire source**, except particulate matter (PM), ~~from the entire source~~ shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. **This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;**
- (b) **The 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. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;**
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided ~~that~~ the source's potential to emit does not exceed the above specified limits.
- (~~d~~e) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

~~C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]~~

~~Except as otherwise provided by statute, rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.~~

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

- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~46206-6015
- (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 14-10-14 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

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

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

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

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, ~~P.O. Box 6015~~
Indianapolis, Indiana ~~46204-2251~~ ~~46206-6015~~

- (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~~ ~~source~~ 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.

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.

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, ~~P.O. Box 6015~~
Indianapolis, Indiana ~~46204-2251~~ ~~46206-6015~~

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.13 ~~Pressure Gauge and Other~~ 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.**

- ~~(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.~~

- ~~(b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.~~
- (be) The Permittee may request **that** the IDEM, OAQ approve the use of ~~a pressure gauge or other~~ **an** instrument that does not meet the above specifications provided the Permittee can demonstrate **that** an alternative ~~pressure gauge or other~~ instrument specification will adequately ensure compliance with permit conditions requiring the measurement of ~~pressure drop or other~~ **the** parameters.

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

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6045
Indianapolis, Indiana ~~46204-2251~~ 46206-6045

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, ~~subject to as defined in~~ **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.** ~~is an applicable requirement and the Permittee shall submit:~~

- ~~(a) A compliance schedule for meeting the requirements of 40 CFR 68; or~~
- ~~(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).~~

~~All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

C.16 ~~Compliance Response Plan - Failure to Take Response Steps~~ [326 IAC 2-8-4] [326 IAC 2-8-5]

- ~~(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:~~
- ~~(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.~~
- ~~(2) If, at any time, the Permittee takes reasonable response steps are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.~~

- ~~(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:~~
- ~~(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or~~
 - ~~(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.~~
 - ~~(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.~~
 - ~~(4) Failure to take reasonable response steps shall constitute a violation of the permit.~~
- ~~(c) The Permittee not required to take any further response steps for any of the following reasons:~~
- ~~(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.~~
 - ~~(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.~~
 - ~~(3) An automatic measurement was taken when the process was not operating.~~
 - ~~(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.~~
- ~~(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.~~
- ~~(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.~~
- ~~(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.~~

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.**

- (b) **The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:**
 - (1) **initial inspection and evaluation;**
 - (2) **recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or**
 - (3) **any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.**

- (c) **A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:**
 - (1) **monitoring results;**
 - (2) **review of operation and maintenance procedures and records;**
 - (3) **inspection of the control device, associated capture system, and the process.**

- (d) **Failure to take reasonable response steps shall be considered a deviation from the permit.**

- (e) **The Permittee shall maintain the following records:**
 - (1) **monitoring data;**
 - (2) **monitor performance data, if applicable; and**
 - (3) **corrective actions taken.**

C.17 **Actions Related to Noncompliance Demonstrated by a Stack Test** [326 IAC 2-8-4]
[326 IAC 2-8-5]

...
The **response action** documents submitted pursuant to this condition do ~~not~~ require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.18 **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** kept 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.

C.19 **General Reporting Requirements** [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The ~~Permittee~~^{source} shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana ~~46204-2251~~⁴⁶²⁰⁶⁻⁶⁰¹⁵
- (d) Unless otherwise specified in this permit, ~~all reports~~^{any quarterly report} required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. ~~The report does~~^{All reports do} require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years, **unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.**

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) One (1) surface coating ~~emission unit~~ **operation**, identified as P001, consisting of the following:
- (1) One (1) surface coating spray booth, identified as Door Edge Paint Booth, **constructed in 1978**, utilizing a HVLP spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E1;
 - (2) One (1) surface coating touch-up spray booth, identified as Door Touch-up Booth, **constructed in 1990**, utilizing an air atomized spray application system, coating a maximum of 175 door edges per hour, using dry filters for particulate matter control, and exhausting to one (1) stack, identified as E2;
- (b) One (1) ~~emission unit~~ **solvent wiping operation**, identified as P002, utilizing a solvent based cleaning solution to hand wipe a maximum of 175 doors per hour and exhausting to general ventilation; and
- (c) One (1) roll coating ~~emission unit~~ **operation**, identified as P003, consisting of the following:
- (1) Two (2) roll coating ~~operations units~~, identified as Adhesive Roll Coater 1 and Adhesive Roll Coater 2, **constructed in 1978 and 1993, respectively**, coating a maximum of 175 doors per hour on a daily average, and exhausting to two (2) stacks, identified as E3 and E4, utilizing solvent for roller cleaning.

(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 Particulate Matter (PM) [326 IAC 6-3-2(d)]

~~The PM from the one (1) surface coating emission unit (P001) shall not exceed the pound per hour emission rate established as E in the following formula:~~

~~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:~~

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

Pursuant to 326 IAC 6-3-2(d), particulate from the Door Edge Paint Booth shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, at all times that the Door Edge Paint Booth is in operation, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the surface coating emission operation (P001) and any control devices.

Compliance Determination Requirements

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

Compliance with the VOC content limitation contained in Condition 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.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limits in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = \frac{\sum_{i=1}^n (C_i \times U_i)}{\sum_{i=1}^n U_i}$$

where: A is the volume weighted average in pounds VOC per gallon less water and exempt solvents as applied;
C is the VOC content of the coating *i* in pounds VOC per gallon less water and exempt solvents as applied;
U is the usage rate of the coating *i* in gallons per day less water and exempt solvents as applied; and
n is the number of coatings being averaged

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

~~D.1.4~~ Particulate Matter (PM)

~~In order to comply with Condition D.1.1, the dry filters for PM control shall be in operation at all times when the one (1) surface coating emission unit (P001) is in operation.~~

D.1.75 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 (E1 and E2) while one or more of the booths are in operation. ~~The Compliance Response Plan shall be followed whenever~~ If a condition exists which should result in a response step, **the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.** Failure to take response steps in accordance with Section C - ~~Compliance Monitoring Plan~~ **Response to Excursions or Exceedances**, shall be considered a ~~violation of~~ **deviation from** this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for w~~When **there is** a noticeable change in overspray emissions, or **when** evidence of overspray emissions is observed, **the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.** ~~The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step.~~ Failure to take response steps in accordance with Section C - ~~Compliance Monitoring Plan~~ **Response to Excursions or Exceedances**, shall be considered a ~~violation of~~ **deviation from** this permit.
- (c) ~~Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.~~

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

D.1.86 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.2 ~~and D.1.3~~, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken ~~monthly as stated below~~ and shall be complete and sufficient to establish compliance with the VOC usage limits ~~and/or the VOC emission limits~~ established in Conditions D.1.2 ~~and D.1.3~~.
- (1) **The VOC content of each coating material and solvent used less water.**
- (2+) The amount ~~and VOC content~~ of each coating material and solvent used **on a daily basis.**
- (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
- (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
- (2) ~~A monthly log of use;~~
- (3) **The volume weighted average VOC content of the coatings used for each day;**

- ~~(43)~~ The **daily** cleanup solvent usage ~~for each month~~; **and**
- ~~(54)~~ The total VOC usage for each ~~month~~ **day**; ~~and~~
- ~~(5)~~ ~~The weight of VOCs emitted for each compliance period.~~
- (b) To document compliance with Condition D.1.75, the Permittee shall maintain a log of weekly overspray observations, **and** daily and monthly inspections, ~~and these additional inspections prescribed by the Preventive Maintenance Plan.~~
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

