



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
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(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: February 21, 2007  
RE: SACO Industries, Inc / 089-19460-00443  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures  
FNPER.dot 03/23/06



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## FEDERALLY ENFORCEABLE STATE OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**SACO Industries, Inc.  
17151 Morse Street  
Lowell, Indiana 46356**

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

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

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

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

Operation Permit No.: 089-19460-00443	
Original signed by:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: February 20, 2007  Expiration Date: February 20, 2012

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## SECTION A SOURCE SUMMARY

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

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

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The Permittee owns and operates a stationary wood and particle board surface coating and manufacturing operation for bathroom and kitchen cabinets.

Authorized Individual:	Ron Bergstrom
Source Address:	17151 Morse Street, Lowell, IN 46356
Mailing Address:	P.O. Box 342, Lowell, IN 46356
General Source Phone Number:	(219) 696-2800
SIC Code:	2434
County Location:	Lake
Source Location Status:	Moderate nonattainment for 8-hour ozone Nonattainment for PM2.5 Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD, Emission Offset Rules, and Nonattainment NSR 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) spray booth (ID EU-03), which began operations in March, 1999, with a maximum capacity of 43.75 wood pieces per hour, utilizing an HVLP application system and a dry filter for overspray control, and exhausting through stack S3.

### 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):

- (a) Woodworking area equipped with the following miscellaneous woodworking equipment:
  - (1) One (1) molder unit, one (1) door shaper unit, and one (1) sanding unit, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse for particulate control (D-5) with a grain loading outlet of 0.003 grains/scf and 12,000 CFM, and exhausting to stack S-5; [326 IAC 2-7-1(21)(G)(xxix)] and
  - (2) One (1) rough milling unit, one (1) ripper unit, one (1) door shaper unit, one (1) lamination booth, one (1) dado machine, and two (2) panel saws, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse (D-7) for particulate control with a grain loading outlet of 0.003 grains/scf and 70,000 CFM, and exhausting to stack S-7. [326 IAC 2-7-1(21)(G)(xxix)]

- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.003 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking areas; [326 IAC 2-7-1(21)(G)(xxix)]
- (c) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
  - (1) Fifteen (15) space heaters each with a maximum heat input rate of 0.05 mmBtu/hr;
- (d) Application of oils, greases, lubricants or other nonvolatile material applied as temporary protective coatings;
- (e) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;
- (f) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (g) Paved and unpaved roads and parking lots with public access;
- (h) One (1) welding department utilizing one (1) baghouse for particulate control (D-7), using E7018 welding material, constructing 43.75 units per hour;
- (i) One (1) lamination booth adhesive applicator, with a maximum capacity of 43.75 units per hour;
- (j) One (1) end panel adhesive applicator, with a maximum capacity of 3.38 pounds per hour of adhesive; and
- (k) One (1) water based spray booth, identified as EU-5, using aqueous materials containing less than or equal to one percent (1%) by weight of VOCs that contain no HAPs.

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

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

## **SECTION B GENERAL CONDITIONS**

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

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

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

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- (a) This permit, F089-19460-00443, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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

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

Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

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

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

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

- (g) Operations may continue during an emergency only if the following conditions are met:
- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

- (a) All terms and conditions of permits established prior to F089-19460-00443 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

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

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

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

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

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

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

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

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

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

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

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

Request for renewal shall be submitted to:

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

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

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

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

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
  - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

and

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

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

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

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

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at 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).
- (c) Alternative Operating Scenarios Federally Enforceable State Operating Permit  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

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

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

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

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit volatile organic compounds (VOCs) and PM-10 from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
- (2) The potential to emit any regulated pollutant from the entire source, except particulate matter (PM), shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period;
- (3) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (4) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two-hundred and fifty (250) tons per twelve (12) consecutive month period, respectively. This limitation shall render 326 IAC 2-2 (PSD) not applicable.

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

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

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

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

C.7 Fugitive Dust Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the in plant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the in plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on November 12, 1998.

C.8 Stack Height [326 IAC 1-7]

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

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

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

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

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

#### **C.10 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 any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

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

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

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

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

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

### **C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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

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

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

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

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

### **C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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

### **C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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

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

### **C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

- (a) The Permittee prepared and submitted a written emergency reduction plans (ERPs) consistent with safe operating procedures on May 11, 2006.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.  
[326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.17 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test Federally Enforceable State Operating Permit

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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 response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

#### C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

#### C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## **Stratospheric Ozone Protection**

### **C.21 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) spray booth (ID EU-03), which began operations in March, 1999, with a maximum capacity of 43.75 wood pieces per hour, utilizing an HVLP application system and a dry filter for overspray control, and exhausting through stack S3.

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

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

#### D.1.1 Volatile Organic Compound (VOC) Limitation [326 IAC 2-3][326 IAC 2-8]

The VOC content delivered to the applicator of the spray booth, identified as EU-03, including coatings, dilution solvents, and clean-up solvents, shall be limited to less than twenty-four and sixty-eight hundredths (24.68) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This limit is required to limit the source wide potential to emit of VOC to less than twenty-five (25) tons per twelve (12) consecutive month period.

Compliance with this VOC limit shall render 326 IAC 2-3 (Emission Offset) and 326 IAC 2-7 (Part 70 Permit) not applicable.

#### D.1.2 PM and PM-10 Limits [326 IAC 2-8][326 IAC 2-2][326 IAC 2-3]

- (a) The usage of solid for the surface coating operations (EU-3) shall be less than the limit calculated as follows:

Maximum Usage of Surface Coating Solids (gal/year) =

$$\left[ \left( \sum_{i=1}^{12} (\text{Density (lbs/gal)} * (\text{Weight \% of Solids}) * (1 - 75\% \text{ Transfer Efficiency}) * (\text{Material Usage (gal/month)}) * (1 \text{ ton}/2000 \text{ lbs}) * (1 - 85\% \text{ Control Efficiency} (\%))) \right) \right] < 15.69 \text{ tons PM/PM-10 per year; and}$$

- (b) The PM/PM-10 emissions from the molding/sanding/shaping operations, sawing/cutting/rough milling operations, and the machining and grinding operations, in permit Section D.2, each shall not exceed 3.11 pounds of PM/PM10 per hour.

The PM/PM-10 emission limits in (a) and (b) together with PM/PM-10 emissions from all other emission units at the source shall limit the PM/PM-10 emissions from the source to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. This PM-10 limit will render the source not subject to the provisions of 326 IAC 2-7. The PM-10 limit will also render 326 IAC 2-3 (Emission Offset) requirements for PM-10 not applicable.

