



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 6, 2009

RE: Royal Spa Corporation / 097 - 28038 - 00391

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL

OFFICE OF AIR QUALITY

Royal Spa Corporation
2041 W. Epler Avenue
Indianapolis, Indiana 46217

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

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.: F097-28038-00391	
Issued by:  Alfred O. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: May 6, 2009 Expiration Date: May 6, 2019

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary spa manufacturing source.

Source Address:	2041 W. Epler Avenue, Indianapolis, Indiana 46217
Mailing Address:	2041 W. Epler Avenue, Indianapolis, Indiana 46217
General Source Phone:	(317) 781-8028
SIC Code:	3998
Source Location Status:	Marion County Nonattainment for PM _{2.5} Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Nonattainment NSR Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

Woodworking Operation

- (a) One (1) woodworking operation, identified as EU2, constructed in 1992, with a maximum capacity of 495 board feet per hour, with particulate emissions controlled by a cyclone, identified as CE1, and exhausting to stack S2.

Resin and Gelcoat Flowcoating, Hand-Applied Gelcoat, PVC Gluing/Silicone Caulking, Thermoforming, and Wood Stain Spray Booth

- (b) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 120 pounds of vinyl ester resin per hour; and one (1) hand-applied gelcoat operation, constructed in 1992, with a maximum capacity of 1.07 pounds of gelcoat per hour, collectively identified as EU3, utilizing dry filters to control particulate emissions, and exhausting to stack S3.
- (c) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gel coat/pigments per hour, identified as EU4, using dry filters to control particulate emissions, and exhausting to stack S4.
- (d) One (1) booth, constructed in 2000, enclosing one (1) flow coater with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gelcoat/pigments per hour, identified as EU6, using dry filters to control particulate emissions, and exhausting to stack S6.
- (e) One (1) assembly operation, identified as EU7, constructed in 1989, comprised of one (1) PVC gluing operation applied by hand with a maximum glue usage of 4.3 pounds per hour and one (1) silicone caulking operation applied by hand with a maximum caulk usage of 3.5 pounds per hour.

- (f) One (1) wood stain spray booth, identified as EU10, constructed in 1991, with a maximum capacity of 495 board feet per hour and 9 pounds of stain per hour, using dry filters to control particulate emissions, exhausting to stack S10.

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) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs:
 - (1) One (1) polyurethane foam spray booth, identified as EU1, constructed in 1989, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S1 [326 IAC 6-3-2];
 - (2) One (1) polyurethane foam spray booth, constructed in 1994, identified as EU5, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S5 [326 IAC 6-3-2]; and
 - (3) One (1) thermoforming operation, identified as EU9, constructed in 1991, with a maximum capacity of 3,100 spas per year [326 IAC 2-8].
- (b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:
 - (1) One (1) natural gas-fired air make-up unit, identified as EU11, with a maximum capacity of two (2) million British thermal units per hour.
- (c) Emission units with PM and PM₁₀ emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:
 - (1) One (1) completed spa trimming operation, identified as EU13, constructed in 2002, with a maximum capacity of 1.5 spas per hour; using a fabric bag filter to control particulate emissions. [326 IAC 6-3-2]
 - (2) One (1) propane-fired combustion engine, identified as EU12, with a maximum capacity of 0.05 million British thermal units per hour.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

-
- (a) This permit, F097-28038-00391, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) 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 within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

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

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

The notification which shall be submitted by the Permittee does not require 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 F097-28038-00391 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- Request for renewal shall be submitted to:
- Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application 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 Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

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

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

C.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 thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

- (a) 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

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

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

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

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

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

- (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; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:

- (1) monitoring data;
- (2) monitor performance data, if applicable; and
- (3) corrective actions taken.

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

- (a) When the results of a stack test performed in conformance with Section C – Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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 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.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) 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.17 Compliance with 40 CFR 82 and 326 IAC 22-1

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

Woodworking Operation

- (a) One (1) woodworking operation, identified as EU2, constructed in 1992, with a maximum capacity of 495 board feet per hour, with particulate emissions controlled by a cyclone, identified as CE1, and exhausting to stack S2.

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

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

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacture Processes), the particulate matter (PM) from the woodworking operation (EU2) shall not exceed 3.6 pounds per hour when operating at a process weight rate of 1,650 pounds per hour. The pound per hour limitation was calculated with the following equation:

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

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

D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with D.1.1 the cyclone (CE1) for particulate control shall be in operation and control emissions from the woodworking operation (EU2) at all times that the woodworking operation is in operation.

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

D.1.4 Visible Emissions Notations

- (a) Daily visible emission notations of the woodworking operation (EU2) stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.5 Cyclone Inspections

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

D.1.6 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion on the processing of the material in the emission unit (EU2). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.7 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of visible emission notations of the woodworking operation (EU2) stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (i.e. the process did not operate that day).
- (b) To document compliance with Conditions D.1.5, the Permittee shall maintain records of the results of the inspections required under Condition D.1.5 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

Resin and Gelcoat Flowcoating, Hand-Applied Gelcoat, PVC Gluing/Silicone Caulking, Thermoforming, and Wood Stain Spray Booth

- (b) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 120 pounds of vinyl ester resin per hour; and one (1) hand-applied gelcoat operation, constructed in 1992, with a maximum capacity of 1.07 pounds of gelcoat per hour, collectively identified as EU3, utilizing dry filters to control particulate emissions, and exhausting to stack S3.
- (c) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gel coat/pigments per hour, identified as EU4, using dry filters to control particulate emissions, and exhausting to stack S4.
- (d) One (1) booth, constructed in 2000, enclosing one (1) flow coater with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gelcoat/pigments per hour, identified as EU6, using dry filters to control particulate emissions, and exhausting to stack S6.
- (e) One (1) assembly operation, identified as EU7, constructed in 1989, comprised of one (1) PVC gluing operation applied by hand with a maximum glue usage of 4.3 pounds per hour and one (1) silicone caulking operation applied by hand with a maximum caulk usage of 3.5 pounds per hour.
- (f) One (1) wood stain spray booth, identified as EU10, constructed in 1991, with a maximum capacity of 495 board feet per hour and 9 pounds of stain per hour, using dry filters to control particulate emissions, exhausting to stack S10.