- ~~(d)~~ One (1) core burning emission unit, identified as P004, consisting of the following:
 - ~~(1)~~ Two (2) core burn units, identified as Core Burn Unit 1 and Core Burn Unit 2, for processing a maximum of 438 pounds of polystyrene sheet per hour on a daily average, and exhausting to two ~~(2)~~ stacks, identified as E5 and E6;
- (e) One (1) woodworking emission unit **operation**, identified as P005, utilizing a baghouse, identified as dust collector DC7, for particulate matter control **with a control efficiency of 99.9%, and exhausting to one (1) stack, identified as DC7**, consisting of the following:

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

D.2.1 Particulate Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) **Particulate matter (PM) emissions from the woodworking operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This limit is required to limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period. Compliance with this limit will render the requirements of 326 IAC 2-2 (PSD) not applicable;**
- (b) **Particulate matter with a diameter less than ten (10) micrometers (PM10) emissions from the woodworking operation (P005) shall not exceed 7.85 pounds per hour, which is equivalent to 34.4 tons per year. This limit is required to limit the source-wide total potential to emit PM10 to less than 100 tons per 12 consecutive month period. Compliance with this limit will satisfy 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable;**

D.2.24 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (**Particulate Emission Limitations for Manufacturing Processes**~~Process Operations~~), the allowable PM emission rate from the woodworking ~~facilities~~ **operation** (P005) shall not exceed 7.85 pounds per hour when operating at a process weight rate of 5268 pounds per hour.

Compliance Determination Requirements

D.2.43 Particulate Matter (PM)

- (a) In order to comply with Condition D.2.1 **and D.2.2**, the baghouse for PM **and PM10** control shall be in operation at all times that the woodworking operation (P005) is in operation.
- (b) **In the event that bag failure is observed in a multi-compartment baghouse, if**

operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.4 Testing Requirements

~~Within 24 months of permit issuance, the Permittee shall perform PM and PM10 emission testing on one of the two (2) units of core burning unit (P004), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration, with each subsequent test performed on the unit not tested in the most recent prior performance test conducted.~~

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

D.2.5 Visible Emissions Notations

(e) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an~~ **If abnormal emissions is are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.** Failure to take response steps in accordance with Section C ~~- Compliance Monitoring Plan - Failure to Take Response Steps~~ **Response to Excursions or Exceedances**, shall be considered a ~~violation of~~ **deviation from** this permit.

D.2.6 Parametric Monitoring

The Permittee shall record the ~~total static~~ pressure drop across the baghouse used in conjunction with the woodworking process, at least once weekly when the woodworking process is in operation when venting to the atmosphere. Unless operated under conditions for which the **Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances** ~~Compliance Response Plan specifies otherwise~~, the pressure drop across the baghouse shall be maintained within the range of 0.0 and 2.5 inches of water or a range established during the latest stack test. ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when~~ **If a the pressure drop reading is observed** outside of the above mentioned range for any one reading, **the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.** Failure to take response steps in accordance with Section C ~~- Compliance Monitoring Plan - Failure to Take Response Steps~~ **Response to Excursions or Exceedances**, shall be considered a ~~violation of~~ **deviation from** this permit.

The instrument used for determining the pressure shall comply with Section C - ~~Pressure Gauge and Other~~ Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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

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

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

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

D.2.87 Record Keeping Requirements

- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
- (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
- (A) ~~Differential static pressure~~ **Pressure drop** across the ~~fabric~~ **baghouse**; and

SECTION D.3

FACILITY OPERATION CONDITIONS

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

- (f) One (1) expandable polystyrene (EPS) block molding operation, identified as P006, consisting of the following:
- (1) One (1) batch polystyrene beads pre-expander system, **constructed in 1997**, including one (1) pre-expander machine and six (6) steel pipe frame supported polyester storage bags for aging **newly pre-expanded bead**~~expander beads~~, capable of processing a maximum average of 1,200 pounds per hour of polystyrene beads ~~and a maximum of 15,000 pounds per day of polystyrene beads~~, containing a maximum average of 7% pentane by weight, **two (2) steel pipe frame supported polyester storage bags for holding reground bead, and the mix metering bags**;
- (2) One (1) block molding press, **constructed in 1997**, for molding pre-expanded polystyrene beads ~~to the desired block size~~~~to final shapes~~, utilizing steam to heat the pre-expanded beads;
- (3) One (1) ~~shaped products~~ **block conditioning** ~~drying~~ room, **constructed in 1997**;
- (4) One (1) pentane emissions collection system, **constructed in 1997 and to be modified in 2006**, connected to a ~~4,000~~**12,000** standard cubic feet per minute (scfm) ~~draft blower~~ **regenerative thermal oxidizer (RTO)**;
The collection system consists of:
- (a) Ductwork conveying process emissions and ventilation air from two permanent total enclosures, one enclosure containing the bead aging bags ~~and pre-expander~~, and one enclosure containing the block ~~aging~~ **conditioning** room;
- (b) Ductwork conveying block molder bead filling pneumatic transfer air ~~and pre-expander pneumatic transfer air~~;
- (5) One (1) boiler, **identified as P009, to be constructed in 2006**, ~~oxidation steam system (BOSS) (thermal oxidizer) with heat recovery devices for controlling VOC emissions~~, equipped with a **natural gas** burner rated at ~~6.75~~ million British thermal units per hour, ~~using a mixture of pentane laden process and ventilation air and natural gas as combustion fuel~~ **for producing steam used in the bead expansion**; and
- (6) One (1) regenerative thermal oxidizer (RTO), **to be constructed in 2006**, equipped with a burner rated at ~~7.22~~**22.785** million British thermal units per hour, using a mixture of

pentane-laden process and ventilation air and natural gas as combustion fuel, and exhausting to one (1) stack, identified as 97-1.

~~(The BOSS and the one (1) regenerative thermal oxidizer are in parallel with one another, each controlling part of the process air and ventilation air from the permanent total enclosures).~~

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

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

D.3.1 Volatile Organic Compound (VOC) Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.

D.3.24 New Facilities, General Reduction Requirements [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), the source shall install and maintain the Best Available Control Technology (BACT) for the one (1) expandable polystyrene block molding operation, identified as P006 in Section D.3 (f)(1), (2) and (3), as described below.

(a) VOC (as pentane) emissions from the expandable polystyrene (EPS) block molding operation, identified as P006 in Section D.3 (f)(1), (2) and (3), shall be captured by the pentane emissions collection system and ducted to one (1) regenerative thermal oxidizer (RTO). The pentane emissions collection system and RTO shall achieve an overall VOC control efficiency of 78%.

(b) The pentane emissions collection system will include two (2) permanent total enclosures, each vented to the RTO, to capture VOC (as pentane) emitted from the EPS block molding operation at:

(1) The bead aging bags, and

(2) The block conditioning room.

~~(a) EPS emission capture system consisting of:~~

~~Two (2) permanent total enclosures, each equipped with 4,000 scfm draft blowers, to capture VOC (as pentane) emitted from the EPS operation at:~~

~~(1) The pre-expander and bead aging bags, and~~

~~(2) The block mold aging room.~~

~~The expandable polystyrene (EPS) capture system shall achieve a one hundred (100) percent capture efficiency.~~

~~One (1) duct conveying emission from the block molder during bead filling operations to either the BOSS or regenerative thermal oxidizer.~~

- (b) ~~EPS capture system exhaust shall be ducted to one (1) regenerative thermal oxidizer and one (1) BOSS. Combined emissions of VOC from the two control devices shall not exceed 3.83 tons per twelve consecutive month period.~~
- (c) ~~Polystyrene bead aging at the EPS process shall be limited to 15,000 pounds of bead per day. Compliance with the requirements of this condition shall limit the potential to emit of the source to less than 100 tons per 12 consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) shall not apply.~~

D.3.3 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the particulate matter emissions from the natural gas-fired steam boiler (P009) shall not exceed 0.6 pounds per million British thermal unit.

