



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 3, 2010

RE: Carriage, Inc / 039-28780-00456

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Carriage, Inc.
210 Wabash Street
Millersburg, Indiana 46543**

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

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

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

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

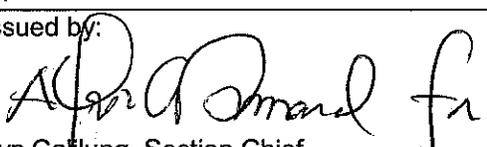
Operation Permit No.: F039-28780-00456	
Issued by:  Iryn Caillung, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 3, 2010 Expiration Date: May 3, 2020

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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 recreational vehicle (RV) and Class C motor home manufacturing operation.

Source Address:	210 Wabash Street, Millersburg, Indiana 46543
Mailing Address:	P.O. Box 246, Millersburg, Indiana 46543
General Source Phone Number:	574-642-3622
SIC Code:	3716
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) Building 1 (Slide-out Assembly, Final and Interior Finish, Cabinet Coating, Assembly and Cabinet Construction), coating wood and metal with no control, exhausting inside the building.
 - (1) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (slide-out assembly).
 - (2) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (final/interior finish).
 - (3) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.75 units per hour (assembly/final finish).
 - (4) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (assembly/cabinets).
 - (5) four (4) chop saws, approved for construction in 2007, capacity: 23.2 pounds of wood per hour, each.
- (b) Buildings 3 and 7 (Assembly and Final Finish) coating wood and metal with no control, exhausting inside the building.

miscellaneous VOC containing aerosol sprays and handwipe solvents, total capacity: 0.625 units per hour.

(c) Building 8 (Cabinet Coating)

three (3) spray booths, coating wood, constructed in 2000, identified as SC1, SC2 and SC3, equipped with a total of six (6) high-volume, low-pressure (HVLP) spray guns, using dry filters for particulate overspray control, exhausted through three (3) stacks, identified as F1, F2 and F3, respectively, capacity: 44.05 wood cabinet doors per hour, each.

(d) Building 9 (Millwork Building)

(1) one (1) airless counter top assembly adhesive spray booth, coating wood, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as #92, capacity: 10.0 units per hour.

(2) three (3) table saws, one (1) radial arm saw, one (1) belt sander, one (1) shaper, and one (1) side lipper, capacity: 500 pounds of wood per hour. The three (3) table saws and one (1) belt sander are each connected to Central Control and exhaust inside the building.

(3) three (3) table saws, one (1) radial arm saw, one (1) shaper, one (1) pin router, one (1) taping machine, and one (1) drill machine, capacity: 1,000 pounds of wood per hour. The three (3) table saws are each connected to central control and exhaust inside the building.

(e) Building 17A (Steel Frame Painting/Surface Coating)

one (1) high pressure air-assisted paint spray booth, coating metal, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as 17A, capacity: 2.0 metal frames per hour.

(f) Building 18 (Woodworking)

one (1) woodworking operation, consisting of various woodworking tools, identified as WW, equipped with two (2) cyclones and three (3) baghouses, exhausted inside the building, capacity: 800 pounds of wood per hour.

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

This stationary source also includes the following insignificant activities:

(a) The following natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour (mmBtu/hr):

(1) Boilers (4 total)
two (2) boilers in Building 5, installed after September 1983, rated at 0.85 and 0.3 mmBtu/hr, and two (2) boilers in Building 18, installed in 2000, identified as H1 and H2, each rated at 0.15 mmBtu/hr. [326 IAC 6-2-4]

(2) Water heaters (4 total)
one (1) water heater in Building 2 rated at 0.04 mmBtu/hr, one (1) water heater in Building 5 rated at 0.04 mmBtu/hr, one (1) water heater in Building 9 rated at 0.036 mmBtu/hr, and one (1) water heater in Building 11 rated at 0.04 mmBtu/hr.

