

**FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
and ENHANCED NEW SOURCE REVIEW  
OFFICE OF AIR MANAGEMENT**

**Four Seasons Housing, Inc.  
1133 County Road 2  
Middlebury, Indiana 46540**

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

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 and 326 IAC 2-1-3.2, 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.: F 039-8569-00458	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

## SECTION A SOURCE SUMMARY

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

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

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The Permittee owns and operates a stationary modular home manufacturing source.

Responsible Official: Ron Dorton  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
SIC Code: 3792  
County Location: Elkhart  
County Status: Attainment for all criteria pollutants  
Source Status: Federally Enforceable State Operating Permit (FESOP)  
Minor Source, under PSD 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)]

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

- (a) One (1) cabinet assembly area, constructed in 1997, consisting of adhesive application operations on wood and particle board substrates, woodworking operations including radial arm saws, bench saws, drill presses, chop saws, table saws, routers and a notcher, and an interior wall assembly area, equipped with a cyclone and baghouse for air pollution control and exhausting through stack R1, capacity: 4.0 modular homes per hour.
- (b) One (1) roof assembly area, constructed in 1997, consisting of adhesive and foam application operations on wood and plastic substrates, capacity: 4.0 modular homes per hour.

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

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

Other categories with emissions below insignificant thresholds:

- (a) Welding operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.
- (b) Flame cutting operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.

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

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

A.5 Prior Permit Conditions

- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.
  
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

**SECTION B GENERAL CONDITIONS**

**B.1 Permit No Defense [326 IAC 2-1-10] [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.2 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, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-7 shall prevail.

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

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

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

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

**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.6 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.7 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.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]**

- (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 Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, 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.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

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

B.10 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 constitutes a violation of the Clean Air Act and 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.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, 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, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.12 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 certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

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

- (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, OAM, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was based on continuous or intermittent data;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts as specified in Sections D of this permit, IDEM, OAM, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.13 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 (PMP) 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;
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, 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 Management, Compliance Section) or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAM, 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 notice either in writing or facsimile, of the emergency to:

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

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

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

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) IDEM, OAM, 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, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
  - (g) Operations may continue during an emergency only if the following conditions are met:
    - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
    - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

- (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
- (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

B.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 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 Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
  - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) An emergency as defined in 326 IAC 2-7-1(12); or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds five percent (5%) of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

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 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)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM 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, OAM, 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, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, 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, OAM 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).

Request for renewal shall be submitted to:

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

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
- (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due. [326 IAC 2-5-3]
- (2) If IDEM, OAM 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, OAM 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, OAM, any additional information identified as needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-8-10] [326 IAC 2-8-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-8-11(b)(2)]

Notwithstanding 326 IAC 2-8-11(b)(1)(D)(i) and 326 IAC 2-8-11(c)(1), minor permit modification procedures may be used for modifications of this permit involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches to the extent that such minor permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated by U.S. EPA.

B.20 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-8-15(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 condition:

For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

B.21 Operational Flexibility [326 IAC 2-8-15]

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-1 has been obtained;
- (3) The changes do not result in emissions which exceed the 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 Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

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

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

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

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

(b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (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 "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade increases and decreases in emissions in 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).
- (d) 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, OAM or U.S. EPA is required.
- (e) 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.22 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, 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) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-8-5(a)(4)]

- (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]
- (2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.24 Transfer of Ownership or Operation [326 IAC 2-1-6][326 IAC 2-8-10]

Pursuant to 326 IAC 2-1-6 and 2-8-10:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current Permittee and the new owner.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-8-10. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) IDEM, OAM shall reserve the right to issue a new permit.

B.25 Annual Fee Payment [326 IAC 2-8-4(6)][326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAM,, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM 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 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

B.26 Enhanced New Source Review [326 IAC 2]

The requirements of the construction permit rules in 326 IAC 2 are satisfied by this permit for any previously unpermitted facilities and such facilities to be constructed within eighteen (18) months after the date of issuance of this permit, as listed in Sections A.2 and A.3.

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

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

**C.1 Overall Source Limit [326 IAC 2-8]**

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

- (a) Pursuant to 326 IAC 2-8:
  - (1) The potential to emit any regulated pollutant from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive months.
  - (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 months; 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 months.
- (b) 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.
- (c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

**C.2 Opacity [326 IAC 5-1]**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in 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.3 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. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

C.4 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.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

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

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 units vented to the control equipment are in operation.