D.3.42 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the **pentane emissions collection system and RTO emissions units and their control devices.**

Compliance Determination Requirements

D.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 2-8-4] [326 IAC 2-2]

In order to comply with Condition D.3.1 and D.3.2, the pentane emissions collection system and RTO shall be in operation at all times the one (1) expandable polystyrene block molding operation is in operation.

D.3.6 Volatile Organic Compound (VOC) Emissions

Compliance with the VOC emission limitations contained in Condition D.3.1 shall be determined for each month using the quarterly reporting form located at the end of this permit. Compliance shall be based on the VOC emitted for the previous month added to the total VOC emitted for the previous 11 months, so as to arrive at the total VOC emitted for the most recent 12 consecutive month period. The VOC emitted during a given time period shall be determined from the "as supplied" manufacturer's data sheets for the VOC content of the polystyrene beads (assuming 100% of the VOC is emitted during use), the polystyrene bead usage for that time period, and the overall VOC control efficiency from most recent valid stack test determined pursuant to Condition D.3.7, using the following equation:

$$\text{VOC Emissions} = f_{\text{VOC}} * U * (1 - \text{CEF})$$

where f_{VOC} = The VOC content of the polystyrene beads used (fraction by weight)
 U = The polystyrene bead usage
 CEF = The overall control efficiency determined pursuant to Condition D.3.7

IDEM, OAQ reserves the authority to determine compliance using methods contained in 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

D.3.73 Testing Requirements [326 IAC 3-6] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

- (a) ~~The Permittee shall perform initial compliance testing on the VOC pentane emissions control collection system and RTO within forty five (45) days after installation and achieving maximum facility production rate, but no later than 180 days after initial start-up of the RTO. The following shall be conducted in order to demonstrate compliance with Conditions D.3.1 and D.3.2:~~

- (1) The Permittee shall demonstrate compliance for the two permanent total enclosures using methods specified in 40 CFR 51, Appendix M, Method 204, or other methods as specified by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

The enclosure differential pressure measured during enclosure capture verification testing shall be recorded.

- ~~(2) The Permittee shall perform VOC testing on the BOSS exhaust during operation of the pre-expander and block molder, utilizing methods as approved by the Commissioner, to determine an emission factor (units in pounds of VOC emitted per ton of polystyrene beads processed through the pre-expander). The emission factor used for compliance demonstration will be determined from the following equation:~~

$$\text{EF} = \text{Mass of VOC emitted during testing (lbs)} / \text{Mass of beads pre-expanded during testing (tons)}$$

~~The average operating temperature measured during emission factor verification testing shall be determined. Testing shall be conducted in accordance with Section C - Performance Testing.~~

- (23) The Permittee shall perform VOC testing on the **pentane emissions collection system and RTO** ~~regenerative thermal oxidizer outlet~~, utilizing methods as approved by the Commissioner, to determine ~~an emission factor (units in pounds of VOC emitted per ton of polystyrene beads processed through the pre-expander)~~ **the overall VOC control efficiency**. The ~~emission factor~~ **overall VOC control efficiency** for the **pentane emissions collection system and RTO** ~~thermal oxidizer~~ will be determined from a weighted average of two ~~emission factor verification~~ **control efficiency** tests conducted during the same 24 hour bead expansion and aging cycle:

(Aa) The Permittee shall perform VOC testing on the **pentane emissions collection system and RTO** ~~regenerative thermal oxidizer~~ exhaust during operation of the pre-expander and block molder.

(Bb) The Permittee shall perform VOC testing on the **pentane emissions collection system and RTO** ~~regenerative thermal oxidizer~~ exhaust during the bead and block aging period when pre-expansion and block molding are not conducted.

The weighted average ~~emission factor~~ **VOC control efficiency** used for compliance demonstration will be determined from the following equation:

$$\text{EF} = \text{VOC}_a \times T_a + \text{VOC}_b \times T_b / \text{tons of beads processed and aged in 24 hours}$$

$$CEF = \left[\frac{\left(T_{pa} * t_a * \frac{CapEF_a}{100\%} * \frac{DesEF_a}{100\%} \right) + \left(T_{pb} * t_b * \frac{CapEF_b}{100\%} * \frac{DesEF_b}{100\%} \right)}{\left(T_{pa} * t_a + T_{pb} * t_b \right)} \right] * 100\%$$

$$CapEF_a = (VOC_a / T_{pa}) * 100\%$$

$$DesEF_a = (1 - (VOC_{ca} / VOC_a)) * 100\%$$

$$CapEF_b = (VOC_b / T_{pb}) * 100\%$$

$$DesEF_b = (1 - (VOC_{cb} / VOC_b)) * 100\%$$

- Where
- CEF** = Weighted average VOC control efficiency (%)
 - T_{pa}** = Total pentane available to lose in the process during the pre-expansion and molding operations (lbs/hr)
 - t_a** = Average time (in hours) that the pre-expansion and molding operations are in operation
 - CapEF_a** = Capture efficiency during the pre-expansion and molding operations (%)
 - VOC_a** = VOC capture rate (before RTO) during pre-expansion and molding operations (lbs/hr)
 - DesEF_a** = Destruction efficiency during the pre-expansion and molding operations (%)
 - VOC_{ca}** = VOC controlled emission rate (after RTO) during the pre-expander and block molder (lbs/hr)
 - T_{pb}** = Total pentane available to lose in the process during the pre-expansion and molding shutdown (lbs/hr)
 - t_b** = Average time (in hours) that the pre-expansion and molding operations are shutdown
 - CapEF_b** = Capture efficiency during the pre-expansion and molding shutdown (%)
 - VOC_a** = VOC emission rate during pre-expansion and molding operations (lbs/hr)
 - VOC_b** = VOC emission capture rate (before RTO) during pre-expansion and molding shutdown (lbs/hr)
 - DesEF_b** = Destruction efficiency during the pre-expansion and molding shutdown (%)
 - VOC_{cb}** = VOC controlled emission rate (after RTO) during the pre-expander and block molder shutdown (lbs/hr)
 - T_a** = number of hours spent running the pre-expander and block molder
 - T_b** = number of hours for the pre-expander and block molder shutdown

The operating temperature of the RTO shall be measured during VOC testing and The an average operating temperature measured for the RTO during emission factor verification testing shall be determined. Testing shall be conducted in accordance with Section C - Performance Testing.

~~(4) The Permittee shall demonstrate that the figure used for the uncontrolled emissions from the release of the block molder if fifteen (15) percent of the potential uncontrolled VOC emissions from the entire operation.~~

- (b) The tests required in (a)(2) and (a)(3) shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. ~~An emission factor shall be determined for each control device (BOSS and regenerative thermal oxidizer) following the most recent emission factor verification test.~~

~~D.3.4 VOC Emissions~~

~~In order to comply with Condition D.3.1, the following shall apply to the expandable polystyrene (EPS) block molding operation:~~

- ~~(a) The BOSS and associated emissions collection blower shall be in operation at all times when the pre-expander system (including bead transportation) and block molding press are in operation.~~
- ~~(b) The regenerative thermal oxidizer (rated at 7.2 MMBtu/hr) and associated emissions collection blower shall be in operation at all times.~~

D.3.8 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1500°F.**
- (b) The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2, as approved by IDEM.**
- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.**

D.3.9 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with Conditions D.3.1 and D.3.2, as approved by IDEM.**
- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.**

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

~~D.3.5 Volatile Organic Compound Control~~

- ~~(a) When operating the one (1) expandable polystyrene block molding operation, the BOSS shall maintain a minimum operating temperature of 1,400°F or the average temperature measured during the emission factor verification tests used to develop the average VOC emission factor in accordance with D.3.3(b). The enclosure differential pressure shall be maintained at or above the values determined in the capture verification testing as specified in D.3.3(a)(1). The temperature of the burner of the boiler shall be continuously monitored and recorded whenever any of the facilities (block molding press and the bead expander) are in operation. Compliance with this condition shall deem 326 IAC 8-1-6 satisfied.~~
- ~~(b) When operating the one (1) expandable polystyrene block molding operation, the regenerative thermal oxidizer shall maintain a minimum operating temperature of 1,450°F or the average temperature measured during the emission factor verification tests used to develop the average VOC emission factor in accordance with D.3.3(b).~~