Insignificant Activities

- (a) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs:
 - (1) One (1) polyurethane foam spray booth, identified as EU1, constructed in 1989, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S1 [326 IAC 6-3-2];
 - (2) One (1) polyurethane foam spray booth, constructed in 1994, identified as EU5, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S5 [326 IAC 6-3-2]; and
 - (3) One (1) thermoforming operation, identified as EU9, constructed in 1991, with a maximum capacity of 3,100 spas per year.
- (c) Emission units with PM and PM₁₀ emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:
 - (1) One (1) completed spa trimming operation, identified as EU13, constructed in 2002, with a maximum capacity of 1.5 spa per hour, using a fabric bag filter to control particulate emissions and exhausting to stack S13. [326 IAC 6-3-2]

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

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

D.2.1 FESOP Limitation [326 IAC 2-8] [326 IAC 2-4.1]

The Permittee shall be subject to the following limitations:

- (a) The total emissions of a single HAP from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, combined, shall not exceed nine and nine-tenths (9.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is structured such that, when including emissions of a single HAP from the insignificant combustion sources, the source total emissions of a single HAP remain less than ten (10) tons per twelve (12) consecutive month period. This limit is based on the following:
 - (1) The emissions of a single HAP from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and resin by the emission factor provided by the "Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001."
 - (2) The emissions of a single HAP from the foam spraying operations (EU1 and EU5), the gluing and caulking operations (EU7), the thermoforming operations (EU9), and the stain spraying operations (EU10), shall be determined by the input of a single HAP. The input of a single HAP to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the emissions of a single HAP shall not exceed nine and nine-tenths (9.9) tons per year.
- (b) The total emissions of any combination of HAPs from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, combined, shall not exceed twenty-four and nine-tenths (24.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is structured such that, when including emissions of any combination of HAPs from EU8 and the insignificant combustion sources, the source total emissions of any combination of HAPs remain less than twenty-five (25) tons per twelve (12) consecutive month period. This limit is based on the following:
 - (1) The emissions of any combination of HAPs from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and resin by the emission factor provided by the "Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001."
 - (2) The emissions of any combination of HAPs from the foam spraying operations (EU1 and EU5), the glueing and caulking operations (EU7), the thermoforming operations (EU9), and the stain spraying operations (EU10), shall be determined by the input of a single HAP. The input of any combination of HAPs to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the emissions of any combination of HAPs shall not exceed twenty-four and nine-tenths (24.9) tons per year.

Compliance with these limitations shall make the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

- (a) The total VOC emissions from the polyurethane foam spray operations (EU1 and EU5) and the flowcoating and gelcoat operations (EU3, EU4, and EU6), shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is based on the following:

- (1) The emissions of volatile organic compounds from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and resin by the emission factor provided by the "Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001."

$$E = \sum_{i=1}^{i=n} \left((A_i \times B_i) / 2000 \right) \times (UEF_i / 2000)$$

Where:

E = HAPs emissions (tons/month)

n = no. of coatings used during the day

A_i = Density (lb/gal resin or gel)

B_i = Gallons of resin or gel used per month

UEF_i = "Unified Emission Factors for Open Molding of Composites", Composites Fabricators Association, July 23, 2001 or its updates (lb monomer/ton resin or gel)

i = type of resin or gel

2000 = conversion factor (lbs/ton)

- (2) The emissions of volatile organic compounds from the polyurethane foam spraying operations (EU1 and EU5) shall be determined by VOC input. VOC input to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the VOC emissions shall be less than twenty-five (25) tons per year.

VOC (tons/yr) = VOC emission from (EU3, EU4 and EU6) + (EU1 and EU5)
VOC emissions from those units are less than twenty-five (25) tons per year.

D.2.3 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the polyurethane foam spraying operations (EU1 and EU5) and the wood stain spray booth operation (EU10) shall be controlled by dry filters and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.5 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC and HAPs usage limitations contained in Conditions D.2.1, and D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

D.2.6 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the dry filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from stacks S1, S5, S10, and S13 while one or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to

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

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

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

D.2.7 Record Keeping Requirements

- (a) To document compliance with Conditions D.2.1, and D.2.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content and usage limits and the HAP content and usage limits established in Conditions D.2.1 and D.2.2
- (1) The VOC and HAP (single and combined) content of each coating material and solvent used.
 - (2) The amount of coating material and solvent less water used on monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
 - (3) The cleanup solvent usage for each month.
 - (4) The total VOC and total single and combined HAP input for each month.
 - (5) The total VOC and total single and combined HAP input for each compliance period.
- (b) To document compliance with Conditions D.2.3, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1 and D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1-1(1).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Royal Spa Corporation
Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
FESOP No.: F097-28038-00391

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

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

Source Name: Royal Spa Corporation
Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
FESOP No.: F097-28038-00391

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

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

Page 2 of 2

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

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: Royal Spa Corporation
 Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
 Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
 FESOP No.: F097-28038-00391
 Facility: EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10
 Parameter: Single HAP emissions
 Limit: The emissions of a single HAP from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, shall not exceed nine and nine-tenths (9.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____ Quarter: _____

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

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

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

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Royal Spa Corporation
Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
FESOP No.: F097-28038-00391
Facility: EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10
Parameter: Combination HAP emissions
Limit: The emissions of any combination of HAPs from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, combined, shall not exceed twenty-four and nine-tenths (24.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____ Quarter: _____

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

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

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

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Royal Spa Corporation
Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
FESOP No.: F097-28038-00391
Facility: EU1, EU3, EU4, EU5, EU6
Parameter: VOC Emissions
Limit: The total emissions of VOC from EU1, EU3, EU4, EU5, EU6 shall not exceed twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____ Quarter: _____

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

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

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

Attach a signed certification to complete this report.

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

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

Source Name: Royal Spa Corporation
 Source Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
 Mailing Address: 2041 W. Epler Avenue, Indianapolis, Indiana 46217
 FESOP No.: F097-28038-00391

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

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Background and Description

Source Name:	Royal Spa Corporation
Source Location:	2041 W. Epler Avenue, Indianapolis, Indiana 46217
County:	Marion
SIC Code:	3998
Permit Renewal No.:	F097-28038-00391
Permit Reviewer:	Alic Bent/EVP/Marcia Earl

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Royal Spa Corporation relating to the operation of a stationary spa manufacturing source.

History

On October 21, 2008, Royal Spa Corporation submitted an application to the OAQ requesting to renew its operating permit. Royal Spa Corporation was issued a FESOP F097-12525-00391 on July 26, 2004.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

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

New Emission Units and Pollution Control Equipment

There are no new facilities operating at this source during this review process.

Permitted Emission Units and Pollution Control Equipment

Woodworking Operation

- (a) One (1) woodworking operation, identified as EU2, constructed in 1992, with a maximum capacity of 495 board feet per hour, with particulate emissions controlled by a cyclone, identified as CE1, and exhausting to stack S2.

Resin and Gelcoat Flowcoating, Hand-Applied Gelcoat, PVC Gluing/Silicone Caulking, Thermoforming, and Wood Stain Spray Booth

- (b) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 120 pounds of vinyl ester resin per hour; and one (1) hand-applied gelcoat operation, constructed in 1992, with a maximum capacity of 1.07 pounds of gelcoat per hour, collectively identified as EU3, utilizing dry filters to control particulate emissions, and exhausting to stack S3.
- (c) One (1) booth, constructed in 1992, enclosing one (1) flow coater, constructed in 2000, with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gel coat/pigments per hour, identified as EU4, using dry filters to control particulate emissions, and exhausting to stack S4.