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

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

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

(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 Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory 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) **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 that the inspector be accredited is federally enforceable.

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

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

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by the IDEM, OAM.

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 Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**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)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule an additional ninety (90) days provided the Permittee notify:

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

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

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present in a process in more than the threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
  - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
  - (2) As a part of the 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); and
  - (3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4][326 IAC 2-8-5]  
[326 IAC 1-6]

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that 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 or;

- (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

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

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (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, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.15 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

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- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that meets the requirements of 326 IAC 2-6 (Emission Reporting). This annual statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The annual emission statement 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, OAM, on or before the date it is due.

C.16 Monitoring Data Availability

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

- (a) Records of all required monitoring data and support information 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 kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;

- (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
- (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

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

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (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 Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (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, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.

- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) 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.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Stratospheric Ozone Protection**

#### **C.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

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

**SECTION D.1 FACILITY OPERATION CONDITIONS**

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

- (a) One (1) cabinet assembly area, constructed in 1997, consisting of adhesive application operations on wood and particle board substrates, woodworking operations including radial arm saws, bench saws, drill presses, chop saws, table saws, routers and a notcher, and an interior wall assembly area, equipped with a cyclone and baghouse for air pollution control and exhausting through stack R1, capacity: 4.0 modular homes per hour.
- (b) One (1) roof assembly area, constructed in 1997, consisting of adhesive and foam application operations on wood and plastic substrates, capacity: 4.0 modular homes per hour.

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

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the wood-working facilities shall not exceed 12.1 pounds per hour when operating at a process weight rate of 10,049 pounds per hour.

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

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

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

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the adhesives and foam applied to wood furniture and cabinets 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.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), the best available control technology (BACT) for the adhesive and foam applied to wood and plastic shall be:

- (a) the use of existing low VOC adhesives in the roof assembly operation, which shall be limited to no more than thirty-percent (30%) VOC by weight;
- (b) the use of dispensing containers and closed containers for solvents and solvent rags, respectively; and
- (c) the use of no more than 98 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive months.

D.1.4 FESOP Limit [326 IAC 2-8]

- (a) These facilities shall use no more than 98 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive months from the entire source.
- (b) These facilities shall use no more than 23 tons of any combination of Hazardous Air Pollutants (HAPs), including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of any combination of HAPs to less than 25 tons per twelve (12) consecutive months from the entire source.
- (c) These facilities shall use no more than 9.9 tons of each individual HAP, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of each individual HAP to less than 10 tons per twelve (12) consecutive months from the entire source.

D.1.5 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 these facilities and any control device.

**Compliance Determination Requirements**

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM, VOC and HAP limits specified in Conditions D.1.1 and D.1.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.7 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)

Compliance with the VOC content limitation contained in Condition D.1.3 and the VOC and HAP usage limitations contained in Condition D.1.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**D.1.8 VOC and HAP Emissions**

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Compliance with Conditions D.1.3(c) and D.1.4 shall be demonstrated at the end of each month based on the total volatile organic compound and hazardous air pollutant usage for the most recent twelve- (12-) month period.

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

**D.1.9 Particulate Matter (PM)**

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The cyclone and baghouse for PM control shall be in operation at all times when the woodworking emission units are in operation and exhausting to the outside atmosphere.

**D.1.10 Visible Emissions Notations**

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- (a) Daily visible emission notations of the cabinet assembly area stack (R1) 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.

**D.1.11 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of the cyclone and all bags controlling the woodworking operation when venting to the atmosphere. A cyclone and baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

**D.1.12 Broken Bag, Failed Bag or Failure Detection**

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In the event that bag failure or cyclone failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. 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 cyclones and single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have 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).

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

**D.1.13 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.10, the Permittee shall maintain records of daily visible emission notations of the cabinet assembly area stack (R1) exhaust.
- (b) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.6 and the dates the vents are re-directed.
- (c) To document compliance with Conditions D.1.3 and D.1.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content and VOC and HAP usage limits established in Conditions D.1.3 and D.1.4.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC and HAP usage for each month; and
  - (5) The weight of VOCs and HAPs emitted for each compliance period.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.1.14 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.1.4 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.

**SECTION D.2 FACILITY OPERATION CONDITIONS**

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

Other categories with emissions below insignificant thresholds:

- (a) Welding operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.
- (b) Flame cutting operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.