~~The enclosure differential pressure shall be maintained at or above the values determined in the capture verification testing as specified in D.3.3(a)(1). The temperature of the burner of the regenerative thermal oxidizer shall be continuously monitored and recorded~~

~~whenever any of the facilities (block molding press or the bead expander) are in operation. Compliance with this condition shall deem 326 IAC 8-1-6 satisfied.~~

D.3.106 Compliance Schedule

- (a) The source has **240 days** ~~six (6) months~~ from the date of issuance of this permit to install the **4,000 scfm regenerative thermal oxidizer RTO** (rated at **7-2.785** MMBtu/hr) and the two permanent total enclosures to enclose the EPS system and **begin full operation**.
- (b) Within **180** ~~forty five (45)~~ days of installing the 4,000 scfm regenerative thermal oxidizer **RTO** and the two permanent total enclosures to enclose the EPS system, the source shall perform initial VOC testing as specified in Condition D.3.73(a).

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

D.3.7 Parametric monitoring

- (a) ~~A continuous monitoring system shall be calibrated, maintained, and operated on the BOSS and the one (1) regenerative thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than 1400°F for the BOSS and 1450°F for the regenerative thermal oxidizer or a temperature greater than or equal to the temperature used to determine the emission factor for each device during the most recent emission factor verification stack test.~~
- (b) ~~The enclosure differential pressure shall be observed at least once per week when the BOSS and the one (1) regenerative thermal oxidizer is in operation. This pressure shall be maintained as established in the capture verification testing in accordance with D.3.3(a)(1) or at a value that represents a higher flowrate.~~
- (c) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the reading is outside the above mentioned range for any one reading. Failure to take response steps in accordance with Section C Compliance Monitoring Plan Failure to Take Response Steps, shall be considered a violation of this permit.~~

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

D.3.118 Record Keeping Requirements

- (a) **To document compliance with Condition D.3.1**, ~~the Permittee shall maintain daily records in accordance with (1) and (2) below of polystyrene bead usage. The records~~ **Records maintained for (1) and (2)** shall be complete and sufficient to establish compliance with the ~~daily bead usage limits and/or the control device VOC emission limits established in Condition D.3.1. The records shall contain, as a minimum, the following information:~~
 - (1) The pounds of polystyrene beads used **on a monthly basis** per day;
 - (2) **The VOC content of the polystyrene beads used (fraction by weight);**
- (b) To document compliance with Conditions D.3.54, **D.3.8**, and D.3.95, the Permittee shall maintain ~~the following records of:~~
 - (1) ~~the following operational parameters of the VOC emission control equipment for~~ **the pentane emissions collection system and RTO:**
 - (1a) Data verifying that the permanent total enclosure meet the design criteria of EPA Method 204; or capture efficiency for those processes that are located in an enclosure unable to meet the design criteria of EPA Method 204;

- ~~(2b)~~ Data used to develop the ~~emission factor~~ **overall control efficiency** for ~~each the pentane emissions collection system and RTO control device (lbs of VOC [as pentane] emitted per ton of bead processed through the pre-expander);~~
- ~~(3e)~~ **The continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.** ~~Temperature readings.~~
- (4) Daily records of the duct pressure or fan amperage.**
- ~~(c)~~ ~~To document compliance with Condition D.3.7, the Permittee shall maintain the following records:~~
 - ~~(1)~~ ~~The following operational parameters of the VOC emission control equipment:~~
 - ~~(a)~~ ~~Temperature readings;~~
 - ~~(b)~~ ~~Weekly readings of the enclosure differential pressure.~~
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

D.3.129 Reporting Requirements

A quarterly summary of the information to document compliance with the VOC emission limit in Condition D.3.1 ~~(b)~~ and the daily bead usage limit in Condition D.3.1 ~~(c)~~ shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or ~~their~~ **its** equivalent, within thirty (30) days after the end of the ~~month~~ **quarter** being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.4 FACILITY OPERATION CONDITIONS

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

- (d) One (1) core burning operation, identified as P004, consisting of the following:**
 - (1) Two (2) core burn units, identified as Core Burn Unit 1 and Core Burn Unit 2, constructed in 1981 and 1997, respectively, for processing a maximum of 175 doors per hour on a daily average, with particulate matter controlled by dry filters with an overall control efficiency of 95%, and exhausting to two (2) stacks, identified as E5 and E6;**
- (g) One (1) polystyrene block cutting operation, consisting of two (2) hot wire cutting lines, identified as Wire Cutting Lines 1 and 2, each constructed in 1997, used for cutting of polystyrene blocks, each with a maximum throughput rate of 30 blocks per hour, and exhausting to general ventilation.**
- (h) One (1) fiberglass door assembly operation, with a maximum design production rate of 175 doors per hour, using wood products from the woodworking operation (P005) and adhesive coated door skins from the roll coating operation (P003), consisting of the following including:**
 - (1a) One (1) fiberglass door groove forming system, identified as P008, constructed in 2002, forming grooves in the door cores via heat, and exhausting to general ventilation; and**
 - ~~(b) The door adhesive roll coating application system identified in Part (c) of Condition A.2;~~
 - (2e) One (1) glaze application area, identified as P007, constructed in 2002, applying glaze to the door fiberglass skin, and exhausting to general ventilation.; and**
 - ~~(d) The woodworking process identified in Part (e) of Condition A.2.~~

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

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

~~D.4.1 Volatile Organic Compound (VOC) Usage Limit, Glaze Application Area [326 IAC 2-7]~~

~~The owner or operator shall limit the input VOC from the glaze application area to 15.75 tons per year per twelve (12) consecutive month period with compliance being determined at the end of each month. Compliance with this limit shall render the requirements of 326 IAC 2-7 not applicable in this case.~~

~~D.4.12 Particulate Matter (PM), Door Groove Forming System [326 IAC 6-3-2(e)]~~

~~The owner or operator shall limit the particulate matter (PM) from the door groove forming system to 1.71 lb/hr or less.~~

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

- (a) the allowable particulate emission rate for each of the two (2) core burn units (Core Burn Unit 1 and Core Burn Unit 2) shall each not exceed 1.48 pounds per hour when operating at a process weight rate of 438 pounds of polystyrene sheets per hour;**
- (b) the allowable particulate emission rate for each of the two (2) hot wire cutting lines (Wire Cutting Lines 1 and 2) shall each not exceed 7.06 pounds per hour when operating at a process weight rate of 4500 pounds of polystyrene block per hour; and**
- (c) the allowable particulate emission rate from the door groove forming system (P008) shall not exceed 1.72 pounds per hour when operating at a process weight rate of 546 pounds of polystyrene sheets per hour.**

The pounds per hour limitations were calculated with the following equation:

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:

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

~~D.4.3 Particulate Matter (PM), Woodworking Process [326 IAC 6-3-2(e)]~~

~~The owner or operator shall limit the particulate matter (PM) from the woodworking process (P005) to 7.85 pounds per hour or less.~~

~~D.4.4 VOC Content Limit, Door Adhesive Roll Coating Application System [326 IAC 8-2-9]~~

- ~~(a) The owner or operator shall limit the volatile organic compound (VOC) content of coatings applied to metal door frames in P003 shall to 3.0 pounds of VOC per gallon of coating less water delivered to the applicator for all other coatings and coating application systems.~~
- ~~(b) Solvent sprayed from the application equipment during clean up or color changes shall be directed in to containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.~~