- (d) One (1) booth, constructed in 2000, enclosing one (1) flow coater with a maximum capacity of 219 pounds of suppressed resin/catalyst/filler/gelcoat/pigments per hour, identified as EU6, using dry filters to control particulate emissions, and exhausting to stack S6.
- (e) One (1) assembly operation, identified as EU7, constructed in 1989, comprised of one (1) PVC gluing operation applied by hand with a maximum glue usage of 4.3 pounds per hour and one (1) silicone caulking operation applied by hand with a maximum caulk usage of 3.5 pounds per hour.
- (f) One (1) wood stain spray booth, identified as EU10, constructed in 1991, with a maximum capacity of 495 board feet per hour and 9 pounds of stain per hour, using dry filters to control particulate emissions, exhausting to stack S10.

Insignificant Activities

- (a) Activities with emissions equal to or less than the following thresholds: 5 tons per year PM or PM₁₀, 10 tons per year SO₂, NO_x, or VOC, 0.2 tons per year Pb, 1.0 tons per year of a single HAP, or 2.5 tons per year of any combination of HAPs:
 - (1) One (1) polyurethane foam spray booth, identified as EU1, constructed in 1989, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S1 [326 IAC 6-3-2];
 - (2) One (1) polyurethane foam spray booth, constructed in 1994, identified as EU5, with a maximum capacity of 55 pounds per hour of foam, with dry filters controlling particulate emissions, and exhausting to stack S5 [326 IAC 6-3-2]; and
 - (3) One (1) thermoforming operation, identified as EU9, constructed in 1991, with a maximum capacity of 3,100 spas per year.
- (b) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:
 - (1) One (1) natural gas-fired air make-up unit, identified as EU11, with a maximum capacity of two (2) million British thermal units per hour.
- (c) Emission units with PM and PM₁₀ emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:
 - (1) One (1) completed spa trimming operation, identified as EU13, constructed in 2002, with a maximum capacity of 1.5 spas per hour; using a fabric bag filter to control particulate emissions. [326 IAC 6-3-2]
 - (2) One (1) propane-fired combustion engine, identified as EU12, with a maximum capacity of 0.05 million British thermal units per hour.

Existing Approvals

Since the issuance of the FESOP 097-12525-00391 on July 26, 2005, the source has constructed or has been operating under the following approvals as well:

Administrative Amendment No. 097-20652-00391 issued on March 1, 2005.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit. The source was issued FESOP No. 097-12525-00391 on July 26, 2004.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A: pages 1 through 12 of this document for detailed emission calculations.

In October 1993 a Final Order Granting Summary Judgement was signed by an Administrative Law Judge ("ALJ") resolving an appeal of an IDEM permit related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls were necessary for the facility to produce its normal product and is integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the controls.

The cyclone (CE1) for particulate control shall be in operation and control emissions from the woodworking operations (EU2) at all times that the woodworking operations is in operation.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Attainment effective November 8, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
¹ Attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic Nonattainment effective April 5, 2005 for PM _{2.5} .	

- (a) **Ozone Standards**
- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
 - (2) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
 - (3) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Marion County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM_{2.5} emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5.
- (c) **Other Criteria Pollutants**
 Marion 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.
- (d) **Fugitive Emissions**
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	5.47
PM ₁₀	5.52
PM _{2.5}	5.52
SO ₂	0.01
VOC	90.95
CO	0.71
NO _x	0.88

HAPs	tons/year
Dimethyl Phthalate	0.01
Styrene	57.36
Glycol Ether	1.58
MDI	0.06
Methyl Methacrylate	0.28
Total	59.25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 100 tons per year.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the source has agreed to limit their single HAP emissions and total HAP emissions below Title V limits. Therefore, the source will be issued a FESOP.
- (c) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Actual Emissions

No previous emission data has been received from the source.

Potential to Emit After Issuance

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

Process/ Emission Unit	Potential To Emit (tons/year)							
	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	HAPs
Woodworking Operation (EU2) *	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00
Spray Booth (EU1)	0.24	0.24	0.24	0.00	< 25	0.00	0.00	Single HAP < 9.99 Total HAPs < 24.9
Flow Coat and Gelcoat Booth (EU3)	0.00	0.00	0.00	0.00		0.00	0.00	
Flow Coat Booth (EU4)	0.00	0.00	0.00	0.00		0.00	0.00	
Spray Booth (EU5)	0.24	0.24	0.24	0.00		0.00	0.00	
Flow Coat Booth (EU6)	0.00	0.00	0.00	0.00		0.00	0.00	
Assembly Operation (EU7)	0.00	0.00	0.00	0.00		15.84	0.00	
Thermofoaming Operation (EU9)	0.00	0.00	0.00	0.00	0.11	0.00	0.00	
Spray Booth (EU10)	0.27	0.27	0.27	0.00	14.02	0.00	0.00	
Natural Gas Combustion (EU11)	0.02	0.06	0.06	0.01	0.05	0.70	0.83	Neg.
Propane Combustion (EU12)	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.05	Neg.
Spa Trimming Operation (EU13)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Total Emissions	3.08	3.12	3.12	0.01	55.02	0.71	0.88	Single HAP < 10 Total HAPs <25

*Note that the EU2 particulate limitation is pursuant to 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Operations).
 EU1, EU5, EU3, EU4, and EU6 are limited to less than 25 tons of VOC input per 12 consecutive month period with compliance determined at the end of each month. These limits render the requirements of 326 IAC 8-1-6 not applicable.
 Neg. = Negligible - Note that negligible indicates emissions of less than 0.01 tons per year.

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) This existing source is not a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM_{2.5} and/or SO₂ is emitted at a rate of less than 100 tons per year.

Federal Rule Applicability

Compliance Assurance Monitoring (CAM)

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

New Source Performance Standards (NSPS)

- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20-56 (40 CFR 63.5785, Subpart WWWW (Reinforced Plastic Composites Production)), are not included in this permit because this source has accepted federally enforceable limits on the amount of hazardous air pollutants (HAPs) emitted, such that the potential to emit of any single HAP is limited to less than 10 tons per year and the potential to emit of any combination of HAPs is limited to less than 25 tons per year.
- (d) The requirements of 40 CFR 63, Subpart HHHHHH, NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations at Area sources (40 CFR Part 63.11169 – 63.11180), are not included in this permit, since this area source does not perform paint stripping using chemical strippers that contain methylene chloride for the removal of dried paint, does not perform spray application of coatings to motor vehicles or mobile equipment, and does not perform spray application of coatings that contain chromium, lead, manganese, nickel, or cadmium to a plastic and/or metal substrates.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

326 IAC 2-1.1-5 (Non-attainment New Source Review)

This existing source is not a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM_{2.5} and/or SO₂ is emitted at a rate of less than 100 tons per year.