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

**D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the welding and flame cutting operations shall not exceed allowable PM emission rate based on the following equation:

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

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

and

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

**Compliance Determination Requirement**

**D.2.2 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

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

Source Name: Four Seasons Housing, Inc.  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
FESOP No.: F 039-8569-00458

**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 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 MANAGEMENT  
COMPLIANCE DATA SECTION  
P.O. Box 6015  
100 North Senate Avenue  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

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

Source Name: Four Seasons Housing, Inc.  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
FESOP No.: F 039-8569-00458

**This form consists of 2 pages**

**Page 1 of 2**

Check either No. 1 or No.2	
<b>9</b>	1. This is an emergency as defined in 326 IAC 2-7-1(12) CThe Permittee must notify the Office of Air Management (OAM), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and CThe Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
<b>9</b>	2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c) CThe Permittee must submit notice in writing within ten (10) calendar days

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/Deviation:
Describe the cause of the Emergency/Deviation:

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

Page 2 of 2

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

Form Completed by: \_\_\_\_\_

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

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

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

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

**FESOP Quarterly Report**

Source Name: Four Seasons Housing, Inc.  
 Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
 Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
 FESOP No.: F 039-8569-00458  
 Facility: Adhesive and foam application  
 Parameter: VOC usage  
 Limit: 98 tons per twelve (12) consecutive months

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

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

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: \_\_\_\_\_

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

**FESOP Quarterly Report**

Source Name: Four Seasons Housing, Inc.  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
FESOP No.: F 039-8569-00458  
Facility: Adhesive and foam application  
Parameter: Total HAP usage  
Limit: 23 tons per twelve (12) consecutive months

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

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

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: \_\_\_\_\_

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

**FESOP Quarterly Report**

Source Name: Four Seasons Housing, Inc.  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
FESOP No.: F 039-8569-00458  
Facility: Adhesive and foam application  
Parameter: Individual HAP usage  
Limit: 9.9 tons per twelve (12) consecutive months

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

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

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: \_\_\_\_\_

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

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

Source Name: Four Seasons Housing, Inc.  
Source Address: 1133 County Road 2, Middlebury, Indiana 46540  
Mailing Address: P.O. Box 630, Middlebury, Indiana 46540  
FESOP No.: F 039-8569-00458

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

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/ Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (eg. Permit Condition D.1.3)	Number of Deviations	Date of each Deviation

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

Attach a signed certification to complete this report.

## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) and Enhanced New Source Review (ENSR)

#### Source Background And Description

Source Name:	Four Seasons Housing, Inc.
Source Location:	1133 County Road 2, Middlebury, Indiana 46540
County:	Elkhart
SIC Code:	3792
Operation Permit No.:	F 039-8569-00458
Permit Reviewer:	CarrieAnn Ortolani, MES

The Office of Air Management (OAM) has reviewed a Federally Enforceable State Operating Permit (FESOP) application from Four Seasons Housing, Inc. relating to the operation of a modular home manufacturing source.

#### Permitted Emission Units and Pollution Control Equipment

The source has no permitted emission units and pollution control devices.

#### Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

- (a) One (1) cabinet assembly area, constructed in 1997, consisting of adhesive application operations on wood and particle board substrates, woodworking operations including radial arm saws, bench saws, drill presses, chop saws, table saws, routers and a notcher, and an interior wall assembly area, equipped with a cyclone and baghouse for air pollution control and exhausting through stack R1, capacity: 4.0 modular homes per hour.
- (b) One (1) roof assembly area, constructed in 1997, consisting of adhesive and foam application operations on wood and plastic substrates, capacity: 4.0 modular homes per hour.

#### Emission Units and Pollution Control Equipment Under Enhanced New Source Review (ENSR)

There are no new facilities to be reviewed under the ENSR process.

#### Insignificant Activities

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

- (a) Four (4) space heaters, constructed in 1997, fired by natural gas, capacity: 2.50 million British thermal units per hour, each.
- (b) Other categories with emissions below insignificant thresholds:

- (1) Welding operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.
- (2) Flame cutting operations with PM<sub>10</sub> emission less than twenty-five (25) pounds per day.

### **Existing Approvals**

There are no existing approvals for this source.