~~D.4.5 Woodworking Process Emission Control Operating Requirement~~

~~In order to comply with Condition D.4.3, the baghouse for PM control shall be in operation at all times that the woodworking operation (P005) is in operation.~~

~~D.4.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]~~

~~A Preventive Maintenance Plan, in accordance with Section C – Preventive Maintenance Plan, of this permit, is required for the emissions units and their control devices.~~

Compliance Determination Requirements

~~D.4.7 Compliance Determination, Volatile Organic Compounds (VOC)~~

~~To determine compliance with the VOC limit of Condition D.4.1, the owner or operator shall on a monthly basis:~~

- ~~(a) draft a list of all coatings, additives, and solvents used at the glaze application area that contain VOCs;~~
- ~~(b) determine the following for each coating, additive, and solvent listed in Part (a) of this Condition based on material properties and formulation data supplied by the coating manufacturer and the applicable material volatile organic compound usage for the most recent month:
 - ~~(1) the amount and VOC content,~~
 - ~~(2) a log of the dates of use, and~~
 - ~~(3) the VOC emissions;~~~~
- ~~(c) the sum total coating, additive, and solvent VOC emissions;~~
- ~~(d) the sum total VOC emissions from the previous 11 months; and~~
- ~~(e) the 12 month rolling total VOC emissions.~~

~~The IDEM, OAQ, reserves the authority to require compliance determination using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4 and material volatile organic compound usage.~~

D.4.2 Particulate Matter (PM)

In order to comply with Condition D.4.1(a), the dry filters controlling particulate from Core Burn Unit 1 shall be in operation at all times that Core Burn Unit 1 is in operation, and the dry filters for controlling particulate from Core Burn Unit 2 shall be in operation at all times that Core Burn Unit 2 is in operation.

D.4.38 Testing Requirements

~~The owner or operator is not required to test any units listed in this section at this time. However, the IDEM, OAQ may require compliance testing at any specific time when deemed necessary to determine if the units listed in this section are in compliance with the limits and standards of Conditions D.4.1, D.4.2, and D.4.3. Said testing shall be determined by performance test(s) conducted in accordance with Section C – Performance Testing.~~

- (a) Within 24 months of May 15, 2002, the Permittee shall perform PM and PM10 emission testing on one of the two (2) units of the core burning operation (P004), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration, with each subsequent test performed on the unit not tested in the most recent prior performance test conducted. PM-10 includes filterable and condensable PM-10.**
- (b) Within one hundred and eighty (180) days after issuance of Significant Permit Revision No. 113-22426-00047, the Permittee shall perform an initial one time performance test for the uncontrolled emissions of VOCs and styrene from each of the following in order to verify the emission factors:**

- (1) one of the two (2) units of the core burning operation (P004);
- (2) one of the two (2) hot wire cutting lines; and
- (3) the fiberglass door groove forming system (P008)

Testing shall be conducted in accordance with Section C - Performance Testing.

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

~~D.4.9 Visible Emissions Notations, Woodworking Process~~

- ~~(a) Daily visible emission notations of the woodworking process stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.~~
- ~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~
- ~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~
- ~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~
- ~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C Compliance Monitoring Plan Failure to Take Response Steps, shall be considered a violation of this permit.~~

~~D.4.10 Parametric Monitoring~~

~~The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the woodworking process, at least once weekly when the woodworking process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.0 and 2.5 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C Compliance Monitoring Plan Failure to Take Response Steps, shall be considered a violation of this permit.~~

~~The instrument used for determining the pressure shall comply with Section C Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.~~

~~D.4.11 Monitoring Requirements, VOC Emission Limit~~

~~To demonstrate compliance with the VOC emission limit of Condition D.4.1, the owner or operator shall record the information determined in Condition D.4.7.~~

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

~~D.4.12 Record Keeping Requirements~~

- ~~(a) To document compliance with the VOC limit of Condition D.4.1, the owner or operator shall maintain records of the information required in Condition D.4.11.~~

- (b) ~~To document compliance with the PM emission limit of Condition D.4.3, the owner or operator shall maintain records of:~~
- (1) ~~the daily visible emission notations required in Condition D.4.9, and~~
 - (2) ~~the following operational parameters during normal operation when venting to the atmosphere:~~
 - (A) ~~differential static pressure across the fabric as required in Condition D.4.10, and~~
 - (B) ~~verification of cleaning cycle operation.~~
- (c) ~~To document compliance with the VOC content limit of Condition D.4.4, the owner or operator shall maintain records of the as applied VOC content of all coatings applied to metal door frames.~~

~~All records shall be maintained in accordance with Section C—General Record Keeping Requirements, of this permit.~~

~~D.4.13 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with the VOC limit of Condition D.4.1 shall be submitted to the address listed in Section C—General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.~~

FESOP CERTIFICATION:

Source Name: **JELD-WEN**Challenge Door of Indiana

FESOP EMERGENCY OCCURRENCE REPORT:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46204-22516-6015
Phone: 317-233-5674
Fax: 317-233-5967

Source Name: **JELD-WEN**Challenge Door of Indiana

- This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

Quarterly Report ~~Part 70~~ Monthly Report

Source Name: **JELD-WEN** Challenge Door of Indiana

Limit: ~~15,000 pounds of polystyrene beads per day~~

Limit: **Less than 18.94 tons VOC per year, with compliance determined at the end of each month**

VOC Emissions = $f_{VOC} * U * (1 - CEF)$

where f_{VOC} = VOC content of beads (fraction by weight);

U = polystyrene bead usage by weight; and

CEF = overall control efficiency determined pursuant to Condition D.3.7.

Quarter: _____ Year: _____

Month	(1) Tons VOC This Month	(2) Tons VOC Past 11 Months	(1) + (2) Rolling Total VOC Emissions (Tons)

Month: _____ Year: _____

Day				Day			
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				no. of deviations			

FESOP QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT:

Source Name: **JELD-WEN** Challenge Door of Indiana

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. **A deviation** required to be reported **pursuant to** an applicable requirement **that exists independent of the permit**, shall be reported according to the schedule stated in the applicable requirement and **does not** need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

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

Quarterly Report

Source Name: _____ Challenge Door of Indiana
 Source Address: _____ 200 Gerber Street, Ligonier, IN 46767
 Mailing Address: _____ P.O. Box 259, Ligonier, IN 46767
 Permit No.: _____ 113-16069-00047
 Facility: _____ Glaze Application Area
 Parameter: _____ VOC Emissions
 Limit: _____ Less than 15.75 Tons VOC/yr, based on a 12 month rolling total

Quarter: _____ Year: _____

Month	(1) Tons VOC This Month	(2) Tons VOC Past 11 Months	(1) + (2) Rolling Total VOC Emissions (Tons)

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

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

Attach a signed certification to complete this report.

Conclusion

The operation of this source shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 113-22426-00047.