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

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating 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 (HVLV) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLV spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

D.1.4 Hazardous Air Pollutants (HAPs) Limitations [326 IAC 2-4.1-1] [326 IAC 2-8]

The input of any single HAP and total HAPs to the one (1) spray booth, identified as EU-03, shall be limited to less than nine and ninety-nine hundredths (9.99) tons per year and twenty-four and ninety-nine hundredths (24.99) tons per year, respectively. This usage limit is required to limit the source wide potential to emit of any single HAP and total HAPs to less than ten (10) and twenty-five (25) tons per year, respectively.

Compliance with these HAP limitations shall render 326 IAC 2-4.1-1 (New Source Toxics Control) and 326 IAC 2-7 (Part 70 Permit) not applicable.

D.1.5 Particulate Matter (PM) [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes), particulate matter from the one (1) spray booth, identified as EU-03, shall be controlled by a dry filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the one (1) spray booth, identified as EU-03, and any control devices.

**Compliance Determination Requirements**

D.1.7 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2][326 IAC 8-1-4]

Compliance with the VOC and HAP content and usage limitations contained in Conditions D.1.1 and D.1.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC and HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.8 Particulate Matter (PM) Control

The dry filter for particulate matter (PM) control shall be in operation and control emissions from the one (1) spray booth, identified as EU-03, at all times that the spray booth is in operation.

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

### **D.1.9 Monitoring**

---

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filter. To monitor the performance of the dry filter, weekly observations shall be made of the overspray from the surface coating booth stack (S3) while the booth is in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

### **D.1.10 Record Keeping Requirements**

---

- (a) To document compliance with Conditions D.1.1 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, single HAP and total HAP usage limits established in Conditions D.1.1 and D.1.4.
  - (1) The VOC and HAP content of each coating material and solvent used;
  - (2) The amount of coating material and solvent less water used on a monthly basis;
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used; and
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
  - (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.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM and PM-10 usage limits established in Condition D.1.2.
  - (1) The solids content of each coating material and solvent used;
  - (2) The amount of coating material and solvent less water used on a monthly basis;

- (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used; and
  - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
- (3) The total solids usage for each month; and
  - (4) The weight of solids emitted for each compliance period.
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.
  - (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, and 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. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

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

#### Insignificant Activities:

- (a) Woodworking area equipped with the following miscellaneous woodworking equipment:
  - (1) One (1) molder unit, one (1) door shaper unit, and one (1) sanding unit, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse for particulate control (D-5) with a grain loading outlet of 0.003 grains/scf and 12,000 CFM, and exhausting to stack S-5; [326 IAC 2-7-1(21)(G)(xxix)] and
  - (2) One (1) rough milling unit, one (1) ripper unit, one (1) door shaper unit, one (1) lamination booth, one (1) dado machine, and two (2) panel saws, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse (D-7) for particulate control with a grain loading outlet of 0.003 grains/scf and 70,000 CFM, and exhausting to stack S-7. [326 IAC 2-7-1(21)(G)(xxix)]
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.003 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking areas. [326 IAC 2-7-1(21)(G)(xxix)]

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

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

#### D.2.1 Baghouse Limitations [326 IAC 2-7-1(21)(G)(xxix)]

The molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations each controlled by a baghouse shall be an insignificant activity for Title V permitting purposes provided that the baghouse operations meet the requirements of 326 IAC 2-7-1(21)(G)(xxix), including the following:

- (a) Each woodworking baghouse shall not exhaust to the atmosphere greater than one hundred twenty-five thousand (125,000) cubic feet of air per minute and shall not emit particulate matter with a diameter less than ten (10) microns in excess of three-thousandths (0.003) grain per dry standard cubic foot of outlet air.
- (b) The opacity from each baghouse shall not exceed ten percent (10%).
- (c) Visible emissions from the baghouse shall be observed daily using procedures in accordance with Method 22 and normal or abnormal emissions are recorded. In the event abnormal emissions are observed for greater than six (6) minutes in duration, the following shall occur:
  - (1) The baghouse shall be inspected.
  - (2) Corrective actions, such as replacing or reseating bags, are initiated, when necessary.

**D.2.2 PM and PM-10 Limit [326 IAC 2-8][326 IAC 2-2][326 IAC 2-3]**

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Pursuant to 326 IAC 2-8-4, emissions of PM/PM-10 from the molding/sanding/shaping operations, sawing/cutting/rough milling operations, and the machining and grinding operations each shall not exceed 3.11 pounds of PM/PM-10 per hour.

This limit is equivalent to a total of less than one hundred (100) tons of PM/PM-10 emissions per twelve (12) consecutive month period, from the molding/sanding/shaping operations, sawing/cutting/rough milling operations, and the machining and grinding operations, including emissions from all other emission units at the source. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply. This limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) requirements not applicable. This limit will also render 326 IAC 2-3 (Emission Offset) requirements for PM-10 not applicable.

**D.2.3 Particulate Matter (PM) [326 IAC 6-3-2]**

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Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations shall not exceed 3.11 pounds per hour each when operating at a process weight rate of 1,325 pounds per hour each.

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

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

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

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

**D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, the grinding and machining operations and any control devices.

**Compliance Determination Requirements**

**D.2.5 Particulate Control**

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The baghouse for particulate control shall be in operation and control emissions from the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations at all times that the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations are in operation.

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

**D.2.6 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations, 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.

#### D.2.7 Broken or Failed Bag Detection

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

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

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

#### D.2.8 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.6 the Permittee shall maintain records of the results of the inspections required under Condition D.2.1(c) and Condition D.2.6, and the dates the vents are redirected.
- (b) To document compliance with Condition D.2.1(c) or Condition D.2.7, the Permittee shall maintain records of daily visible emission notations of the baghouse exhaust.
- (c) The Permittee shall maintain records of corrective actions to document compliance with 326 IAC 2-7-21(1)(G)(xxix)(GG)(dd).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

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

Source Name: SACO Industries, Inc.  
Source Address: 17151 Morse Street, Lowell, Indiana 46356  
Mailing Address: 17151 Morse Street, Lowell, Indiana 46356  
FESOP No.: F089-19460-00443

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: SACO Industries, Inc.  
Source Address: 17151 Morse Street, Lowell, Indiana 46356  
Mailing Address: 17151 Morse Street, Lowell, Indiana 46356  
FESOP No.: F089-19460-00443

**This form consists of 2 pages**

**Page 1 of 2**

- |   |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|---|

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

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

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

Page 2 of 2

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

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

A certification is not required for this report.