### **Enforcement Issue**

- (a) IDEM is aware that the following equipment has been constructed and operated prior to receipt of the proper permit:
  - (1) One (1) cabinet assembly area, constructed in 1997, consisting of adhesive application operations on wood and particle board substrates, woodworking operations including radial arm saws, bench saws, drill presses, chop saws, table saws, routers and a notcher, and an interior wall assembly area, equipped with a cyclone and baghouse for air pollution control and exhausting through stack R1, capacity: 4.0 modular homes per hour.
  - (2) One (1) roof assembly area, constructed in 1997, consisting of adhesive and foam application operations on wood and plastic substrates, capacity: 4.0 modular homes per hour.
  - (3) Four (4) space heaters, constructed in 1997, fired by natural gas, capacity: 2.50 million British thermal units per hour, each.
- (b) IDEM is aware that the source was not issued a FESOP by December 14, 1996 nor did they submit a Part 70 application by that date.
- (c) IDEM is reviewing this matter and will take appropriate action. This proposed permit will also satisfy the requirements of the construction permit rules.

### **Recommendation**

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

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

An administratively complete FESOP application for the purposes of this review was received on May 8, 1997. Additional information was received on July 23, 1997 and May 18, 1998.

**Emissions Calculations**

See Appendix A (Emissions Calculation Spreadsheets, five (5) pages) for detailed calculations of emissions from surface coating, welding and natural gas combustion. Particulate emissions from woodworking are as follows:

**Particulate Emissions From Woodworking Operations**

Particulate matter emissions from the woodworking operations in the cabinet assembly area are based upon measurements taken at an identical Four Seasons Housing plant located at 104 14th Avenue in Middlebury, Indiana (F 039-6207-00094), and have been adjusted from a maximum capacity of 3.0 homes per hour to 4.0 homes per hour. All woodworking devices are connected to the baghouse/cyclone dust collector.

5.3 tons (10,600 lb) of sawdust is collected annually in the cyclone.  
 System operates at approximately 23.3% capacity (40 hour work week, 51 weeks)  
 Cyclone is 99% efficient

$$\begin{aligned}
 10,600 \text{ lb/yr} \div 0.233 \times 4/3 &= 60,658 \text{ lbs/yr collected dust adjusted for capacity} \\
 60,658 \text{ lb/yr} \div 0.99 &= 61,270 \text{ lbs/yr uncontrolled Potential Emission} \\
 \text{PM} = \text{PM}_{10} &= 30.6 \text{ TPY uncontrolled Potential Emission} \\
 61,270 \text{ lb/hr} (1 - .99) &= 612.7 \text{ lb/yr} \\
 &= 0.306 \text{ TPY Potential Emissions after control}
 \end{aligned}$$

	Recap of Emissions in Tons Per Year				
	Adhesive & Foam Application	Woodworking	Welding	Combustion	Total
<b>PM</b>	0.000	30.6	0.086	0.526	31.2
<b>PM<sub>10</sub></b>	0.000	30.6	0.086	0.526	31.2
<b>SO<sub>2</sub></b>	0.000	0.000	0.000	0.026	0.026
<b>NO<sub>x</sub></b>	0.000	0.000	0.000	4.38	4.38
<b>VOC</b>	234.9	0.000	0.000	0.232	235
<b>CO</b>	0.000	0.000	0.000	0.920	0.920

### Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as “emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility.”

<b>Pollutant</b>	<b>Potential Emissions (tons/year)</b>
PM	31.2
PM <sub>10</sub>	31.2
SO <sub>2</sub>	0.026
VOC	235
CO	0.920
NO <sub>x</sub>	4.38

Note: For the purpose of determining Title V applicability for particulates, PM<sub>10</sub>, not PM, is the regulated pollutant in consideration.

See pages 1, 3, 4, and 5 of 5 of the attached spreadsheets and page 3 of 14 of this document for detailed calculations.

<b>HAP</b>	<b>Potential Emissions (tons/year)</b>
Toluene	8.07
Hexane	8.04
MEK	40.7
Ethylene Glycol	5.73
MDI	0.0003
Glycol Ethers	2.10
Manganese	0.0022
Nickel	0.00004
Chromium	0.0001
<b>TOTAL</b>	<b>64.6</b>

See pages 2, 3 and 4 of 5 of the attached spreadsheets for detailed calculations.

- (a) The potential emissions (as defined in the Indiana Rule) of VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

- (b) The potential emissions (as defined in Indiana Rule) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in Indiana Rule) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.
- (d) **Fugitive Emissions**  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter emissions are not counted toward determination of PSD and Emission Offset applicability.