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

This source, constructed after 1977, is not one (1) of the twenty-eight (28) listed source categories. The potential to emit each attainment regulated pollutant from the entire source is less than 250 tons per year. Therefore, this source is a minor source and the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, 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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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 (Major Sources of Hazardous Air Pollutants (HAP))

- (a) EU1, EU2, EU5, EU7, EU9, EU10, and EU13 are not subject to the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) because they were constructed prior to July 27, 1997 and they do not have the potential to emit greater than ten (10) tons per twelve (12) consecutive month period of a single HAP or twenty-five (25) tons per twelve (12) consecutive month period of any combination of HAPs.
- (b) EU3 and EU4 are not subject to the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) even though they have the potential to emit greater than ten (10) tons per twelve (12) consecutive month period of a single HAP because they were constructed prior to July 27, 1997.
- (c) EU6 is not subject to the requirements of 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) even though it was constructed after July 27, 1997 and had the potential to emit greater than ten (10) tons per twelve (12) consecutive month period of a single HAP because actual emissions never reached ten (10) tons per twelve (12) consecutive month period of a single HAP. Additionally, actual emissions of a combination of HAPs never reached twenty-five (25) tons per twelve (12) consecutive month period.

Pursuant to F097-12525-00391, issued July 26, 2004, the source-wide emissions of a single HAP is limited to less than ten (10) tons per twelve (12) consecutive month period and the source-wide emissions of any combination of HAPs is limited to less than twenty-five (25) tons per twelve (12) consecutive month period. Compliance with the FESOP limits shall make the requirements of 326 IAC 2-4.1 not applicable.

326 IAC 2-8 (FESOP)

The Permittee shall be subject to the following limitations:

- (a) The total emissions of a single HAP from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, combined, shall not exceed nine and nine-tenths (9.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is structured such that, when including emissions of a single HAP from the insignificant combustion sources, the source total emissions of a single HAP remain less than ten (10) tons per twelve (12) consecutive month period. This limit is based on the following:
 - (1) The emissions of a single HAP from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and

resin by the emission factor provided by the “Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001.”

- (2) The emissions of a single HAP from the foam spraying operations (EU1 and EU5), the gluing and caulking operations (EU7), the thermoforming operations (EU9), and the stain spraying operations (EU10), shall be determined by the input of a single HAP. The input of a single HAP to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the emissions of a single HAP shall not exceed nine and nine-tenths (9.9) tons per year.
- (b) The total emissions of any combination of HAPs from EU1, EU3, EU4, EU5, EU6, EU7, EU9, and EU10, combined, shall not exceed twenty-four and nine-tenths (24.9) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is structured such that, when including emissions of any combination of HAPs from EU8 and the insignificant combustion sources, the source total emissions of any combination of HAPs remain less than twenty-five (25) tons per twelve (12) consecutive month period. This limit is based on the following:
- (1) The emissions of any combination of HAPs from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and resin by the emission factor provided by the “Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001.”
 - (2) The emissions of any combination of HAPs from the foam spraying operations (EU1 and EU5), the gluing and caulking operations (EU7), the thermoforming operations (EU9), and the stain spraying operations (EU10), shall be determined by the input of a single HAP. The input of any combination of HAPs to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the emissions of any combination of HAPs shall not exceed twenty-four and nine-tenths (24.9) tons per year.

Compliance with these limitations shall make the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

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

326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County)

This source has the potential to emit particulate of less than one hundred (100) tons per year and has actual emissions less than ten (10) tons per year. Royal Spa Corporation is not specifically identified in 326 IAC 6.5-6 (Marion County). Therefore, 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County) do not apply to this source.

State Rule Applicability – Woodworking Operation (EU2)

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

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the woodworking operation shall not exceed 3.6 pounds per hour when operating at a process weight rate of 1,650 pounds per hour. The pound per hour limitation was calculated with the following equation:

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

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

$$E = 4.10 (0.825)^{0.67} = 3.6 \text{ pounds per hour}$$

The cyclone (CE1) shall be in operation at all times the woodworking operation (EU2) is in operation, in order to comply with this limit.

State Rule Applicability - Polyurethane Foam Spraying, Flowcoating and Hand-Applied Gelcoat

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

- (1) The flowcoating operations (EU3, EU4, and EU6) are not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). The facilities have 100% transfer efficiency, therefore, there are no particulate matter emissions from these units.
- (2) The gelcoat operation of EU3 is not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Operations) because this operation does not have the potential to emit particulate as the gelcoat is applied by hand.
- (3) Particulate from the polyurethane foam spraying operations (EU1 and EU5) shall be controlled by dry filters, and the Permittee shall operate the control devices in accordance with manufacturer's specifications.

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

The polyurethane foam spray operations (EU1 and EU5), the flowcoating and gelcoat operations (EU3, EU4, and EU6) are subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) because they were constructed after January 1, 1980, are considered a single facility, and have a potential to emit volatile organic compounds that is greater than twenty-five (25) tons per twelve (12) consecutive month period.

Pursuant to F097-12525-00391, issued July 26, 2004, the total VOC emissions from the polyurethane foam spray operations (EU1 and EU5) and the flowcoating and gelcoat operations (EU3, EU4, and EU6), shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit is based on the following:

- (a) The emissions of volatile organic compounds from the gelcoat and molding operations EU3, EU4, and EU6 shall be calculated by multiplying the usage of each gelcoat and resin by the emission factor provided by the "Unified Emission Factors for Open Molding of Composites, Composites Fabricators Association, April 2001."

$$E = \sum_{i=1}^{i=n} \left((A_i \times B_i) / 2000 \right) \times (UEF_i / 2000)$$

Where:

E = HAPs emissions (tons/month)

n = no. of coatings used during the day

A_i = Density (lb/gal resin or gel)

B_i = Gallons of resin or gel used per month

UEF_i = "Unified Emission Factors for Open Molding of Composites", Composites Fabricators Association, July 23, 2001 or its updates (lb monomer/ton resin or gel)
i = type of resin or gel
2000 = conversion factor (lbs/ton)

- (c) The emissions of volatile organic compounds from the polyurethane foam spraying operations (EU1 and EU5) shall be determined by VOC input. VOC input to these operations should be limited such that, when combined with emissions from the gelcoat and resin operations (EU3, EU4, and EU6), the VOC emissions shall be less than twenty-five (25) tons per year.

VOC (tons/yr) = VOC emission from (EU3, EU4 and EU6) + (EU1 and EU5)
VOC emissions from those units are less than twenty-five (25) tons per year.

Compliance with these limits will render the requirements of 326 IAC 8-1-6 not applicable.

326 IAC 8-2-7 (Large Appliance Coating Operations)

The polyurethane foam spray operations (EU1 and EU5), the flowcoating and gelcoat operations (EU3, EU4, and EU6); are not subject to the requirements of 326 IAC 8-2-7 (Large Appliance Coating Operations) because a spa is not considered a large appliance.