**Appendix A: Emissions Calculations
Emission Summary**

**Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006**

Category	Uncontrolled/Unlimited Potential Emissions (tons/year)													
	Emissions Generating Activity													
	Pollutant	Door Edge Paint Booth of P001	Door Touch-Up Booth of P001	Solvent Wiping (P002)	Adhesive Roll Coaters 1 & 2 and Cleanup (P003)	Core Burning Units 1 & 2 (P004)	Woodworking Operation (P005)	Woodworking Waste Collection and Transfer	Expandable Polystyrene Block Molding Operation (P006)	Polystyrene Block Wire Cutting	Fiberglass Door Glaze Application Area (P007)	Fiberglass Door Core Groover (P008)	Natural Gas Combustion (RTO & P009)	TOTAL
Criteria Pollutants	PM	19.49	0.29			22.23	1532.00	1.50		0.34		2.08	0.06	1577.99
	PM10	19.49	0.29			22.23	1532.00	1.50		0.34		2.08	0.26	1578.18
	SO2												0.02	0.02
	NOx												3.41	3.41
	VOC	16.77	0.63	8.65	6.53	23.54			367.92	4.60	16.94	2.20	0.19	447.98
	CO												2.86	2.86
Hazardous Air Pollutants	Methylene Diphenyl Diisocyanate				5.0E-03									5.0E-03
	Methanol									0.63				0.63
	Xylene									0.59				0.59
	Acetophenone					0.04			7.2E-03		3.4E-03			0.05
	Benzene					0.04			6.9E-03		3.3E-03	7.2E-05		0.05
	Ethyl Benzene					0.02			4.5E-03		2.2E-03			0.03
	Isopropylbenzene					0.03			6.1E-03		2.9E-03			0.04
	m,p-Xylene					4.6E-03			9.0E-04		4.3E-04			5.9E-03
	Methyl Ethyl Ketone		0.18			0.41			0.08		0.04			0.71
	Phenol					6.9E-03			1.3E-03		6.5E-04			8.9E-03
	Styrene					2.76			0.54		0.26			3.56
	Tetrachloroethylene					6.1E-03			1.2E-03		5.7E-04			7.9E-03
	Toluene					0.09			1.8E-02		0.01		1.2E-04	0.12
	Dichlorobenzene												4.1E-05	4.1E-05
	Formaldehyde												2.6E-03	2.6E-03
	n-Hexane												0.06	0.06
	Lead												1.7E-05	1.7E-05
	Cadmium												3.8E-05	3.8E-05
	Chromium												4.8E-05	4.8E-05
	Manganese												1.3E-05	1.3E-05
Nickel												7.2E-05	7.2E-05	
	Totals	0	0.18	0	5.0E-03	3.41	0	0	0	0.67	1.22	0.32	0.06	5.86
														Worse Case HAP
														3.56

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

**Appendix A: Emissions Calculations
Emission Summary**

**Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006**

Category	Limited Potential Emissions (tons/year)													
	Emissions Generating Activity													
	Pollutant	Door Edge Paint Booth of P001	Door Touch-Up Booth of P001	Solvent Wiping (P002)	Adhesive Roll Coaters 1 & 2 and Cleanup (P003)	Core Burning Units 1 & 2 (P004)	Woodworking Operation (P005)	Woodworking Waste Collection and Transfer	Expandable Polystyrene Block Molding Operation (P006)	Polystyrene Block Wire Cutting	Fiberglass Door Glaze Application Area (P007)	Fiberglass Door Core Groover (P008)	Natural Gas Combustion (RTO & P009)	TOTAL
Criteria Pollutants	PM	19.49	0.29			12.98	34.40	1.50		0.34		2.08	0.06	71.14
	PM10	19.49	0.29			22.23	34.40	1.50		0.34		2.08	0.26	80.58
	SO2												0.02	0.02
	NOx												3.41	3.41
	VOC	16.77	0.63	8.65	6.53	23.54			18.94	4.60	16.94	2.20	0.19	99.00
	CO												2.86	2.86
Hazardous Air Pollutants	Methylene Diphenyl Diisocyanate				5.0E-03									5.0E-03
	Methanol									0.63				0.63
	Xylene									0.59				0.59
	Acetophenone					0.04			7.2E-03		3.4E-03			0.05
	Benzene					0.04			6.9E-03		3.3E-03	7.2E-05		0.05
	Ethyl Benzene					0.02			4.5E-03		2.2E-03			0.03
	Isopropylbenzene					0.03			6.1E-03		2.9E-03			0.04
	m,p-Xylene					4.6E-03			9.0E-04		4.3E-04			5.9E-03
	Methyl Ethyl Ketone		0.18			0.41			0.08		0.04			0.71
	Phenol					6.9E-03			1.3E-03		6.5E-04			8.9E-03
	Styrene					2.76			0.54		0.26			3.56
	Tetrachloroethylene					6.1E-03			1.2E-03		5.7E-04			7.9E-03
	Toluene					0.09			1.8E-02		0.01		1.2E-04	0.12
	Dichlorobenzene												4.1E-05	4.1E-05
	Formaldehyde												2.6E-03	2.6E-03
	n-Hexane												0.06	0.06
	Lead												1.7E-05	1.7E-05
	Cadmium												3.8E-05	3.8E-05
	Chromium												4.8E-05	4.8E-05
	Manganese												1.3E-05	1.3E-05
Nickel												7.2E-05	7.2E-05	
	Totals	0	0.18	0	5.0E-03	3.41	0	0	0	0.67	1.22	0.32	0.06	5.86
														Worse Case HAP
														3.56

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

Appendix A: Emissions Calculations
Core Burning (P004), Core Grooving (P008), Wire Cutting (P006)
Particulate Matter (PM/PM10)

Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006

Core Process and Production Rates

	Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)
Maximum Hourly Throughput (based on average daily maximum) (cores/hr) =	175	175	
Maximum Hourly Throughput (blocks/hr) =			60
Maximum Average Number of Cuts Per Block (cuts/block)* =			48
Maximum Hourly Cutting Rate (cuts/hr) =			2880
Maximum Annual Hours of Operation (hours/year) =	8760	8760	8760
Maximum Annual Process Rate (cores/year) =	1,533,000	1,533,000	
Maximum Annual Process Rate (cuts/year) =			25,228,800

Mass Loss per Volume Loss Ratio for Core Burning (lbs/in3)** = 8.48E-06

Potential to Emit (PTE) of Particulate Matter (PM/PM10)

Compound	Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)
Maximum volume lost during processing (in3/core)** =	3420	320	
Maximum volume lost during processing (perimeter cut) (in3/cut)** =			3.192
Maximum mass lost during processing (lbs/core)** =	0.029	2.7E-03	
Maximum mass lost during processing (lbs/cut) =			2.7E-05
PTE of PM/PM10 (lbs/hour) =	5.08	0.47	0.078
PTE of PM/PM10 (tons/year) =	22.23	2.08	0.341

Core Burning Units Dry Filter Control Efficiency = 95.0%
 Core Burning Units PTE of PM/PM10 Emissions after controls (lbs/hr) = 0.25
 Core Burning Units PTE of PM/PM10 Emissions after controls (tons/yr) = 1.11

Compliance with 326 IAC 6-3-2

Allowable Emissions, E = 4.10 * P^{0.67} (for weight rates up to 60,000 lb/hr)
 where E = emissions in lbs/hr
 P = process weight in tons/hr

	Core Burning Units 1 or 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 or 2) (P006)
Process Weight, P (lbs/hr) =	438	546	4500
Process Weight, P (tons/hr) =	0.22	0.27	2.25
Allowable PM Emissions, E (lbs/hr) =	1.48	1.72	7.06
Allowable PM Emissions, E (lbs/day) =	35.6	41.2	169.4
Allowable PM Emissions, E (tons/yr) =	6.49	7.52	30.9

Process weight for each wire cutting line calculated as follows: (30 blocks/hr) * (50 cores/block) * (3 lbs/core)

Methodology

*Provided by JELD-WEN, assuming 95% of blocks cut with 46 cuts and 5% of blocks cut with 50 cuts.