**Limited Potential To Emit**

- (a) The source has accepted a federally enforceable limit on potential to emit VOC of 99 tons per year, consisting of:
  - (i) 98 tons per year for the significant activities; and
  - (ii) 1.0 ton per year for the insignificant activities.
- (b) The source has accepted a limit on potential to emit of 24 tons per year for any combination of HAPS, consisting of:
  - (i) 23.0 tons per year for the significant activities; and
  - (ii) 1.0 ton per year for insignificant activities.
- (c) The source has accepted a limit on potential to emit of 9.9 tons per year for any single HAP. The HAP emissions from insignificant activities are particulate HAPs, such as chromium, nickel and manganese. Therefore, the insignificant activities will not emit the same HAPs as those emitted at the adhesive and foam application facilities. The individual HAP emission limit will consist of 9.9 tons per year for the significant activities.
- (d) The table below summarizes the total limited potential to emit of the significant and insignificant emission units.

Process/ facility	Limited Potential to Emit (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Woodworking Operations	30.6	30.6	0.000	0.000	0.000	0.000	0.000
Adhesive and Foam Application	0.000	0.000	0.000	98.0	0.000	0.000	23.0
Insignificant Activities	1.00	1.00	1.00	1.00	1.00	5.00	1.00
<b>Total Emissions</b>	<b>31.6</b>	<b>31.6</b>	<b>1.00</b>	<b>99.0</b>	<b>1.00</b>	<b>5.00</b>	<b>24.0</b>

**County Attainment Status**

The source is located in Elkhart County.

Pollutant	Status
TSP	attainment
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone.

**Federal Rule Applicability**

- (a) There are no New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart JJ (Part 63.800) because the source is not a major source as defined by 40 CFR Part 63.2. The source has agreed to limit individual HAP usage to 9.9 tons per year and total HAP usage to 24.0 tons per year. Therefore, the emission limitations listed in 40 CFR Part 63, Subpart JJ are not applicable. However, pursuant to this rule, the source shall keep records to show that they are a minor source of HAPS.

### **State Rule Applicability - Entire Source**

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

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC in Elkhart County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

#### 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

#### 326 IAC 1-7 (Stack Height Provisions)

- (a) Stack R1 is subject to the provisions of 326 IAC 1-7 (Stack Height Provisions), that apply to all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.
- (b) Since actual emissions from Stack R1 are less than twenty-five (25) tons per year of PM, the source is exempt from the requirements of 326 IAC 1-7-3(a) (Stack Height Provisions).

### **State Rule Applicability - Individual Facilities**

#### 326 IAC 2-1-3.4 (New Source Toxics Control)

This source is not subject to 326 IAC 2-1-3.4 (New Source Toxics Control) since the source was constructed and operational prior to July 27, 1997.

#### 326 IAC 6-3-2 (Process Operations)

- (a) The woodworking operations are subject to 326 IAC 6-3-2, Process Operations. The particulate matter (PM) emissions will be limited to 12.1 pounds per hour when operating at a process weight rate of 10,049 pounds per hour. Since this allowable PM emission rate of 12.1 pounds per hour is greater than the potential PM emission rate of 6.99 pounds per hour, the woodworking operations comply with this rule. This limitation was determined using the following equation:

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

- (b) The adhesive and foam application operations are not subject to the requirements of 326 IAC 6-3, Process Operations, because there is no overspray or particulate emissions from these operations.

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

Since the adhesive and foam application operations on wood and plastic substrates have the potential to emit more than 25 tons per year of VOC, 326 IAC 8-1-6 is applicable. The applicant has submitted a Best Available Control Technology (BACT) analysis which evaluated substitution of materials as well as three (3) different add-on control technologies.

- (a) The adhesives used in the roof assembly operation, Shingle Stick, Plastic Cement and Lap Cement are all low VOC coatings at 2.32 pounds (30%) of VOC per gallon of coating less water. Lower VOC content adhesives are not feasible.
- (b) Carbon adsorption has been determined technologically infeasible because the ketones in the air stream have high heats of adsorption which increase the carbon bed temperature, causing a lower adsorption capacity and possibly carbon bed fires.
- (c) The removal costs per ton for the remaining add-on control technologies, thermal oxidation and catalytic oxidation, were \$3,688 and \$2,768, respectively. These figures are attached in the BACT Cost Analysis, which is based on potential emissions. Since the source has accepted a VOC usage limit of 98 tons per twelve (12) consecutive months to satisfy the requirements of 326 IAC 2-8 (FESOP), this analysis does not represent the cost of controlling the limited emissions. The cost per ton of controlling limited emissions will be \$8,840 for thermal oxidation and \$6,635 for catalytic oxidation. Based upon net income and profit projections submitted by the applicant, installation and operation of the add-on controls is not economically feasible. The annual cost of a thermal oxidizer or a catalytic oxidizer will be 153% or 122%, respectively, of the projected net annual profit.
- (d) The Best Available Control Technology (BACT) has therefore been determined to be:
- (1) the use of existing low VOC adhesives in the roof assembly operation, which shall be limited to no more than thirty percent (30%) VOC by weight,
  - (2) the use of dispensing containers and closed containers for solvents and solvent rags, respectively, and
  - (3) the use of no more than 98 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive months.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