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

The polyurethane foam spray operations (EU1 and EU5), the flowcoating and gelcoat operations (EU3, EU4, and EU6) are not subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) because these operations are not coating metal.

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

The polyurethane foam spray operations (EU1 and EU5), the flowcoating and gelcoat operations (EU3, EU4, and EU6) are not subject to the requirements of 326 8-2-10 (Flat Wood Panels; Manufacturing Operations) because these operations are not coating wood panels.

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

The polyurethane foam spray operations (EU1 and EU5), the flowcoating and gelcoat operations (EU3, EU4, and EU6) are not subject to the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) because these operations are not coating wood furniture or cabinets.

State Rule Applicability - PVC Gluing/Silicone Caulking Operation (EU7)

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

The PVC gluing/silicone caulking operation (EU7) is not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because its potential emissions for particulate matter (PM/PM₁₀) are negligible.

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

The gluing/caulking operation (EU7) is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) even though it was constructed after January 1, 1980 because it does not have the potential to emit twenty-five (25) tons per twelve (12) consecutive month period of VOC.

State Rule Applicability - Thermoforming Operation (EU9)

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

The thermoforming operation (EU9) is not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because its potential emissions for particulate matter (PM/PM₁₀) are negligible.

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

The thermoforming operation (EU9) is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) even though it was constructed after January 1, 1980 because the potential emission for PM/PM₁₀ are negligible.

State Rule Applicability - Wood Stain Spray Booth (EU10)

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

Particulate from the wood stain spray booth operation (EU10) shall be controlled by dry filters, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

The wood stain spray booth operation (EU10) is not subject to the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) even though it was constructed after January 1, 1980 because the potential to emit for VOCs for the spray booth operation is less than twenty-five (25) tons per twelve (12) consecutive month period of VOC.

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

The wood stain spray booth operation (EU10) is not subject to the requirements of 326 8-2-10 (Flat Wood Panels; Manufacturing Operations) because this operation is not manufacturing wood panels. It is manufacturing wood frames for spas.

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

The wood stain spray booth operation (EU10) is not subject to the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) because wood frames for spas do not meet the definition of wood furniture.

State Rule Applicability - Insignificant Spa Trimming Operation (EU13)

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

Particulate from the spa trimming operation (EU13) shall be controlled by dry filters, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

Compliance Determination and Monitoring Requirements

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

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

The compliance monitoring requirements applicable to the polyurethane foam spray booths (EU1 and EU5) and wood stain spray booth operation (EU10) are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Polyurethane foam spray booths (EU1 and EU5), wood stain spray booth operation (EU10)	Inspections shall be performed to verify the placement, integrity and particle loading of the filters.	Daily	Normal-Abnormal	Response Steps
	Observation shall be made of the overspray from the spray booth stacks to monitor the performance of the dry filters.	Weekly		
	Inspections shall be performed of the coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground.	Monthly		

These monitoring conditions are necessary because the dry filters for the polyurethane foam spray booths (EU1 and EU5), the wood stain spray booth operation (EU10) and the spa trimming operation (EU13) must operate properly to ensure compliance with 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-8-4 (FESOP).

The compliance monitoring requirements applicable to the woodworking operation (EU2) are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Woodworking Operation	Visible Emissions	Daily	Normal-Abnormal	Response Steps
	Cyclone Failure Detection	Quarterly	Normal-Abnormal	

These monitoring conditions are necessary because the cyclone (CE1) for the woodworking operation (EU2) must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-8 (FESOP).

Recommendation

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

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

An application for the purposes of this review was received on October 21, 2008.

Conclusion

The operation of this stationary spa manufacturing source shall be subject to the conditions of the attached FESOP Renewal No. **F097-28038-00391**.

Appendix A: Emissions Calculations Summary

Company Name: Royal Spa Corporation
 Address City IN Zip: 2041 W. Epler, Indianapolis, Indiana 46217
 Permit Number: F097-28038-00391
 Reviewer: AB/EVP/Marcia Earl
 Date: October 2008

Process Name	Uncontrolled Potential Emissions (tons per year)							
	VOC	Combined HAP	Highest Individual HAP	PM	PM ₁₀ / PM _{2.5}	NOx	CO	SO ₂
EU2	0.00	0.00	0.00	45.99	45.99	0.00	0.00	0.00
EU1 Foam	0.28	0.00	0.00	0.24	0.24	0.00	0.00	0.00
EU5 Foam	0.28	0.00	0.00	0.24	0.24	0.00	0.00	0.00
EU3 Flow Coat	32.65	32.05	31.86 styrene	0.00	0.00	0.00	0.00	0.00
EU4 Flow Coat	13.35	12.23	12.23 styrene	0.00	0.00	0.00	0.00	0.00
EU6 Flow Coat	14.39	13.27	13.27 styrene	0.00	0.00	0.00	0.00	0.00
EU7 - PVC Glue 705	15.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EU7 - Silicone Clear	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EU7 - Silicone White	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EU9 Thermoforming Emissions	0.11	0.10	0.10 Methyl Methacrylate	0.00	0.00	0.00	0.00	0.00
EU10 Spraying Emissions - stain	11.83	1.58	1.58 glycol ether	2.66	2.66	0.00	0.00	0.00
EU10 Spraying Emissions - thinner	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (EU11)	0.05	0.02	0.015 hexane	0.02	0.06	0.83	0.70	0.01
Propane Combustion (EU12)	1.20E-03	0.00	0.00	1.44E-03	1.44E-03	4.55E-02	7.66E-03	4.31E-05
EU13 Completed Spa Trimming Operation Emissions	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
TOTAL	90.96	59.25	57.36 styrene	3.17	3.22	0.88	0.71	0.01

Process Name	Controlled/Limited Potential Emissions (tons per year)								
	VOC	Combined HAP	Highest Individual HAP	PM	PM ₁₀ / PM _{2.5}	NOx	CO	SO ₂	
EU2	0.00	0.00	0.00	2.30	2.30	0.00	0.00	0.00	
EU1 Foam	less than 25	0.00	0.00	0.24	0.24	0.00	0.00	0.00	
EU5 Foam		0.00	0.00	0.24	0.24	0.00	0.00	0.00	
EU3 Flow Coat		0.00	less than 25 total HAP	less than 9.99 single HAP	0.00	0.00	0.00	0.00	0.00
EU4 Flow Coat		0.00			0.00	0.00	0.00	0.00	
EU6 Flow Coat		0.00			0.00	0.00	0.00	0.00	
EU7 - PVC Glue 705		15.26			0.00	0.00	0.00	0.00	
EU7 - Silicone Clear		0.12			0.00	0.00	0.00	0.00	
EU7 - Silicone White		0.46			0.00	0.00	0.00	0.00	
EU9 Thermoforming Emissions		0.11			0.00	0.00	0.00	0.00	
EU10 Spraying Emissions - stain		11.83			0.27	0.27	0.00	0.00	
EU10 Spraying Emissions - thinner	2.19	0.00			0.00	0.00	0.00		
Natural Gas Combustion (EU11)	0.05	0.02			0.015 hexane	0.02	0.06	0.83	0.70
Propane Combustion (EU12)	1.20E-03	0.00	0.00	1.44E-03	1.44E-03	4.55E-02	7.66E-03	4.31E-05	
EU13 Completed Spa Trimming Operation Emissions	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	
TOTAL	55.02	< less than 25	< less than 10 styrene	3.08	3.12	0.88	0.71	0.01	