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

### FESOP Quarterly Report

Source Name: SACO Industries, Inc.  
Source Address: 17151 Morse Street, Lowell, Indiana 46356  
Mailing Address: 17151 Morse Street, P.O. Box 342, Lowell, Indiana 46356  
FESOP No.: F089-19460-00443  
Facility: One (1) spray booth (EU-3)  
Parameter: VOC usage  
Limit: The usage of VOC delivered to the applicator, including coatings, dilution solvents, and clean up solvents, in the one (1) spray booth (EU-3) shall be limited to 24.68 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

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

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

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

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

Attach a signed certification to complete this report.

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

### FESOP Quarterly Report

Source Name: SACO Industries, Inc.  
 Source Address: 17151 Morse Street, Lowell, Indiana 46356  
 Mailing Address: 17151 Morse Street, P.O. Box 342, Lowell, Indiana 46356  
 FESOP No.: F089-19460-00443  
 Facility: One (1) spray booth (EU-3)  
 Parameter: HAP usage  
 Limit: The usage of any single HAP delivered to the applicator, including coatings, dilution solvents, and clean up solvents, in the one (1) spray booth (EU-3) shall be limited to 9.99 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

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

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

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

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

Attach a signed certification to complete this report.

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

### FESOP Quarterly Report

Source Name: SACO Industries, Inc.  
 Source Address: 17151 Morse Street, Lowell, Indiana 46356  
 Mailing Address: 17151 Morse Street, P.O. Box 342, Lowell, Indiana 46356  
 FESOP No.: F089-19460-00443  
 Facility: One (1) spray booth (EU-3)  
 Parameter: Total HAP usage  
 Limit: The usage of total HAPs delivered to the applicator, including coatings, dilution solvents, and clean up solvents, in the one (1) spray booth (EU-3) shall be limited to 24.99 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

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

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

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

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

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: SACO Industries, Inc.  
 Source Address: 17151 Morse Street, Lowell, Indiana 46356  
 Mailing Address: 17151 Morse Street, P.O. Box 342, Lowell, Indiana 46356  
 FESOP No.: F089-19460-00443  
 Facility: One (1) spray booth (EU-3)  
 Parameter: Total solids usage to limit source-wide emissions of PM/PM-10 to less than 100 tons per year  
 Limit: The usage of solids in the one (1) spray booth (EU-3) shall be limited such that the emissions of PM/PM-10 are limited to less than 15.69 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

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

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

Maximum Usage of Surface Coating Solids (gal/year) =

$$\left[ \left( \sum_{i=1}^{12} (\text{Density (lbs/gal)} * (\text{Weight \% of Solids}) * (1 - 75\% \text{ Transfer Efficiency}) * (\text{Material Usage (gal/month)}) * (1 \text{ ton}/2000 \text{ lbs}) * (1 - 85\% \text{ Control Efficiency (\%)})) \right) \right] < 15.69 \text{ tons PM/PM-10 per year}$$

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

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

Attach a signed certification to complete this report.

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

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

Source Name: SACO Industries, Inc.  
 Source Address: 17151 Morse Street, Lowell, Indiana 46356  
 Mailing Address: 17151 Morse Street, P.O. Box 342, Lowell, Indiana 46356  
 FESOP No.: F089-19460-00443

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

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

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

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

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

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

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

Attach a signed certification to complete this report.

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

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

**Source Background and Description**

<b>Source Name:</b>	SACO Industries, Inc.
<b>Source Location:</b>	17151 Morse Street, Lowell, Indiana 46356
<b>County:</b>	Lake
<b>SIC Code:</b>	2434
<b>Permit Renewal No.:</b>	F089-19460-00443
<b>Permit Reviewer:</b>	Tanya White/EVP

On December 11, 2006, the Office of Air Quality (OAQ) had a notice published in the *Post Tribune*, Gary, Indiana, stating that SACO Industries, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to continue to operate a stationary wood and particle board surface coating and manufacturing operation for bathroom and kitchen cabinets. The notice also stated that OAQ 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 IDEM, OAQ has made the following changes to the FESOP (additions in bold, deletions in ~~strikeout~~):

1. Permit Condition A.3 has been revised to include a water-based coating operation that was omitted from the draft permit that went to public notice.

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

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

- (a) Woodworking area equipped with the following miscellaneous woodworking equipment:
  - (1) One (1) molder unit, one (1) door shaper unit, and one (1) sanding unit, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse for particulate control (D-5) with a grain loading outlet of 0.003 grains/scf and 12,000 CFM, and exhausting to stack S-5; [326 IAC 2-7-1(21)(G)(xxix)] and
  - (2) One (1) rough milling unit, one (1) ripper unit, one (1) door shaper unit, one (1) lamination booth, one (1) dado machine, and two (2) panel saws, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse (D-7) for particulate control with a grain loading outlet of 0.003 grains/scf and 70,000 CFM, and exhausting to stack S-7. [326 IAC 2-7-1(21)(G)(xxix)]

- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.003 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking areas; [326 IAC 2-7-1(21)(G)(xxix)]
  - (c) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
    - (1) Fifteen (15) space heaters each with a maximum heat input rate of 0.05 mmBtu/hr;
  - (d) Application of oils, greases, lubricants or other nonvolatile material applied as temporary protective coatings;
  - (e) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;
  - (f) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
  - (g) Paved and unpaved roads and parking lots with public access;
  - (h) One (1) welding department utilizing one (1) baghouse for particulate control (D-7), using E7018 welding material, constructing 43.75 units per hour;
  - (i) One (1) lamination booth adhesive applicator, with a maximum capacity of 43.75 units per hour; ~~and~~
  - (j) One (1) end panel adhesive applicator, with a maximum capacity of 3.38 pounds per hour of adhesive-; **and**
  - (k) One (1) water based spray booth, identified as EU-5, using aqueous materials containing less than or equal to one percent (1%) by weight of VOCs that contain no HAPs.**
- ...