- (a) Since the adhesive and foam application operations on wood and plastic substrates were constructed after 1990 and the actual VOC emissions from each booth is greater than 15 pounds per day, the adhesive and foam application are subject to the requirements of 326 IAC 8-2-12. This rule requires that the owner/ operator of a wood furniture operation apply all coating material, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repairs, using one (1) or more of the following application systems:

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)	Aerosol Spray Cans

High-volume low-pressure spray is an acceptable alternative application of air-assisted airless spray. High-volume low-pressure (HVLP) spray means technology used to apply coating to a 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.

- (b) The caulking and brush-on adhesive applications methods used at the source are in compliance with this rule.

**Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, 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 permit Section D are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in permit Section D. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

The cabinet assembly area has applicable compliance monitoring conditions as specified below:

- (a) The cyclone and baghouse for PM control shall be in operation at all times when the cabinet assembly area are in operation and exhausting to the outside atmosphere.

- (b) Daily visible emission notations of the cabinet assembly area stack (R1) exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. 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. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  
- (c) An inspection shall be performed each calendar quarter of all bags controlling the wood-working operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application Form GSD-08.

This source has accepted federally enforceable air toxic emission limits of 9.9 tons per year for any single HAP and 24 tons per year for any combination of HAPs.

### **Conclusion**

The operation of this modular home manufacturing source will be subject to the conditions of the attached proposed **FESOP No. F 039-8569-00094**.

## Indiana Department of Environmental Management Office of Air Management

### Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

**Source Name:** Four Seasons Housing, Inc.  
**Source Location:** 1133 County Road 2, Middlebury, Indiana 46540  
**County:** Elkhart  
**SIC Code:** 3792  
**Operation Permit No.:** F 039-8569-00458  
**Permit Reviewer:** CarrieAnn Ortolani, MES

On October 30, 1998, the Office of Air Management (OAM) had a notice published in the Elkhart Truth, Elkhart, Indiana, stating that Four Seasons Housing, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a modular home manufacturing source with a cyclone and baghouse as controls. The notice also stated that OAM proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP 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 FESOP should be issued as proposed.

Upon further review, the OAM has decided to make the following changes to the FESOP. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

#### Change 1:

Condition C.2 was revised as follows:

##### C.2 Opacity [326 IAC 5-1]

---

Pursuant to 326 IAC 5-1-2 (~~Visible Emissions~~ **Opacity** Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), ~~visible emissions~~ opacity shall meet the following, unless otherwise stated in this permit:

- (a) ~~Visible emissions~~ **Opacity** shall not exceed an average of forty percent (40%) ~~opacity~~ in ~~twenty four (24) consecutive readings~~, **any one (1) six (6) minute averaging period** as determined in 326 IAC 5-1-4.
- (b) ~~Visible emissions~~ **Opacity** shall not exceed sixty percent (60%) ~~opacity~~ 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.

#### Change 2:

Condition D.1.9 has been revised as follows:

##### D.1.9 Particulate Matter (PM)

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The cyclone and baghouse for PM control shall be in operation at all times when the woodworking ~~emission units are~~ in operation and exhausting to the outside atmosphere.

**Change 3:**

Condition D.1.11 has been revised as follows:

**D.1.11 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of **the cyclone and** all bags controlling the woodworking operation when venting to the atmosphere. A **cyclone and** baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

**Change 4:**

Condition D.1.12 has been revised as follows:

**D.1.12 Broken Bag, Failed Bag or Failure Detection**

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In the event that bag failure **or cyclone failure** has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. 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) ~~Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.~~ **For cyclones and single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have 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).**

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

**Company Name:** Four Seasons Housing, Inc.  
**Address City IN Zip:** 1133 C.R. 2, Middlebury, Indiana 46540  
**FESOP:** 039-8569  
**Pit ID:** 039-00458  
**Reviewer:** CarrieAnn Ortolani  
**Date:** May 8, 1997