**Appendix A: Emissions Calculations
Foam Booth Emissions (EU1 and EU5)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

EU1 and EU5 Foam Spraying Emissions

Material	Maximum Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Particulate Content (wt. %)	Potential to Emit Particulate (ton/yr)	VOC Content (lb/lb foam)	Potential to Emit VOC (ton/yr)	MDI Content (lb/lb foam)	Potential to Emit MDI (ton/yr)	Actual Usage per Spa (lb/spa)	Actual Restricted Spas* (spas/yr)	Actual Rate (lb/yr)	Actual Particulate Emissions (ton/yr)	Actual VOC Emissions (ton/yr)	Actual MDI Emissions (ton/yr)
EU1 Foam	55	481,800	0.1%	0.24	1.17E-03	0.28	1.27E-04	0.03	35	3,100	108500	0.05	0.06	0.01
EU5 Foam	55	481,800	0.1%	0.24	1.17E-03	0.28	1.27E-04	0.03	35	3,100	108500	0.05	0.06	0.01
Total				0.48		0.56		0.06					0.13	0.01

* Royal Spa Manufacturing has elected to limit styrene emissions to less than 10 tons per year. The number of Actual Restricted Spas represents the maximum number of spas that can be manufactured while keeping styrene emissions less than 10 tons per year.

Methodology

Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. % lb/lb of foam) / 2000 (lb/ton)
 Actual Rate (lb/yr) = Actual Usage per Spa (lbs/spa) * Actual Number of Spas as Limited by Styrene Emissions (3,100 spas/yr)
 Actual Particulate Emissions (tons/yr) = Actual Rate (lb/yr) * Content (wt. %) * 1 ton/2000 lbs
 Actual VOC/MDI Emissions (tons/yr) = Actual Rate (lb/yr) * Content (lb/lb foam) * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Woodworking Emissions (EU2)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

EU2 Woodworking Emissions

Emission Unit	Sawdust Generation Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Potential to Emit PM/PM10 (ton/yr)	Control Efficiency (%)	Controlled PTE PM/PM10 (ton/yr)
EU2	10.5	91,980	46.0	95%	2.30

*Assume all PM emissions are equal to PM10.

*Control = Cyclone CE1.

Methodology

Potential to Emit PM/PM10 (ton/yr) = Maximum Rate Assuming 8760 Hours per Year (lb/yr) / 2000 (lb/ton)
8760 (hr/yr) / 2000 (lb/ton)

Controlled PTE PM/PM10 (ton/yr) = Potential to Emit of PM/PM10 (ton/yr) * (1 - Control Efficiency)

Appendix A: Emissions Calculations
Emissions From Flow Coat of Vinyl Ester Resin and Suppressed Resin Emissions (EU3, EU4, EU6)

Company Name: Royal Spa Corporation
 Address: 2041 W. Epler, Indianapolis, Indiana 46217
 FESOP Renewal No.: F097-28038-00391
 Reviewer: AB/EVPMarcia Earl
 Date: October 2001

EU3, EU4, EU6 Flow Coaters: Application of Catalyst VOC and HAP Emissions

Unit	Material	Maximum Rate (lb/hr)	Catalyst in Resin (%)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Worst Case VOC Content (wt. %)	Potential to Emit VOC (ton/yr)	Worst Case Dimethyl Phthalate Content (wt. %)	Loss of Available Dimethyl Phthalate to Air (%)	Potential to Emit Dimethyl Phthalate (ton/yr)	Actual Usage per Spa (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Rate (lb/yr)	Actual VOC Emissions (ton/yr)	Actual Dimethyl Phthalate Emissions (ton/yr)
EU3 Flow Coat	Worst Case Catalyst	120	1.25%	13,140	9.3%	0.61	47%	0.04%	1.24E-03	1.40	3100.00	4,340	0.20	4.08E-04
EU4 Flow Coat	Worst Case Catalyst	219	1.25%	23,981	9.3%	1.12	47%	0.04%	2.25E-03	2.80	3100.00	8,680	0.40	8.16E-04
EU6 Flow Coat	Worst Case Catalyst	219	1.25%	23,981	9.3%	1.12	47%	0.04%	2.25E-03	1.40	3100.00	4,340	0.20	4.08E-04
Total						2.84			0.01				0.81	1.63E-03

Note:
 % Loss DMP Emission Factor Taken from "Emission Factors for Liquid Organic Peroxide Catalysts Used in the Open Molding of Composites", Haberlein, 3/24/99.
 Worst-Case Catalyst includes worst-case percentage content from a variety of catalysts utilized.

Methodology

Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. %) / 2000 (lb/ton)
 Actual Rate (lbs/yr) = Actual Usage per spa (lb/spa) * Actual restricted spas as limited by styrene emissions (3,100 spas/yr)
 Actual Emissions (tons/yr) = Actual Rate (lb/yr) * Content (wt.%) * 1 ton/2000 lbs

EU3, EU4, EU6 Flowcoaters: Application of Resin/Filled Resin PM Emissions

Unit	Material	Maximum Filled Resin Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Worst Case Solids Content (wt. %)	Transfer Efficiency	Uncontrolled Potential to Emit PM/PM ₁₀ (ton/yr)	Filter Control Efficiency (%)	Controlled Potential to Emit PM/PM ₁₀ (ton/yr)
EU3 Flow Coat	Vinyl Ester Resin	120	1,051,200	97.0%	100.0%	0.00	90%	0.00
EU4 Flow Coat	Filled Suppressed Resin	219	1,918,440	99.0%	100.0%	0.00	90%	0.00
EU6 Flow Coat	Filled Suppressed Resin	219	1,918,440	99.0%	100.0%	0.00	90%	0.00
Total						0.00		0.00

Note: The worst case solids content assumes 100% of the worst case material. In reality, the application includes a mixture of this material and other materials with lower solids contents.
 Assume all PM emissions are equal to PM10.