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

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

**Source Background and Description**

<b>Source Name:</b>	<b>SACO Industries, Inc.</b>
<b>Source Location:</b>	<b>17151 Morse Street, Lowell, Indiana 46356</b>
<b>County:</b>	<b>Lake</b>
<b>SIC Code:</b>	<b>2434</b>
<b>Operation Permit No.:</b>	<b>F089-10041-00443</b>
<b>Operation Permit Issuance Date:</b>	<b>March 4, 1999</b>
<b>Permit Renewal No.:</b>	<b>F089-19460-00443</b>
<b>Permit Reviewer:</b>	<b>Tanya White/EVP</b>

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from SACO Industries, Inc., relating to the operation of a stationary wood and particle board surface coating and manufacturing operation for bathroom and kitchen cabinets.

**History**

On June 17, 2004, SACO Industries, Inc. submitted a Federally Enforceable State Operating Permit renewal application. On May 11, 2006, SACO Industries, Inc. submitted an administrative amendment application to OAQ requesting to remove three (3) paint booths (EU-01, EU-02, and EU-4) from the permit and to add a dust collector, which will replace a smaller existing dust collector. The administrative amendment will be combined into the FESOP renewal No. 089-19460-00443.

There will not be any increases in the potential to emit of any regulated pollutants as a result of this permit amendment. Potential emissions of VOC for the source will decrease as a result of removing three of the four spray booths.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) spray booth (ID EU-03), which began operations in March, 1999, with a maximum capacity of 43.75 wood pieces per hour, utilizing an HVLP application system and a dry filter for overspray control, and exhausting through stack S3.

**Unpermitted Emission Units and Pollution Control Equipment**

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

**Insignificant Activities**

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

- (a) Woodworking area equipped with the following miscellaneous woodworking equipment:
  - (1) One (1) molder unit, one (1) door shaper unit, and one (1) sanding unit, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse for particulate control (D-5) with a grain loading outlet of 0.003 grains/scf and 12,000 CFM, and exhausting to stack S-5; [326 IAC 2-7-1(21)(G)(xxix)] and
  - (2) One (1) rough milling unit, one (1) ripper unit, one (1) door shaper unit, one (1) lamination booth, one (1) dado machine, and two (2) panel saws, each with a maximum capacity of 43.75 units per hour, utilizing one (1) baghouse (D-7) for particulate control with a grain loading outlet of 0.003 grains/scf and 70,000 CFM, and exhausting to stack S-7. [326 IAC 2-7-1(21)(G)(xxix)]
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.003 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking areas; [326 IAC 2-7-1(21)(G)(xxix)]
- (c) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
  - (1) Fifteen (15) space heaters each with a maximum heat input rate of 0.05 mmBtu/hr;
- (d) Application of oils, greases, lubricants or other nonvolatile material applied as temporary protective coatings;
- (e) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;
- (f) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (g) Paved and unpaved roads and parking lots with public access;
- (h) One (1) welding department utilizing one (1) baghouse for particulate control (D-7), using E7018 welding material, constructing 43.75 units per hour;
- (i) One (1) lamination booth adhesive applicator, with a maximum capacity of 43.75 units per hour; and
- (j) One (1) end panel adhesive applicator, with a maximum capacity of 3.38 pounds per hour of adhesive.

#### **Permitted Emission Units and Pollution Control Equipment Removed from the Source**

The following permitted emission units and pollution control devices will be removed from the source:

- (a) Three (3) spray booths (ID EU-01, EU-2, and EU-4) each with a maximum capacity of 43.75 wood pieces per hour, utilizing an HVLP application system and dry filters for overspray control, and exhausting through stacks S1, S2, and S4, respectively.

### Existing Approvals

The source has been operating under the previous FESOP 089-10041-00443 issued on March 4, 1999, and the following amendments and revisions:

- (a) First Reopening No. 089-13070-00443 issued on November 26, 2001;
- (b) First Administrative Amendment No. 089-19020-00443 issued on August 10, 2004.

All conditions from previous approvals were incorporated into this FESOP except those related to the three (3) spray booths (ID EU-01, EU-2, and EU-4) that were removed from the source.

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

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

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

A FESOP renewal application for the purposes of this review was received on June 17, 2004. Additional information was received on June 26, 2006.

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

### Emission Calculations

See Appendix A of this document for detailed emission calculations (Pages 1 through 9).

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP, adjusted for the removal of spray booths EU-01, EU-2, and EU-04.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	Greater than 250
PM-10	Greater than 250
SO <sub>2</sub>	Less than 100
VOC	Greater than 100
CO	Less than 100
NO <sub>x</sub>	Less than 25

HAPs	Unrestricted Potential Emissions (tons/yr)
Xylenes	Greater than 10
Total HAPs	Greater than 25

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

**Potential to Emit After Issuance**

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Spray Booth (EU-03)	15.69 <sup>(1)</sup>	15.69 <sup>(1)</sup>	0.00	< 24.86	0.00	0.00	< 9.99 <sup>(2)</sup>
Woodworking Operations (Insignificant Activity)	27.24 <sup>(1)</sup>	27.24 <sup>(1)</sup>	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (Insignificant Activity)	0.01	0.02	0.002	0.02	0.28	0.33	0.01
Adhesive Operations (Insignificant Activity)	0.07	0.07	0.00	0.12	0.00	0.00	Negl.
Machining and Grinding Operations (Insignificant Activity)	13.62 <sup>(1)</sup>	13.62 <sup>(1)</sup>	0.00	0.00	0.00	0.00	0.00
Other Insignificant Activities	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.
<b>Total Emissions</b>	<b>&lt; 250</b>	<b>&lt; 100</b>	<b>&lt; 100</b>	<b>&lt; 25</b>	<b>&lt; 100</b>	<b>&lt; 100</b>	<b>&lt; 25<sup>(2)</sup></b>

1 Allowable emissions under 326 IAC 6-3-2 (Particulate Emissions Limitations for Manufacturing Processes). PM-10 is assumed to be equal to PM.  
 2 Emissions limitation in order to comply with 326 IAC 2-8 (FESOP).

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM2.5	0.00
PM-10	0.00
SO <sub>2</sub>	Not reported
VOC	18.00
CO	Not reported
NO <sub>x</sub>	Not reported
HAP (specify)	Not reported

**County Attainment Status**

The source is located in Lake County.