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	kg VOC /kg solids	Transfer Efficiency
<b>Cabinet Assembly</b>																	
Conbond	6.70	79.5%	0.0%	79.5%	0.0%	13.60%	0.3030	4.00	1.00	5.33	5.33	6.46	154.94	28.28	0.00	5.85	100%
Sun Adhesive	9.90	35.0%	0.0%	35.0%	0.0%	44.50%	0.1102	4.00	1.00	3.47	3.47	1.53	36.66	6.69	0.00	0.79	100%
Latex Adhesive	10.10	10.9%	0.0%	10.9%	0.0%	72.00%	0.6481	4.00	1.00	1.10	1.10	2.85	68.43	12.49	0.00	0.15	100%
Weldon	7.22	86.1%	0.0%	86.1%	0.0%	15.00%	0.3030	4.00	1.00	6.21	6.21	7.53	180.78	32.99	0.00	5.74	100%
Harvey Seal	11.32	28.0%	0.0%	28.0%	0.0%	74.23%	0.0379	4.00	1.00	3.17	3.17	0.48	11.53	2.10	0.00	0.38	100%
<b>Roof Assembly</b>																	
Shingle Stick	7.74	30.0%	0.0%	30.0%	0.0%	61.90%	0.2192	4.00	1.00	2.32	2.32	2.04	48.86	8.92	0.00	0.48	100%
Plastic Cement	7.74	30.0%	0.0%	30.0%	1.85%	61.90%	0.1515	4.00	1.00	2.37	2.32	1.41	33.77	6.16	0.00	0.48	100%
Lap Cement	7.74	30.0%	0.0%	30.0%	0.0%	61.90%	3.0303	4.00	1.00	2.32	2.32	28.15	675.49	123.28	0.00	0.48	100%
Oatley Cleaner	6.60	100.0%	0.0%	100.0%	0.0%	0.00%	0.0909	4.00	1.00	6.60	6.60	2.40	57.59	10.51	0.00	N/A	100%
Foam Seal	10.29	0.0%	0.0%	0.0%	0.0%	100.00%	6.0606	4.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	100%
Foam Seal Solvent	8.00	100.0%	0.0%	100.0%	0.0%	0.00%	0.0250	4.00	1.00	8.00	8.00	0.80	19.20	3.50	0.00	N/A	100%
<b>State Potential Emissions</b>											<b>TOTAL:</b>	<b>53.6</b>	<b>1287</b>	<b>235</b>	<b>0.00</b>		

Add worst case coating to all solvents

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
 Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* Flash-off  
 Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day) \* Flash-off  
 Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs) \* Flash-off  
 Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
 Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids) \* Flash-off  
 Total = Worst Coating + Sum of all solvents used

**HAP Emission Calculations**

**Company Name:** Four Seasons Housing, Inc.  
**Address City IN Zip:** 1133 C.R. 2, Middlebury, Indiana 46540  
**FESOP:** 039-8569  
**Pit ID:** 039-00458  
**County:** Elkhart  
**Reviewer:** CarrieAnn Ortolani  
**Date:** May 8, 1997

Material	Density (lb/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Emission Factor	Weight % Toluene	Weight % Hexane	Weight % MEK	Weight % Ethylene Glycol	Weight % MDI	Weight % Glycol Ethers	Toluene Emissions (tons/yr)	Hexane Emissions (tons/yr)	MEK Emissions (tons/yr)	Ethylene Glycol Emissions (tons/yr)	MDI Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)
<b>Cabinet Assembly</b>																
Conbond	6.70	0.3030	4.00	1.00	20.00%	22.60%	0.10%	0.00%	0.00%	0.00%	7.11	8.04	0.04	0.00	0.00	0.00
Sun Adhesive	9.90	0.1102	4.00	1.00	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.96	0.00	0.00	0.00	0.00	0.00
Latex Adhesive	10.10	0.6481	4.00	1.00	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00	0.00	0.00	5.73	0.00	0.00
Weldon	7.22	0.3030	4.00	1.00	0.00%	0.00%	80.00%	0.00%	0.00%	0.00%	0.00	0.00	30.66	0.00	0.00	0.00
Harvey Seal	11.32	0.0379	4.00	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
<b>Roof Assembly</b>																
Shingle Stick	7.74	0.2192	4.00	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Plastic Cement	7.74	0.1515	4.00	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Lap Cement	7.74	3.0303	4.00	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Oatley Cleaner	6.60	0.0909	4.00	1.00	0.00%	0.00%	95.00%	0.00%	0.00%	0.00%	0.00	0.00	9.99	0.00	0.00	0.00
Foam Seal	10.29	6.0606	4.00	6.0E-07	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00	0.00	0.00	0.00	0.0003	0.00
Foam Seal Solvent	8.00	0.0250	4.00	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00	0.00	0.00	0.00	0.00	2.10