(3) Enclosed space heaters (29 total)
six (6) heaters in Building 1 each rated at 0.48 MMBtu/hr, two (2) heaters in Building 2 each rated at 0.15 mmBtu/hr, one (1) heater in Building 3 rated at 0.14 mmBtu/hr, two (2) heaters in Building 6 each rated at 0.05 mmBtu/hr, two (2)

- heaters in Building 7 each rated at 0.3 mmBtu/hr, three (3) heaters in Building 8 each rated at 0.15 mmBtu/hr, four (4) heaters in Building 9 each rated at 0.3 mmBtu/hr, two (2) heaters in Building 9 each rated at 0.15 mmBtu/hr, one (1) heater in Building 9 rated at 0.08 mmBtu/hr, two (2) heaters in Building 9 each rated at 0.13 mmBtu/hr, one (1) heater in Building 11 rated at 0.1 mmBtu/hr, and three (3) heaters in Building 22 each rated at 0.2 mmBtu/hr.
- (4) Radiant space heaters (65 total)
twelve (12) heaters in Building 3 each rated at 0.05 mmBtu/hr, two (2) heaters in Building 4 each rated at 0.05 mmBtu/hr, twelve (12) heaters in Building 5 each rated at 0.05 mmBtu/hr, six (6) heaters in Building 6 each rated at 0.05 mmBtu/hr, fifteen (15) heaters in Building 7 each rated at 0.05 mmBtu/hr, five (5) heaters in Building 9 each rated at 0.1 mmBtu/hr, one (1) heater in Building 10 rated at 0.15 mmBtu/hr, ten (10) heaters in Building 11 each rated at 0.105 mmBtu/hr, and two (2) heaters in Building 17A each rated at 0.10 mmBtu/hr.
- (5) Air make-up units (4 total)
one (1) unit in Building 8 rated at 1.0 mmBtu/hr, one (1) unit in Building 17 rated at 1.25 mmBtu/hr, and two (2) units in Building 17A each rated at 1.0 mmBtu/hr;
- (b) Degreasing operations that do not exceed 145 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (c) The brazing, cutting, soldering and welding equipment related to manufacturing activities not resulting in the emissions of HAPs. [326 IAC 6-3-2]
- (d) The following woodworking activities with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (1) one (1) table saw in Building 3, equipped with one (1) cyclone dust collection system, capacity: 100 pounds of wood per hour;
- (2) one (1) chop saw, one (1) radial arm saw, one (1) table saw, one (1) band saw, one (1) belt sander, one (1) "Time-Saver" sander, and two (2) work benches in Building 1, equipped with one (1) cyclone dust collection system, capacity: 250 pounds of wood per hour.
- (e) The following welding activities, in Buildings 16 and 17, with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (1) five (5) stick welding stations using carbon electrodes with a maximum consumption rate of 15 electrodes per hour;
- (2) three (3) metal inert Gas (MIG) steel welding stations using carbon AWS A5.18 wire with a maximum consumption rate of 1.0 unit per hour;
- (3) five (5) MIG aluminum welding stations using type ER 4043 (aluminum) wire with a maximum consumption rate of 1.25 units per hour.
- (f) One (1) 3/16" metal and one (1) 1/8" aluminum saw, in Building 17, each with a maximum cutting rate of 2,400 inches per hour and with a potential particulate matter emissions of below insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (g) Various VOC containing handwipe solvents for repair work in Building 6, at a maximum capacity of 0.10 units per hour and with a potential emissions of below insignificant threshold of 15 pounds per day.

- (h) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (i) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (k) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (l) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.
- (m) On-site fire and emergency response training approved by the department.
- (n) the following storage tanks with VOC emissions equal to or below insignificant threshold of 15 pounds per day:
 - (1) one (1) 4,000 gallon above ground gasoline storage tank;
 - (2) one (1) 8,000 gallon above ground diesel storage tank;
 - (3) five (5) 300 gallon motor oil storage totes.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, F039-28780-00456, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

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

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

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

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

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

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

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

(C) Corrective actions taken.

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

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

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

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

- (a) All terms and conditions of permits established prior to F039-28780-00456 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue

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

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

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

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

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

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

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

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

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

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

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

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

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

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification 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.9 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification 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.10 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.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

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

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

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

C.13 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.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

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

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

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

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

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

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

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (f) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Building 1 (Slide-out Assembly, Final and Interior Finish, Cabinet Coating, Assembly and Cabinet Construction) coating wood and metal with no control, exhausting inside the building.
 - (1) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (slide-out assembly).
 - (2) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (final/interior finish).
 - (3) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.75 units per hour (assembly/final finish).
 - (4) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (assembly/cabinets).
 - (5) four (4) chop saws, approved for construction in 2007, capacity: 23.2 pounds of wood per hour, each.
- (b) Buildings 3 and 7 (Assembly and Final Finish): coating wood and metal with no control, exhausting inside the building.