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

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as moderate nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

- (d) Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

### Source Status

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

Pollutant	Emissions (tons/yr)
PM	Less than 250
PM-10	Less than 100
SO <sub>2</sub>	Less than 100
VOC	Less than 25
CO	Less than 100
NO <sub>x</sub>	Less than 25
Single HAP	Less than 10
Combination HAPs	Less than 25

- (a) This existing source is **not** a major stationary source for PSD purposes because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater because emissions of PM are limited to less than 250 tons per year and emissions of attainment regulated pollutants are limited by the FESOP to less than 100 tons per year, and it is not in one of the 28 listed source categories.
- (b) This existing source is **not** a major stationary source because nonattainment regulated pollutants VOC and NO<sub>x</sub>, and PM-10 (surrogate for PM<sub>2.5</sub>) are not emitted at a rate of 100 tons per year each or greater.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit for this source.
- (c) This woodworking area is not subject to 40 CFR Part 63, Subpart JJ (National Emission Standards for Wood Furniture Manufacturing Operations), because this source is not a major source of HAPs as defined in 40 CFR Part 63.2.

## State Rule Applicability – Entire Source

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

This source, which was constructed after August 7, 1977, is not subject to the requirements of this rule. The requirements of 326 IAC 2-2 (PSD) apply to major sources or major modifications. This source is not considered a major source because the allowable emissions of all regulated attainment pollutants, are limited to less than 100 tons per year, except for PM emissions which are each limited to less than 250 tons per year, after application of all federally enforceable emission limits and it is not one of the 28 listed source categories. VOC emissions are limited to less than 100 tons per year in accordance with 326 IAC 2-3 (Emission Offset), after application of all federally enforceable emission limits. In order to comply with 326 IAC 2-8 (FESOP) emissions of PM-10 are controlled to less than 100 tons per year. In order to preclude applicability of 326 IAC 2-2 (PSD) emissions of PM are controlled to less than 250 tons per year. Compliance with the PM and PM-10 limitations shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration, PSD) not applicable.

### 326 IAC 2-3 Emission Offset

The source will limit emissions of VOC from the one (1) spray booth (EU-03) such that the VOC emissions are less than twenty-five (25) tons per twelve (12) consecutive month period. The source-wide potential to emit of NOx is less than 25 tons per year. Lake County is a moderate nonattainment area for the 8-hour ozone standard. Therefore, pursuant to 326 IAC 2-3 the source is not subject to the requirements of 326 IAC 2-3 (Emission Offset).

### Nonattainment NSR

U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review (NSR) requirements. This source is not subject to the Non-attainment NSR requirements because PM10 emissions from this source are limited to less than 100 tons per year.

### 326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a revised Preventive Maintenance Plan (PMP) on May 11, 2006. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

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

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is located in Lake county but source-wide VOC emissions have been limited to less than 25 tons per year and potential NOx emissions are less than 25 tons per year, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

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

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any source that constructs or reconstructs a major source of HAPs, which has the potential to emit (PTE) 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs, must control emissions from that source using technologies consistent with the Maximum Achievable Control Technology (MACT). The emissions of any single HAP and total HAPs are limited to less than 10 and 25 tons per year, respectively. Therefore, this rule does not apply.

326 IAC 2-8 (FESOP)

- (a) The VOC content delivered to the applicator of the spray booth, identified as EU-03, including coatings, dilution solvents, and clean-up solvents, shall be limited to less than twenty-four and sixty-eight hundredths (24.68) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This limit is required to limit the source wide potential to emit of VOC to less than twenty-five (25) tons per twelve (12) consecutive month period.

Compliance with this VOC limit shall render 326 IAC 2-7 (Part 70 Permit) not applicable.

- (b) The input of any single HAP and total HAPs to the one (1) spray booth, identified as EU-03, shall be limited to less than nine and ninety-nine hundredths (9.99) tons per year and twenty-four and ninety-nine hundredths (24.99) tons per year, respectively. This usage limit is required to limit the source wide potential to emit of any single HAP and total HAPs to less than ten (10) and twenty-five (25) tons per year, respectively.

Compliance with these HAP limitations shall render 326 IAC 2-7 (Part 70 Permit) not applicable.

- (c) The usage of solid for the surface coating operations (EU-3) shall be less than the limit calculated as follows:

Maximum Usage of Surface Coating Solids (gal/year) =

$$\left[ \left( \sum_{i=1}^{12} (\text{Density (lbs/gal)} * (\text{Weight \% of Solids}) * (1 - 75\% \text{ Transfer Efficiency}) * (\text{Material Usage (gal/month)}) * (1 \text{ ton}/2000 \text{ lbs}) * (1 - 85\% \text{ Control Efficiency} (\%))) \right) \right] < 15.69 \text{ tons PM/PM-10 per year; and}$$

- (d) The PM/PM-10 emissions from the molding/sanding/shaping operations, sawing/cutting/rough milling operations, and the machining and grinding operations, each shall not exceed 3.11 pounds of PM/PM10 per hour.

The PM/PM-10 emission limits in (c) and (d) together with PM/PM-10 emissions from all other emission units at the source shall limit the PM/PM-10 emissions from the source to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. This PM-10 limit will render the source not subject to the provisions of 326 IAC 2-7.

### State Rule Applicability – Individual Facilities

#### 326 IAC 6.8 (Particulate Matter Limitations for Lake County)

The requirements of 326 IAC 6.8 are not applicable to any facility at this source because none of the facilities at this source are specifically listed in 326 IAC 6.8-2 through 326 IAC 6.8-11 and the source does have actual emissions of PM of ten (10) tons per year or greater.

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

- (a) Particulate from the molding/sanding/shaping operations shall not exceed 3.11 pounds per hour when operating at a process rate of 1,325 pounds per hour.

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

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

$$E = 4.10 * (0.6625)^{0.67} = 3.11 \text{ pounds PM per hour}$$

The uncontrolled particulate emission rate from the molding/sanding/shaping operations is 3,085.71 pounds per hour, which exceeds the allowable particulate calculated above (3.11 pounds per hour). The controlled particulate emission rate from the molding/sanding/shaping operations is 0.31 pounds per hour. In order to comply with the allowable particulate emission rate the baghouse, identified as D-5, for particulate control shall be in operation at all times that the molding/sanding/shaping operations are in operation.

- (b) Particulate from the sawing/cutting/rough milling operations shall not exceed 3.11 pounds per hour when operating at a process rate of 1,325 pounds per hour.

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

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

$$E = 4.10 * (0.6625)^{0.67} = 3.11 \text{ pounds PM per hour}$$

The uncontrolled particulate emission rate from the sawing/cutting/rough milling operations is 18,000.00 pounds per hour, which exceeds the allowable particulate calculated above (3.11 pounds per hour). The controlled particulate emission rate from the sawing/cutting/rough milling operations is 1.80 pounds per hour. In order to comply with the allowable particulate emission rate the baghouse, identified as D-7, for particulate control shall be in operation at all times that the sawing/cutting/rough milling operations are in operation.