Total State Potential Emissions

<b>TOTALS:</b>	<b>(tons/yr):</b>	<b>8.07</b>	<b>8.04</b>	<b>40.7</b>	<b>5.73</b>	<b>0.0003</b>	<b>2.10</b>
	<b>(lb/hr):</b>	<b>1.84</b>	<b>1.84</b>	<b>9.30</b>	<b>1.31</b>	<b>0.0001</b>	<b>0.480</b>
	<b>(g/sec):</b>	<b>0.232</b>	<b>0.231</b>	<b>1.17</b>	<b>0.165</b>	<b>0.00001</b>	<b>0.061</b>

**Total HAPS = 64.6 TPY**

**METHODOLOGY**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs  
 MDI Emission Factor derived using methodology from The Society of the Plastics Industry, Publication AX-186

**Appendix A: Emissions Calculations  
From Welding Operations**

**Company Name: Four Seasons Housing, Inc.**  
**Address City IN Zip: 1133 C. R. 2, Middlebury, Indiana 46540**  
**FESOP: 039-8569**  
**Pit ID: 039-00458**  
**Reviewer: CarrieAnn Ortolani**  
**Date: May 8, 1997**

Type of Welding	Number of Units	Electrode Type	Maximum Electrode Consumption per Unit (lbs/hr)	Emission Factors (lb pollutant/lb electrode consumed)		Potential Emissions (tons/year)	
				PM	Manganese	PM	Manganese
Stick Welding	1.0	Carbon Steel	0.12500	0.0370	0.0030	0.020	0.002
<b>Total Potential Emissions (tons/yr):</b>						<b>0.020</b>	<b>0.002</b>

METHODOLOGY

Emissions (tons/yr) = Number of Units \* Maximum Electrode Consumption per Unit \* Emission Factor (lb pollutant/lb electrode consumed) \* 8760 (hrs/yr) \* (1 ton/2000 lbs)  
 Emission Factors are from the SARA 313 Reporting Guide.

**Appendix A: Emissions Calculations  
From Flame-Cutting of Metal**

**Company Name: Four Seasons Housing, Inc.**  
**Address City IN Zip: 1133 C. R. 2, Middlebury, Indiana 46540**  
**FESOP: 039-8569**  
**Plt ID: 039-00458**  
**Reviewer: CarrieAnn Ortolani**  
**Date: May 8, 1997**

Type of Flame-Cutting	Maximum Metal Thickness Cut (inches)	Maximum Metal Cutting Rate (in/min)	Emission Factors (lbs pollutant/1000 inches cut 1" thick)				Potential Emissions (tons/year)			
			PM	Manganese	Nickel	Chromium	PM	Manganese	Nickel	Chromium
Oxyacetylene	0.25	6.0	0.1622	0.0005	0.0001	0.0003	0.0639	0.0002	0.00004	0.0001
<b>Total Potential Emissions (tons/yr):</b>							<b>0.064</b>	<b>0.0002</b>	<b>0.00004</b>	<b>0.0001</b>

**METHODOLOGY**

Emissions (tons/yr) = Maximum Metal Thickness Cut (in) \* Emission Factor (lbs pollutant/1000 inches cut 1" thick) \* Maximum Metal Cutting Rate (in/min) \* 60 (min/hr) \* 8760 (hrs/yr) \* (1 ton/2000 lbs)  
Emission Factors are from the SARA 313 Reporting Guide.

**Appendix A: Emission Calculations  
 Natural Gas Combustion Only  
 MM Btu/hr 0.3 - < 10  
 Four (4) 2.5 MMBtu Space Heaters**

**Company Name:** Four Seasons Housing, Inc.  
**Address City IN Zip:** 1133 C. R. 2, Middlebury, Indiana 46540  
**FESOP:** 039-8569  
**Plt ID:** 039-00458  
**Reviewer:** CarrieAnn Ortolani  
**Date:** May 8, 1997

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

10.0

87.6

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.526	0.526	0.026	4.38	0.232	0.920

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low NOx Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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