Methodology

Uncontrolled Potential to Emit PM/PM₁₀ (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Solids Content (wt. %) * (1-Transfer Efficiency) / 2000 (lb/ton)
 Controlled PTE of PM/PM₁₀ (ton/yr) = Potential Emissions * (1-Control Efficiency)

Appendix A: Emissions Calculations
Emissions From Flow Coat of Vinyl Ester Resin and Suppressed Resin Emissions (EU3, EU4, EU6)
Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

EU3, EU4, and EU6 Flow Coaters: Application of Resin/Filled Resin Styrene Emissions

Unit	Material	Maximum Filled Resin Application Rate (lb/hr)	Monomer in Filled Resin (%)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Worst Case Styrene Content (wt. %)	Emission Factor (lb styrene/ton monomer)	Potential to Emit Styrene (tons/yr)	Actual Usage (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Rate (lb/yr)	Actual Emissions (tons/yr)
EU3 Flow Coat	Vinyl Ester Resin	120	100	1,051,200	48.0%	118	31.01	39	3100	120900	3.57
EU4 Flow Coat	Filled Suppressed Resin	219	50	959,220	34.0%	51	12.23	101	3100	313100	3.99
EU6 Flow Coat	Filled Suppressed Resin	219	50	959,220	34.0%	49	11.75	43	3100	133300	1.63
Total							54.99				9.19

Note:
VOC Emissions = Styrene Emissions
Styrene emission factors are taken from "Unified Emission Factors for Open Molding of Composites", July 23, 2001 (EU3 Mechanical Non-Atomized and EU4 and EU6 Mechanical Non-Atomized with VSR)

Methodology:
Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. %) / 2000 (lb/ton)
Actual Rate (lbs/yr) = Actual Usage per spa (lb/spa) * Actual Restricted number of spas as limited by styrene emissions (3,100 spas/yr)
Actual Emissions (tons/yr) = Actual Rate (lb/yr) * Content (wt.%) * 1 ton/2000 lbs

EU3 and EU6: Application of Gelcoats and Pigments

Unit	Material	Maximum Application Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Worst Case Styrene Content (wt. %)	Emission Factor (lb styrene/ton gelcoat)	Potential to Emit Styrene (tons/yr)	Methyl Methacrylate Content (wt. %)	Emission Factor (lb MMA/ton gelcoat)	Potential to Emit MMA (tons/yr)	Vinyl Acetate Content (%)	Potential Vinyl Acetate Emissions (tons/yr)	Ethylene Glycol Content (wt. %)	Potential to Emit Ethylene Glycol (ton/year)	Actual Usage per Spa (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Usage Rate (lb/yr)	Actual Styrene Emissions (ton/yr)	Actual MMA Emissions (ton/yr)	Actual Vinyl Acetate Emissions (ton/yr)	Actual Ethylene Glycol Emissions (ton/yr)
EU3 (hand applied)	Tool Black	0.2	1,752	53.0%	197	0.09	0.00%	0	0.00	0.60%	5.26E-03	1.10E-03	1.E-03	0.2	3100	465	0.02	0.00	1.40E-03	2.56E-04
EU3 (hand applied)	Tool Orange	0.2	1,752	38.0%	112	0.05	0.00%	0	0.00	0.00%	0	0.00	0	0.1	3100	310	0.01	0.00	0.00E+00	0.00E+00
EU3 (Flow Coat)	Tooling Resin	0.7	6,132	46.0%	118	0.18	1.00%	15	0.02	0.00%	0	0.00	0	0.5	3100	1,395	0.04	0.01	0.00E+00	0.00E+00
EU3 (Flow Coat)	White Gelcoat	1.6	14,016	28.0%	151	0.53	3.00%	45	0.16	0.00%	0	0.00	0	1.0	3100	3,100	0.12	0.03	0.00E+00	0.00E+00
Total						0.85			0.18		5.26E-03		1.E-03				0.19	0.04	1.40E-03	2.56E-04

Unit	Material	Maximum Application Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	Worst Case Styrene Content (wt. %)	Emission Factor (lb styrene/ton gelcoat)	Potential to Emit Styrene (tons/yr)	Actual Usage per Spa (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Usage Rate (lb/yr)	Actual Styrene Emissions (ton/yr)
EU6 (Flow Coat)	Black Gelcoat	2.6	22,776	38.0%	241	1.37	1.6	3100	4,960	0.30
EU6 (Flow Coat)	Black Gelcoat Putty	1.0	8,760	18.0%	67	0.15	0.6	3100	1,860	0.03
EU6 (Flow Coat)	Black Pigment	0.5	4,380	0.0%	0	0.00	0.3	3100	930	0.00
Total						1.52				0.33

Note:
VOC Emissions = Sum of HAP Emissions
Styrene emission factors are taken from "Unified Emission Factors for Open Molding of Composites", July 23, 2001 (Flow Coat EU3 and Flow Coat EU6 = Mechanical Non-Atomized; Hand-Applied EU3 = Manual)
MMA emission factors are taken from "Unified Emission Factors for Open Molding of Composites", July 23, 2001
Methodology:
Other HAP Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. %) / 2000 (lb/ton)
Potential to Emit Styrene and MMA (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) / 2000 (lb/ton) * Emission factor (lb/ton) / 2000 (lb/ton)
Actual Rate (lbs/yr) = Actual Usage per spa (lb/spa) * Actual restricted number of spas as limited by styrene emissions (3,100 spas/yr)
Other HAP Actual Emissions (tons/yr) = Actual Rate (lb/yr) * Content (wt.%) * 1 ton/2000 lbs
Styrene and MMA Actual Emissions (tons/yr) = Actual Rate (lb/yr) / 2000 (lb/ton) * Emission factor (lb/ton) / 2000 (lb/ton)

**Appendix A: Emissions Calculations
Glueing/Caulking Operation Emissions (EU7)**

**Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008**

EU7 Glueing and Caulking Emissions

Material	Maximum Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	VOC Content (wt. %)	Potential to Emit VOC (ton/yr)	Actual Usage Per Spa (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Rate (lb/yr)	Actual VOC Emissions (ton/yr)
PVC Glue 705	4.3	37,668	81.0%	15.26	2.70	3,100	8,370	3.39
Silicone Clear	0.7	6,132	3.9%	0.12	0.40	3,100	1,240	0.02
Silicone White	2.7	23,652	3.9%	0.46	1.70	3,100	5,270	0.10
Total				15.84				3.52

Note: The transfer efficiency for this operation is 100% because the glues and caulking are applied by hand. Therefore, the particulate emissions are assumed to be negligible from this operation.