- (c) Particulate from the machining and grinding operations shall not exceed 3.11 pounds per hour when operating at a process rate of 1,325 pounds per hour.

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

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

$$E = 4.10 * (0.6625)^{0.67} = 3.11 \text{ pounds PM per hour}$$

The uncontrolled particulate emission rate from the machining and grinding operations is 5.14 pounds per hour, which exceeds the allowable particulate calculated above (3.11 pounds per hour). The controlled particulate emission rate from the sawing machining and grinding operations is 0.10 pounds per hour. In order to comply with the allowable particulate emission rate the baghouse for particulate control shall be in operation at all times that the machining and grinding operations are in operation.

- (d) Pursuant to 326 IAC 6-3-2(d), particulate matter from the one (1) spray booth, identified as EU-03, shall be controlled by a dry filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (e) The welding operations utilize less than six hundred twenty-five (625) pounds of rod or wire per day. Pursuant to 326 IAC 6-3-1(b)(9), the welding operations are exempt from the requirements of 326 IAC 6-3.
- (f) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from the lamination booth adhesive applicator and the end panel adhesive applicator are exempt from the requirements of 326 IAC 6-3-2 because PM emission for each of the applicators is less than 0.551 pounds per hour.

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

The one (1) spray booth (EU-03) is not subject to the provisions of 326 IAC 8-1-6. This rule requires all facilities constructed after January 1, 1980, which have potential VOC emission rates of 25 or more tons per year, and which are not otherwise regulated by other provisions of 326 IAC 8, to reduce VOC emissions using Best Available Control Technology (BACT). This source is subject to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating); therefore, the requirements of 326 IAC 8-1-6 do not apply.

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

The source is not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), because there are no metal coating operations at this source.

**326 IAC 8-2-10 (Flat Wood Panels; Manufacturing Operations)**

This source is not subject to 326 IAC 8-2-10 (Flat Wood Panels; Manufacturing Operations), because it does not apply to coating lines used solely in the manufacture of exterior siding or particle board used as a furniture component.

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

- (a) Surface coating of wood furnishings in Spray Booth EU-03 is subject to the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating). Pursuant to this rule, the source shall at all times 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

Spray Booth EU-03 uses an air-assisted airless application method, which is one of the rule approved application methods for surface coating.

- (b) Application of adhesive on wood furnishings in the additives and drawer department spray booth is not subject to 326 IAC 8-2-12, because potential VOC emissions for this operation are less than 15 pounds per day. Pursuant to 326 IAC 8-2-1, the requirements of 326 IAC 8-2-12 do not apply for the additives and drawer department spray booth. Any change or modification which increases the potential to emit VOC from the additives and drawer department spray booth to greater than or equal to 15 pounds per day shall comply with the requirements of 326 IAC 8-2-12 and shall require prior approval from the OAQ.

**326 IAC 8-6 (Organic Solvent Emission Limitations)**

This source is not subject to 326 IAC 8-6 (Organic Solvent Emission Limitations), because the source is limited by another Article 8 rule.

**326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)**

This source is not subject to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties) because the source has limited the potential to emit of VOC to less than 25 tons per year.

**326 IAC 8-11 (Wood Furniture Coatings)**

This source is not subject to 326 IAC 8-11 (Wood Furniture Coatings) because the source has limited the potential to emit of VOC to less than 25 tons per year.

## **Compliance Requirements**

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

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

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

- (a) The one (1) spray booth (EU-03) has applicable compliance monitoring conditions as specified below:
- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stack (S3) while booth EU-03 is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step.

- (2) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step.

These monitoring conditions are necessary because the dry filter for the one (1) spray Booth (EU-03) must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), 326 IAC 2-8 (FESOP), and 326 IAC 2-2 (PSD).

- (b) The woodworking equipment have applicable compliance monitoring conditions as specified below:
  - (1) An inspection shall be performed each calendar quarter of all bags controlling the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations, 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.
  - (2) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
  - (3) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouses for the molding/sanding/shaping operations, the sawing/cutting/rough milling operations, and the grinding and machining operations must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Matter Emission Limitations), 326 IAC 2-8 (FESOP), and 326 IAC 2-2 (PSD).

## Conclusion

The operation of this wood and particle board surface coating and manufacturing operation for bathroom and kitchen cabinets source shall be subject to the conditions of the FESOP 089-19460-00443.

### Appendix A: Emission Calculations

**Company Name:** Saco Industries, Inc.  
**Address City IN Zip:** 17151 Morse Street, Lowell, IN 46356  
**FESOP Renewal No.:** F-089-19460-00443  
**Reviewer:** TW/EVP  
**Date:** 22-Jun-06

Potential Emissions (tons/year)						
Pollutant	Emissions Generating Activity					Total
	Surface Coating	Combustion	Adhesive Operations	Wood Working Operations	Machining/Grind Operations	
PM	104.60	0.01	0.07	92,355.43	22.53	92,460.10
PM-10	104.60	0.02	0.07	92,355.43	22.53	92,460.12
SO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00	0.00
NO <sub>x</sub>	0.00	0.33	0.00	0.00	0.00	0.33
VOC	153.09	0.02	0.12	0.00	0.00	153.23
CO	0.00	0.28	0.00	0.00	0.00	0.28
Total HAPs	60.45	0.01	Negl.	0.00	0.00	60.45
HAP	44.78	0.01	Negl.	0.00	0.00	44.79
	<b>Xylene</b>	<b>Hexane</b>				

Total emissions based on 8,760 hours/year.

Controlled Emissions (tons/year)						
Pollutant	Emissions Generating Activity					Total
	Surface Coating	Combustion	Adhesive Operations	Wood Working Operations	Machining/Grind Operations	
PM	15.69	0.01	0.07	9.24	0.45	25.00
PM-10	15.69	0.02	0.07	9.24	0.45	25.02
SO <sub>2</sub>	0.00	0.00	0.00	0.00	0.00	0.00
NO <sub>x</sub>	0.00	0.33	0.00	0.00	0.00	0.33
VOC	<25	0.02	0.12	0.00	0.00	<25
CO	0.00	0.28	0.00	0.00	0.00	0.28
Total HAPs	<24.99	0.01	Negl.	0.00	0.00	<25
HAP	<9.99	0.01	Negl.	0.00	0.00	<10
	<b>Xylene</b>	<b>Hexane</b>				

Total emissions based on 8,760 hours/year.