**Provided by JELD-WEN, based on process knowledge or source testing of similar units processing similar materials at the JELD-WEN Exterior Doors plant in Chiloquin, Oregon on 5/22/2002

Maximum Hourly Cutting Rate (cuts/hr) = [Maximum Hourly Throughput (blocks/hr)] * [Maximum Average Number of Cuts Per Block (cuts/block)]

Maximum Annual Process Rate (cores/year) = [Maximum Hourly Throughput (cores/hr)] * [Maximum Annual Hours of Operation (hours/year)]

Maximum Annual Process Rate (cuts/year) = [Hourly Cutting Rate (assuming 24 hr/day) (cuts/hr)] * [Maximum Annual Hours of Operation (hours/year)]

Maximum mass lost during processing (lbs/core) = [Maximum volume lost during processing (in3/core)] * [Mass Loss per Volume Loss Ratio for Core Burning (

Maximum mass lost during processing (lbs/cut) = [Maximum volume lost during processing (in3/cut)] * [Mass Loss per Volume Loss Ratio for Core Burning (lbs

PTE of PM/PM10 (lbs/hour) = [Maximum mass lost during processing (lbs/core)] * [Maximum Hourly Throughput (cores/hr)]

PTE of PM/PM10 (lbs/hour) = [Maximum mass lost during processing (lbs/cut)] * [Hourly Cutting Rate (assuming 24 hr/day) (cuts/hr)]

PTE of PM/PM10 (tons/year) = [PTE of PM/PM10 (lbs/hour)] * [Maximum Annual Hours of Operation (hours/year)] / [2000 lbs/ton]

Appendix A: Emissions Calculations
Core Burning (P004), Core Grooving (P008), Wire Cutting (P006)
Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006

Core Process and Production Rates

	Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)
Maximum Hourly Throughput (based on average daily maximum) (cores/hr) =	175	175	
Maximum Hourly Throughput (blocks/hr) =			60
Maximum Average Number of Cuts Per Block (cuts/block)* =			48
Maximum Hourly Cutting Rate (cuts/hr) =			2880
Maximum Annual Hours of Operation (hours/year) =	8760	8760	8760
Maximum Annual Process Rate (cores/year) =	1,533,000	1,533,000	
Maximum Annual Process Rate (cuts/year) =			25,228,800
Maximum volume lost during processing (in3/core)** =	3420	320	
Maximum volume lost during processing (face cut) (in3/cut)** =			40.6

Potential to Emit (PTE) of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

Compound	CAS #	Type	Emission Factors**			Potential to Emit (PTE) (lbs/hour)			Potential to Emit (PTE) (tons/year)		
			Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)	Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)	Core Burning Units 1 & 2 (P004)	Core Groover (P008)	Wire Cutting (Lines 1 & 2) (P006)
Acetophenone	98-86-2	HAP/VOC	4.80E-05	4.49E-06	5.70E-07	8.40E-03	7.86E-04	1.64E-03	0.04	3.44E-03	0.01
Benzene	71-43-2	HAP/VOC	4.60E-05	4.30E-06	5.47E-07	8.05E-03	7.53E-04	1.57E-03	0.04	3.30E-03	0.01
Ethyl Benzene	100-41-4	HAP/VOC	3.00E-05	2.81E-06	3.56E-07	5.25E-03	4.91E-04	1.03E-03	0.02	2.15E-03	0.00
Isopropylbenzene	98-82-8	HAP/VOC	4.10E-05	3.84E-06	4.87E-07	7.18E-03	6.71E-04	1.40E-03	0.03	2.94E-03	0.01
m,p-Xylene	1330-20-7	HAP/VOC	6.00E-06	5.61E-07	7.13E-08	1.05E-03	9.82E-05	2.05E-04	4.60E-03	4.30E-04	8.99E-04
Methyl Ethyl Ketone	78-93-3	HAP/VOC	5.40E-04	5.05E-05	6.42E-06	0.09	8.84E-03	0.02	0.41	0.04	0.08
Phenol	108-95-2	HAP/VOC	9.00E-06	8.42E-07	1.07E-07	1.58E-03	1.47E-04	3.08E-04	6.90E-03	6.45E-04	1.35E-03
Styrene	100-42-5	HAP/VOC	3.60E-03	3.37E-04	4.28E-05	0.63	0.06	0.12	2.76	0.26	0.54
Tetrachloroethylene	127-18-4	HAP/VOC	8.00E-06	7.49E-07	9.51E-08	1.40E-03	1.31E-04	2.74E-04	6.13E-03	5.74E-04	1.20E-03
Toluene	108-88-3	HAP/VOC	1.20E-04	1.12E-05	1.43E-06	0.02	1.96E-03	0.00	0.09	8.61E-03	0.02
1,2,4-Trimethylbenzene	95-63-6	non-HAP/VOC	1.10E-04	1.03E-05	1.31E-06	0.02	1.80E-03	0.00	0.08	7.89E-03	0.02
2-Methylbutane	78-78-4	non-HAP/VOC	1.00E-03	9.36E-05	1.19E-05	0.18	0.02	0.03	0.77	0.07	0.15
Benzaldehyde	100-52-7	non-HAP/VOC	4.60E-04	4.30E-05	5.47E-06	0.08	7.53E-03	0.02	0.35	0.03	0.07
C10-C12 hydrocarbons	NA	non-HAP/VOC	7.00E-06	6.55E-07	8.32E-08	1.23E-03	1.15E-04	2.40E-04	5.37E-03	5.02E-04	1.05E-03
C4-C6 hydrocarbons (excluding pentane and cyclopentane)	NA	non-HAP/VOC	2.44E-02	2.28E-03	2.90E-04	4.27	0.40	0.83	18.70	1.75	3.66
Cyclopentane	287-92-3	non-HAP/VOC	4.20E-05	3.93E-06	4.99E-07	7.35E-03	6.88E-04	1.44E-03	0.03	3.01E-03	0.01
Dimethylethoxybenzene	NA	non-HAP/VOC	1.00E-05	9.36E-07	1.19E-07	1.75E-03	1.64E-04	3.42E-04	7.67E-03	7.17E-04	1.50E-03
Isopropanol	67-63-0	non-HAP/VOC	9.10E-05	8.51E-06	1.08E-06	0.02	1.49E-03	3.11E-03	0.07	6.53E-03	0.01
n-Propylbenzene	103-65-1	non-HAP/VOC	1.80E-05	1.68E-06	2.14E-07	3.15E-03	2.95E-04	6.16E-04	0.01	1.29E-03	2.70E-03
o-Methylstyrene	611-15-4	non-HAP/VOC	8.60E-05	8.05E-06	1.02E-06	0.02	1.41E-03	2.94E-03	0.07	6.17E-03	0.01
Substituted Benzene	NA	non-HAP/VOC	4.50E-05	4.21E-06	5.35E-07	7.88E-03	7.37E-04	1.54E-03	0.03	3.23E-03	0.01
Total VOCs (excluding pentane)	NA	Total VOCs	---	---	---	5.38	0.50	1.05	23.54	2.20	4.60
Total HAPs	NA	Total HAPs	---	---	---	0.78	0.07	0.15	3.41	0.32	0.67

Methodology

**Provided by JELD-WEN, assuming 95% of blocks cut with 46 cuts and 5% of blocks cut with 50 cuts.

*Provided by JELD-WEN, based on process knowledge or source testing of similar units processing similar materials at the JELD-WEN Exterior Doors plant in Chiloquin, Oregon on 5/22/2002. Emission factors for hot wire cutting and door grooving were calculated using the emission factors for core embossing and the volume loss ratio between each of the processes and the core embossing process.