Methodology

Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. %) / 2000 (lb/ton)

Actual Rate (lbs/yr) = Actual Usage per Spa (lb/spa) * Actual Restricted Number of Spas as Limited by Styrene Emissions (3,100 spas/yr)

Actual Emissions (tons/yr) = Actual Rate (lbs/yr) * Content (wt. %) * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Thermoforming Operation Emissions (EU9)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F97-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

EU9 Thermoforming Emissions

Actual Restricted Vessels:	2,900 vessels	
Actual Restricted Domes:	200 domes	
Potential Vessels in 8760 Hours:	12702 vessels	
Potential Domes in 8760 hours:	876 domes	
Average Vessel Area:	48 ft ²	6' by 8'
Average Dome Area:	72 ft ²	6' by 12'
Acrylic Thickness (Vessels):	0.125 in	
Acrylic Thickness (Domes):	0.22 in	

Acrylic Composition

	Density:	70 lb/ft ³	
	Methyl Methacrylate:	98 wt. %	MSDS data
VOC Emission Rate:		0.04 wt. %	Manufacturer's Estimate

Calculations:

Material Processed (tons) = Total Volume thermoformed (dome & vessel) (ft³) * Density (lb/ft³)
 = ((dome volume * No. of domes) + (Vessel volume * No. of vessels)) * Density

Actual Processed (tons) =	119,980 lbs =	60.0 tons
Potential Processed (tons)=	525,512 lbs =	262.8 tons

VOC Emissions

VOC Emissions = Material Processed * Emission Rate (%)

Actual VOC (ton/yr) =	0.02 ton/yr
Potential VOC (ton/yr) =	0.11 ton/yr

HAP Emissions

HAP = ((dome volume * No. of domes) + (Vessel volume * No. of vessels)) * Density * Emission Rate (%) * HAP (wt. %)

Actual Methyl Methacrylate (ton/yr):	0.02 ton/yr
Potential Methyl Methacrylate (ton/yr):	0.10 ton/yr

**Appendix A: Emissions Calculations
Spray Booth Emissions (EU10)**

**Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008**

EU10 Spraying Emissions

Material	Maximum Rate (lb/hr)	Maximum Rate Assuming 8760 Hours Per Year (lb/yr)	VOC Content (wt. %)	Potential to Emit VOC (ton/yr)	Glycol Ether Content (wt. %)	Potential to Emit Glycol Ether (ton/yr)	Solids Content (wt. %)	Transfer Efficiency (%)	Uncontrolled Potential to Emit PM/PM ₁₀ (ton/yr)	Filter Control Efficiency (%)	Controlled PTE PM/PM ₁₀ (ton/yr)	Actual Usage per Spa (lb/spa)	Actual Restricted Spas (spas/yr)	Actual Rate (lb/yr)	Actual VOC Emissions (ton/yr)	Actual Glycol Ether Emissions (ton/yr)
Stain	9	78,840	30%	11.83	4.0%	1.58	67.5%	90%	2.66	90%	0.27	6	3100	18,600	2.79	0.37
Total				11.83		1.58			2.66		0.27				2.79	0.37

EU10 Cleaning Emissions

Material	Maximum Rate (lb/hr)	Maximum Rate Assuming 8760 Hours per Year (lb/yr)	VOC Content (wt. %)	Potential to Emit VOC (ton/yr)	Maximum Usage per Spa (lb/spa)	Maximum Restricted Spas (spas/yr)	Actual Rate Year (lb/yr)	Actual VOC Emissions (ton/yr)
Lacquer Thinner	0.50	4380	100%	2.19	0.30	3100	930	0.47
Total				2.19				0.47

Methodology

Potential to Emit (ton/yr) = Maximum Rate Assuming 8760 Hours Per Year (lb/yr) * Content (wt. %) / 2000 (lb/ton)
 Uncontrolled Potential to Emit PM/PM₁₀ (ton/yr) = Maximum Rate Assuming 8760 Hours per Year (lb/yr) * Solids Content (wt. %) * (1-Transfer Efficiency) / 2000 (lb/ton)
 Controlled PTE PM/PM₁₀ (ton/yr) = Potential to Emit PM/PM₁₀ (ton/yr) * (1-Control Efficiency%)
 Actual Rate (lbs/yr) = Actual Usage per Spa (lb/spa) * Actual Restricted Number of Spas as Limited by Styrene Emissions (3,100 spas/yr)
 Actual Emissions (tons/yr) = Actual Rate (lbs/yr) * Content (wt. %) * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Natural Gas Combustion (EU11)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F97-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

2.0

16.7

Emission Factor in lb/MMCF	Pollutant					
	PM	PM ₁₀	SO ₂	NO _x	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
Potential to Emit in tons/yr	0.02	0.06	0.01	0.83	0.05	0.70

**Emission Factors for NO_x: Uncontrolled = 100 lb/MMCF.

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

1 MMCF = 1,050 MMBtu (AP-42 (1985, updated 1/95), Appendix A)

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,050 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

**Appendix A: Emissions Calculations
Natural Gas Combustion (EU11)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential to Emit in tons/yr	1.75E-05	1.00E-05	6.26E-04	1.50E-02	2.84E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential to Emit in tons/yr	4.17E-06	9.18E-06	1.17E-05	3.17E-06	1.75E-05

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

1 MMCF = 1,050 MMBtu (AP-42 (1985, updated 1/95), Appendix A)

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,050 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

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

**Appendix A: Emissions Calculations
Propane Combustion (EU12)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

Heat Input Capacity
MMBtu/hr

Potential Throughput
kgals/year

SO₂ Emission factor = 0.10 x S
S = Sulfur Content =

0.18 grains/100ft³

0.05

4.79

Emission Factor in lb/kgal	Pollutant					
	PM*	PM ₁₀ *	SO ₂	NO _x	VOC	CO
	0.6	0.6	0.018 (0.10S)	19.0	0.5 **TOC value	3.2
Potential to Emit in tons/yr	1.44E-03	1.44E-03	4.31E-05	4.55E-02	1.20E-03	7.66E-03

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Potential to Emit (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

**Appendix A: Emissions Calculations
Spa Trimming Operation (EU13)**

Company Name: Royal Spa Corporation
Address: 2041 W. Epler, Indianapolis, Indiana 46217
FESOP Renewal No.: F097-28038-00391
Reviewer: AB/EVP/Marcia Earl
Date: October 2008

EU13 Completed Spa Trimming Operation Emissions

Particulate Collection Container Size	55 gal =	7.35 cf	Basis
2002 Particulate Container Cleanout Schedule	4 per year		Field Measurement 7.48 gal/cf
2002 Vessels Made	2,781		Plant Personnel
Maximum Restricted Vessels Made	3,100		Plant Records
Particulate Within Collection Container	100 % of volume		Limited
Particulate Density	55 lb/cf		Estimate
Filter Efficiency	99 %		Average of Acrylic and Resin Density
			Engineering Estimate

Actual Emissions:

Particulate Generated = Particulate Collected / Control Efficiency
 Particulate emissions = Particulate Generated - Particulate Collected

Particulate Collected (lb/yr) = Container size (ft3) * % full * cleanout (times/yr) * density (lb/ft3)
 = 1617 lb/yr
 Particulate Generated = Particulate Collected (lb/yr) / Filter Efficiency (99%)
 = 1633.3 lb/yr
 Particulate emissions = Particulate Generated - Particulate Collected
 = 16.3 lb/yr
 0.01 tons/yr

Potential Emissions:

Potential Controlled Emissions = Actual Controlled Emissions * Maximum Restricted Vessels Made/Vessels Made in 2002
 = 18.21 lb/yr
 = 0.01 tons/yr