## Appendix A: Emission Calculations VOC and Particulate From Surface Coating Operations

**Company Name: Saco Industries, Inc.**  
**Address City IN Zip: 17151 Morse Street, Lowell, IN 46356**  
**FESOP Renewal No.: F-089-19460-00443**  
**Reviewer: TW/EVP**  
**Date: 22-Jun-06**

<b>Uncontrolled Potential Emissions</b>															
Material (as applied)	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Non-VOC Volatiles	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Maximum (gal/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency
Ash Blush	6.92	92.46%	65.01%	27.45%	0.00%	7.54%	11.36	1.90	1.90	21.58	518.02	94.54	6.50	33.58	75.00%
Chestnut	6.82	81.94%	65.08%	16.86%	0.00%	18.06%	11.36	1.15	1.15	13.06	313.54	57.22	15.33	8.49	75.00%
Toffee Stain	7.08	93.21%	72.59%	20.62%	0.00%	6.79%	11.36	1.46	1.46	16.59	398.05	72.64	5.98	28.69	75.00%
Frosted Oak	7.40	52.43%	45.81%	6.62%	0.00%	47.57%	11.36	0.49	0.49	5.57	133.59	24.38	43.79	1.37	75.00%
Cherry-Cinnamon	7.20	88.92%	69.06%	19.87%	0.00%	11.08%	11.36	1.43	1.43	16.24	389.88	71.15	9.92	17.22	75.00%
Nutmeg Stain	6.98	92.83%	72.77%	20.06%	0.00%	7.17%	11.36	1.40	1.40	15.90	381.70	69.66	6.23	26.03	75.00%
Cider Stain	6.83	89.16%	70.71%	18.45%	0.00%	10.84%	11.36	1.26	1.26	14.31	343.53	62.69	9.21	15.49	75.00%
Water Ash Honey	8.41	0.018%	0.00%	0.018%	0.00%	99.98%	11.36	0.00	0.00	0.02	0.41	0.08	104.59	0.00	75.00%
Water Ash Spice	8.41	0.039%	0.00%	0.039%	0.00%	99.96%	11.36	0.00	0.00	0.04	0.89	0.16	104.57	0.00	75.00%
Water Ash Blush	8.41	0.038%	0.00%	0.038%	0.00%	99.96%	11.36	0.00	0.00	0.04	0.87	0.16	104.57	0.00	75.00%
Water Honey Oak (Wipe)	6.92	89.28%	71.22%	18.06%	0.00%	10.72%	11.36	1.25	1.25	14.20	340.80	62.20	9.23	15.54	75.00%
Water Cherry-Cinnamon	8.41	0.043%	0.00%	0.043%	0.00%	99.96%	11.36	0.00	0.00	0.04	0.99	0.18	104.57	0.00	75.00%
Water Nutmeg	8.41	0.029%	0.00%	0.029%	0.00%	99.97%	11.36	0.00	0.00	0.03	0.66	0.12	104.58	0.00	75.00%
Water Fruitwood	8.41	0.015%	0.00%	0.015%	0.00%	99.99%	11.36	0.00	0.00	0.01	0.34	0.06	104.60	0.00	75.00%
Water Pickled Toner	8.41	0.078%	0.00%	0.078%	0.00%	99.92%	11.36	0.01	0.01	0.07	1.79	0.33	104.53	0.01	75.00%
Self Priming Precat Lacquer	9.00	58.78%	24.66%	34.12%	0.00%	41.22%	11.36	3.07	3.07	34.89	837.28	152.80	46.15	9.93	75.00%
Clean-up Solvent-Butyl Cellosolve	7.52	100.00%	0.00%	100.00%	0.00%	0.00%	0.0088	7.5	7.52	0.07	1.58	0.29	0.00	#DIV/0!	

**Worst-case Potential Emissions (tons/yr):**

<b>153.09</b>	<b>104.60</b>
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**Methodology:** Controlled PM Emissions (tons/yr) = 15.69

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water) Control Efficiency\* = 85.0%

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

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

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

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

Particulate Potential Tons per Year = (gal/hour) \* (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) \* Transfer Efficiency

\*The control efficiency of the dry filter was conservatively set to 85%.

**Appendix A: Emission Calculations**

**HAP Emission Calculations**

**Company Name: Saco Industries, Inc.**  
**Address City IN Zip: 17151 Morse Street, Lowell, IN 4**  
**FESOP Renewal No.: F-089-19460-00443**  
**Reviewer: TW/EVP**  
**Date: 22-Jun-06**

Material	Density (Lb/Gal)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Ethyl Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)
Ash Blush	6.92	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.89	0.00	0.00	0.00	0.00	0.00	0.00
Chestnut	6.82	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.79	0.00	0.00	0.00	0.00	0.00	0.00
Toffee Stain	7.08	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.05	0.00	0.00	0.00	0.00	0.00	0.00
Frosted Oak	7.40	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry-Cinnamon	7.20	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.16	0.00	0.00	0.00	0.00	0.00	0.00
Nutmeg Stain	6.98	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.95	0.00	0.00	0.00	0.00	0.00	0.00
Cider Stain	6.83	11.36	2.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	6.80	0.00	0.00	1.02	0.00	0.00	0.00
Water Ash Honey	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Ash Spice	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Ash Blush	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Honey Oak (Wipe)	6.92	11.36	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.89	0.00	0.00	0.00	0.00	0.00	0.00
Water Cherry-Cinnamon	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Nutmeg	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Fruitwood	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Pickled Toner	8.41	11.36	0.00%	0.00%	0.00%	0.00%	0.00%	3.50%	0.00%	0.00	0.00	0.00	0.00	0.00	14.65	0.00
Self Priming Precat Lacquer	9.00	11.36	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	44.78	0.00	0.00	0.00	0.00	0.00	0.00

**Worst-case Potential Emissions (Tons/yr):**

**44.78      0.00      0.00      1.02      0.00      14.65      0.00**

**METHODOLOGY**

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

## Appendix A: Woodworking Particulate Emissions

**Company Name:** Saco Industries, Inc.  
**Address City IN Zip:** 17151 Morse Street, Lowell, IN 46356  
**FESOP Renewal No.:** F-089-19460-00443  
**Reviewer:** TW/EVP  
**Date:** 22-Jun-06