miscellaneous VOC containing aerosol sprays and handwipe solvents, total capacity: 0.625 units per hour.
- (c) Building 8 (Cabinet Coating):

three (3) spray booths, coating wood, constructed in 2000, identified as SC1, SC2 and SC3, equipped with a total of six (6) high-volume, low-pressure (HVLP) spray guns, using dry filters for particulate overspray control, exhausted through three (3) stacks, identified as F1, F2 and F3, respectively, capacity: 44.05 wood cabinet doors per hour, each.
- (d) Building 9 (Millwork Building)
 - (1) one (1) airless counter top assembly adhesive spray booth, coating wood, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as #92, capacity: 10.0 units per hour.
 - (2) three (3) table saws, one (1) radial arm saw, one (1) belt sander, one (1) shaper, and one (1) side lipper, capacity: 500 pounds of wood per hour. The three (3) table saws and one (1) belt sander are each connected to central control and exhaust inside the building.
 - (3) three (3) table saws, one (1) radial arm saw, one (1) shaper, one (1) pin router, one (1) taping machine, and one (1) drill machine, capacity: 1,000 pounds of wood per hour. The three (3) table saws are each connected to central control and exhaust inside the building.
- (e) Building 17A (Steel Frame Painting/Surface Coating):

one (1) high pressure air-assisted paint spray booth, coating metal, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as 17A, capacity: 2.0 metal frames per hour.

(f) Building 18 (Woodworking):

one (1) woodworking operation, consisting of various woodworking tools, identified as WW, equipped with two (2) cyclones and three (3) baghouses, exhausted inside the building, capacity: 800 pounds of wood per hour.

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

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

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 8-6]

The total VOC usage at the surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents, shall be limited to less than 97.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit in combination with other emissions will limit the VOC emissions from the entire source to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply and 326 IAC 8-6 is not applicable.

D.1.2 Hazardous Air Pollutants (HAP) [326 IAC 2-8-4]

- (a) The worst-case single HAP usage at the surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents, shall be limited to less than a total of 9.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this usage limit is required to limit the potential to emit of any single HAP to less than ten (10) tons per year and less than ten (10) tons per year from the entire source.
- (b) The total HAPs usage at the surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents, shall be limited to less than 24.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this usage limit is required to limit the potential to emit of total HAPs to less than twenty-five (25) tons per year and less than twenty-five (25) tons per year from the entire source.

Compliance with these limits renders the requirements of 326 IAC 2-7 (Part 70) not applicable.

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

Pursuant to 326 IAC 6-3-2(d), particulate from the surface coating operations in Buildings 8, 9 and 17A shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device at all times that the surface coating is in operation.

D.1.4 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 18 shall not exceed 2.22 pounds per hour when operating at a process weight rate of 0.4 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 9 shall not exceed 3.38 pounds per hour when operating at a process weight rate of 0.75 tons per hour.

These limitations are based upon the following:

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

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

D.1.5 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, when coating metal in Buildings 1, 3, 7 and 17A, the Permittee shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.

D.1.6 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment in Buildings 1, 3, 7 and 17A during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in Buildings 8 and 9 shall utilize one of the following application methods:

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

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

D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for this facility and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]

Compliance with the VOC usage and content limitations contained in Conditions D.1.1, D.1.5 and D.1.6 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.10 Particulate Control

(a) In order to comply with Condition D.1.3, the baghouses, cyclones and dry filters for particulate control shall be in operation and control emissions from the woodworking at all

times that the facilities are in operation.

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

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

D.1.11 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters for the coating booths in Building #9 Counter Top Assembly Booth, Building #8 Coating Booths - SC1, SC2, SC3, and Building 17A. To monitor the performance of the dry filters, weekly observations shall be made of the overspray 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. Failure to take response steps shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the 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. Failure to take response steps shall be considered a deviation from this permit.

D.1.12 Visible Emissions Notations

- (a) Daily visible emission notations of the stack exhausts for the woodworking operations in Buildings 8, 9 and 18 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Failure to take response steps shall be considered a deviation from this permit.

D.1.13 Broken or Failed Bag Detection

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

replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the hot mix batch mixer and the dryer. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.14 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. 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). Failure to take response steps shall be considered a deviation from this permit.

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

D.1.15 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits established in Conditions D.1.1 and D.1.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) The VOC and HAP content of each coating material and solvent used.
- (2) The amount of coating material and solvent used on monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
- (3) The total VOC and HAP usage for each month.