Maximum Hourly Cutting Rate (cuts/hr) = [Maximum Hourly Throughput (blocks/hr)] * [Maximum Average Number of Cuts Per Block (cuts/block)]

Maximum Annual Process Rate (cores/year) = [Maximum Hourly Throughput (cores/hr)] * [Maximum Annual Hours of Operation (hours/year)]

Maximum Annual Process Rate (cuts/year) = [Hourly Cutting Rate (assuming 24 hr/day) (cuts/hr)] * [Maximum Annual Hours of Operation (hours/year)]

PTE of VOCs or HAPs (lbs/hour) = [Maximum Hourly Throughput (cores/hr)] * [Emission Factor (lbs/core)]

PTE of VOCs or HAPs (lbs/hour) = [Hourly Cutting Rate (assuming 24 hr/day) (cuts/hr)] * [Emission Factor (lbs/cut)]

PTE of VOCs or HAPs (tons/year) = [PTE of VOCs or HAPs (lbs/hour)] * [Maximum Annual Hours of Operation (hours/year)] / [2000 lbs/ton]

**Appendix A: Emissions Calculations
Pentane Emissions from
Expandable Polystyrene Block Molding Operation (P006)**

Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006

Actual Emissions of VOCs

Emission Scenario	Actual Emission of VOCs (pentane) (before RTO) (tons/year)	Overall VOC Capture Efficiency**	VOC Destruction Efficiency	Overall VOC Control Efficiency	Amount of pentane not captured (tons/yr)	Amount of pentane emitted from RTO (tons/yr)	Total Actual Emission of VOCs (pentane) (tons/year)	FESOP Limit
BOSS + RTO (existing) based on calculations provided in the 113-22426-00047 application	74.3	39.63%	97.50%	38.64%	44.9	0.74	45.6	polystyrene bead aging limited to 15,000 lbs of beads per day (equivalent to 625 lbs of beads per hour)

Potential to Emit VOCs

Emission Scenario	PTE of VOCs (pentane) (before RTO) (tons/year)	Overall VOC Capture Efficiency	VOC Destruction Efficiency	Overall VOC Control Efficiency	Amount of pentane not captured (tons/yr)	Amount of pentane emitted from RTO (tons/yr)	PTE of VOCs (pentane) (after RTO) (tons/year)	FESOP Limit	Limited/Controlled PTE of VOCs (pentane) (tons/year)
BOSS + RTO (existing) based on calculations from TSD Addendum for FESOP 113-10260-00047 which assume polystyrene bead aging limited to 15,000 lbs of beads per day	130.59	85.00%	99.20%	84.32%	19.59	0.89	20.48	polystyrene bead aging limited to 15,000 lbs of beads per day (equivalent to 625 lbs of beads per hour)	20.48
New RTO (after modification) based on maximum polystyrene bead aging usage of 1200 lbs of beads per hour and assuming 7% VOC content of beads and 8760 hours of operation per year	367.92	96.75%	95.00%	91.91%	11.96	17.80	29.76	VOC emissions from the EPS block molding operation limited to 4.32 pounds per hour (equivalent to 18.94 tons VOC per 12 consecutive month period)	18.94
Total Net Emission Increase for Modification (tons/yr) =									-1.54

Methodology

Amount of pentane not captured (tons/yr) = [PTE of pentane (before RTO) (tons/yr)] * [1 - Overall Capture Efficiency]

Amount of pentane emitted from RTO (tons/yr) = [PTE of pentane (before RTO) (tons/yr)] * [Overall Capture Efficiency] * [1 - Pentane Destruction Efficiency]

PTE of VOCs (pentane) (after RTO) (tons/year) = [Amount of pentane not captured (tons/yr)] + [Amount of pentane emitted from RTO (tons/yr)]

**Represents an average capture efficiency for actual operations existing at the source, based on calculations provided in the 113-22426-00047 application. The existing BOSS system is operated 2,390 hours per year, during which the capture efficiency is approximately 87.7%. When the BOSS system is not operated (6730 hours per year), pentane emissions are not captured and treated in the BOSS + RTO system (0% capture/destruction efficiency).

Abbreviations

PTE = Potential to Emit

RTO = Regenerative Thermal Oxidizer

VOC = Volatile Organic Compounds

BACT = Best Available Control Technology

BOSS = Boiler Oxidation Steam System

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

**Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006**

Emission Scenario	Unit Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr					
			PM*	PM10*	SO2	NOx**	VOC	CO
BOSS steam boiler (existing)	6.7	58.69	0.056	0.223	0.018	2.935	0.161	2.465
BOSS RTO (existing)	7.2	63.07	0.060	0.240	0.019	3.154	0.173	2.649
New steam boiler (after modification)	5.0	43.80	0.042	0.166	0.013	2.190	0.120	1.840
New RTO (after modification)	2.785	24.40	0.023	0.093	0.007	1.220	0.067	1.025
Total PTE (existing)			0.116	0.463	0.037	6.088	0.335	5.114
Total PTE (after modification)			0.065	0.259	0.020	3.410	0.188	2.864

Emission Scenario	Potential Emission tons/yr									
	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
BOSS steam boiler (existing)	6.2E-05	3.5E-05	2.2E-03	0.053	1.0E-04	1.5E-05	3.2E-05	4.1E-05	1.1E-05	6.2E-05
BOSS steam boiler (existing)	6.6E-05	3.8E-05	2.4E-03	0.057	1.1E-04	1.6E-05	3.5E-05	4.4E-05	1.2E-05	6.6E-05
New steam boiler (after modification)	4.6E-05	2.6E-05	1.6E-03	0.039	7.4E-05	1.1E-05	2.4E-05	3.1E-05	8.3E-06	4.6E-05
New RTO (after modification)	2.6E-05	1.5E-05	9.1E-04	0.022	4.1E-05	6.1E-06	1.3E-05	1.7E-05	4.6E-06	2.6E-05
Total PTE (existing)										
Total PTE (after modification)										

Total HAPs (Existing) =	0.11	tons per year
Total HAPs (After Modification) =	0.06	tons per year

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

Methodology

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
 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)
 All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter	SO2 = Sulfur Dioxide	DCB = Dichlorobenzene	Cr = Chromium
PM10 = Particulate Matter (<10 um)	NOx = Nitrous Oxides	Pb = Lead	Mn = Manganese
HAP = Hazardous Air Pollutant	VOC = Volatile Organic Compounds	Cd = Cadmium	Ni = Nickel
BOSS = Boiler Oxidation Steam System	CO = Carbon Monoxide		

**Appendix A: Emissions Calculations
Modification Summary**

Company Name: JELD-WEN
Address City IN Zip: 200 Gerber Street, Ligonier, IN 46767
Operation Permit No.: F113-10260-00047
Significant Permit Revision No.: 113-22426-00047
Reviewer: Nathan Bell
Date: February 16, 2006

Expandable Polystyrene Block Molding Operation (P006)	Potential to Emit (PTE) (tons/year) After Limits/Controls								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	(Compound)
Pentane Emissions (existing) (using BOSS for pollution control)	0	0	0	0	20.48	0	0	0	
Natural Gas Combustion (existing) (BOSS steam boiler + RTO)	0.12	0.46	0.04	6.09	0.33	5.11	0.11	0.05	(hexane)
Total PTE (existing)	0.12	0.46	0.04	6.09	20.81	5.11	0.11	0.05	(hexane)
Pentane Emissions (after modification) (using new RTO for pollution control)*	0	0	0	0	18.94	0	0	0	
Natural Gas Combustion (after modification) (new steam boiler + new RTO)	0.06	0.26	0.02	3.41	0.19	2.86	0.06	0.02	(hexane)
Total PTE (after modification)	0.06	0.26	0.02	3.41	19.13	2.86	0.06	0.02	(hexane)
Total Net Emission Increase for Modification	-0.05	-0.20	-0.016	-2.68	-1.68	-2.25	-0.05	-0.03	(hexane)

*The EPS Block Molding Operation (P006) shall comply with the following:

(a) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render the requirements 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, VOC emissions from the expandable polystyrene (EPS) block molding operation shall not exceed 4.32 pounds per hour, which is equivalent to 18.94 tons per year, with compliance determined at the end of each of month. This limit will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period.

(b) In order to comply with 326 IAC 8-1-6 (BACT), the EPS capture system shall achieve an overall VOC control efficiency of 78%.

RTO = Regenerative Thermal Oxidizer

BOSS = Boiler Oxidation Steam System