Process	Pollutant	Design Outlet Grain Loading (grains/acfm)	Maximum air flowrate (acfm)	Control Efficiency (%)	Controlled Emissions (lb/hr)	Controlled Potential Emissions (ton/yr)	Uncontrolled Emissions (lb/hr)	Uncontrolled Potential Emissions (ton/yr)
Molding/Sanding/Shaping (S-5)	PM/PM-10	3.00E-03	12,000	99.99%	0.31	1.3515	3,085.71	13,515.43
Sawing/Cutting/Rough Milling (S-7)	PM/PM-10	3.00E-03	70,000	99.99%	1.80	7.8840	18,000.00	78,840.00

## METHODOLOGY

Controlled Emissions (lb/hr) = Design Outlet Grain Loading (grains/acfm) \* Flowrate (acf/min) \* 60 (min/hr) \* 1/7000 (grains/lb)

Controlled Emissions (tpy) = Design Outlet Grain Loading (grains/acfm) \* Flowrate (acf/min) \* 60 (min/hr) \* 1/7000 (grains/lb) \* 8,760 (hr/yr) / 2000 (lb/ton)

Uncontrolled Emissions (lb/hr) = Controlled Emissions (lb/hr) / (1 - Control Efficiency %)



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

**Fifteen (15) Space Heaters**

**Company Name: Saco Industries, Inc.  
 Address City IN Zip: 17151 Morse Street, Lowell, IN 46356  
 FESOP Renewal No.: F-089-19460-00443  
 Reviewer: TW/EVP  
 Date: 22-Jun-06**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.899E-06	3.942E-06	2.464E-04	5.913E-03	1.117E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.643E-06	3.614E-06	4.599E-06	1.248E-06	6.899E-06

Methodology is the same as page 4.

The five highest organic and metal HAPs emission factors are provided above.

**Appendix A: Emissions Calculations  
Welding and Thermal Cutting**

**Company Name: Saco Industries, Inc.  
Address City IN Zip: 17151 Morse Street, Lowell, IN 46356  
FESOP Renewal No.: F-089-19460-00443  
Reviewer: TW/EVP  
Date: 22-Jun-06**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Electric Arc	1	0.00500	0.036	0.0009			1.80E-04	4.50E-06	0.00E+00	0.00E+00	4.50E-06
Electric Arc	1	0.00400	0.036	0.0009			1.44E-04	3.60E-06	0.00E+00	0.00E+00	3.60E-06
Stick (E7018 electrode)	1	0.00493	0.0211	0.0009			1.04E-04	4.44E-06	0.00E+00	0.00E+00	4.44E-06
Stick (E7018 electrode)	1	0.00400	0.0211	0.0009			8.44E-05	3.60E-06	0.00E+00	0.00E+00	3.60E-06
<b>EMISSION TOTALS</b>											
Potential Emissions lbs/hr							0.00				1.61E-05
Potential Emissions lbs/day							0.01				3.87E-04
Potential Emissions tons/year							0.00				7.07E-05

**METHODOLOGY**

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

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

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

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

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

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

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

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

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

Company Name: Saco Industries, Inc.  
Address City IN Zip: 17151 Morse Street, Lowell, IN 46356  
FESOP Renewal No.: F-089-19460-00443  
Reviewer: TW/EVP  
Date: 22-Jun-06

Uncontrolled Potential Emissions																	
Material (as applied)	Process	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)	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 ton/yr	lb VOC /gal solids	Transfer Efficiency
Quick Stick Panel & Construction Adhesive	Drawer Department-Adhesives	10.25	27.90%	0.00%	27.90%	0.00%	45.00%	0.0002	43.75	2.9	2.86	0.03	0.60	0.11	0.07	8.47	75.00%
Titebond Extend Wood Glue	Drawer Department-Adhesives	9.66	57.70%	57.68%	0.02%	66.91%	32.93%	0.0090	43.75	0.0	0.00	0.00	0.02	0.00	0.00	0.01	100.00%
Titebond Extend White Glue	Drawer Department-Adhesives	9.08	54.50%	54.45%	0.05%	59.35%	40.60%	0.0010	43.75	0.0	0.00	0.00	0.00	0.00	0.00	0.01	100.00%
Titebond Extend White Glue	Drawer Department-Adhesives	9.08	54.50%	54.45%	0.05%	59.35%	40.60%	0.0010	43.75	0.0	0.00	0.00	0.00	0.00	0.00	0.01	100.00%
Titebond Extend White Glue	Drawer Department-Adhesives	9.08	54.50%	54.45%	0.05%	59.35%	40.60%	0.0010	43.75	0.0	0.00	0.00	0.00	0.00	0.00	0.01	100.00%
Titebond Extend White Glue	Drawer Department-Adhesives	9.08	54.50%	54.45%	0.05%	59.35%	40.60%	0.0010	43.75	0.0	0.00	0.00	0.00	0.00	0.00	0.01	100.00%

Uncontrolled Potential Emissions:

0.03	0.64	0.12	0.07
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**Methodology:**

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

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

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

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

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

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

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

Total = Worst Coating + Sum of all solvents used

**Appendix A: Machining and Grinding Particulate Emissions**

**Company Name:** Saco Industries, Inc.  
**Address City IN Zip:** 17151 Morse Street, Lowell, IN 46356  
**FESOP Renewal No.:** F-089-19460-00443  
**Reviewer:** TW/EVP  
**Date:** 22-Jun-06

Process	Pollutant	Design Outlet Grain Loading (grains/acf)	Maximum air flowrate (acfm)	Maximum Process Throughput (tons/hr)	Control Efficiency (%)	Controlled Emissions (lb/hr)	Controlled Potential Emissions (ton/yr)	Uncontrolled Emissions (lb/hr)	Uncontrolled Potential Emissions (ton/yr)
Machining and Grinding	PM	3.00E-03	4,000	0.66	98.00%	0.1029	0.4505	5.14	22.53

**METHODOLOGY**

Controlled Emissions (lb/hr) = Design Outlet Grain Loading (grains/acf) \* Flowrate (acf/min) \* 60 (min/hr) \* 1/7000 (grains/lb)

Controlled Emissions (tpy) = Design Outlet Grain Loading (grains/acf) \* Flowrate (acf/min) \* 60 (min/hr) \* 1/7000 (grains/lb) \* 8,760 (hr/yr) / 2000 (lb/ton)

Uncontrolled Emissions (lb/hr) = Controlled Emissions (lb/hr) / (1 - Control Efficiency %)

Uncontrolled Emissions (tpy) = Controlled Emissions (lb/hr) / (1 - Control Efficiency %) \* 8,760 (hr/yr) / 2000 (lb/ton)