(b) To document the compliance status with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.1.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) The VOC 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; and

- (4) The total VOC usage for each month.
- (c) To document the compliance status with Condition D.1.12, the Permittee shall maintain records of daily visible emission notations of the stack exhausts for the woodworking operations in Buildings 8, 9 and 18. 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, (e.g. the process did not operate that day).
- (d) To document the compliance status with Condition D.1.11 the Permittee shall maintain records of monitoring data for weekly overspray observations, daily and monthly inspections.
- (e) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligation with regard to the records required by this condition.

D.1.16 Reporting Requirements

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) The following natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour (mmBtu/hr):
- Boilers (4 total)
- (1) two (2) boilers in Building 5, installed after September 1983, rated at 0.85 and 0.3 million British thermal units per hour, and two (2) boilers in Building 18, installed in 2000, identified as H1 and H2, each rated at 0.15 million British thermal units per hour. [326 IAC 6-2-4]
- (b) Degreasing operations that do not exceed 145 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (c) The brazing, cutting, soldering and welding equipment related to manufacturing activities not resulting in the emissions of HAPs. [326 IAC 6-3-2]
- (d) The following woodworking activities with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (1) one (1) table saw in Building 3, equipped with one (1) cyclone dust collection system, capacity: 100 pounds of wood per hour;
- (2) one (1) chop saw, one (1) radial arm saw, one (1) table saw, one (1) band saw, one (1) belt sander, one (1) "Time-Saver" sander, and two (2) work benches in Building 1, equipped with one (1) cyclone dust collection system, capacity: 250 pounds of wood per hour.
- (e) The following welding activities, in Buildings 16 and 17, with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (1) five (5) stick welding stations using carbon electrodes with a maximum consumption rate of 15 electrodes per hour;
- (2) three (3) metal inert gas (MIG) steel welding stations using carbon AWS A5.18 wire with a maximum consumption rate of 1.0 unit per hour;
- (3) five (5) MIG aluminum welding stations using type ER 4043 (aluminum) wire with a maximum consumption rate of 1.25 units per hour.
- (f) One (1) 3/16" metal and one (1) 1/8" aluminum saw, in Building 17, each with a maximum cutting rate of 2,400 inches per minute and with a potential particulate matter emissions of below insignificant threshold of 5 pounds per hour. [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 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), PM emissions from all facilities used for indirect heating purposes which were constructed after September 21, 1983, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

D.2.2 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 3 shall not exceed 0.551 pounds per hour when operating at a process weight rate of 0.05 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 1 shall not exceed 1.02 pounds per hour when operating at a process weight rate of 0.125 tons per hour.

These limitations are based upon the following:

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

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

- (c) Pursuant to 326 IAC 6-3-2, the particulate emissions from the welding and metal cutting operations in Buildings 16 and 17 shall each be limited by the following:

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

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

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs existing as of July 1, 1990, located in Clark, Elkhart, Floyd, Lake, Marion, Porter or St. Joseph Counties, the Permittee shall ensure that the following requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.

- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.2.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for this facility and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.6 Particulate Control

In order to comply with Conditions D.2.2 (a) and (b), the baghouses and cyclones for particulate control shall be in operation and control emissions from the woodworking facilities at all times that the woodworking facilities are in operation.

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

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

Source Name: Carriage, Inc.
Source Address: 210 Wabash Street, Millersburg, Indiana 46543
Mailing Address: P.O. Box 246, Millersburg, Indiana 46543
FESOP Permit No.: F039-28780-00456

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: Carriage, Inc.
Source Address: 210 Wabash Street, Millersburg, Indiana 46543
Mailing Address: P.O. Box 246, Millersburg, Indiana 46543
FESOP Permit No.: F039-28780-00456

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) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Carriage, Inc.
Source Address: 210 Wabash Street, Millersburg, Indiana 46543
Mailing Address: P.O. Box 246, Millersburg, Indiana 46543-0246
FESOP No.: F 039-28780-00456
Facilities: The surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents
Parameter: Total VOC input
Limit: Less than 97.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Total VOC input (tons)	Total VOC input (tons)	Total VOC input (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Carriage, Inc.
 Source Address: 210 Wabash Street, Millersburg, Indiana 46543
 Mailing Address: P.O. Box 246, Millersburg, Indiana 46543-0246
 FESOP No.: F 039-28780-00456
 Facilities: The surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents
 Parameter: Worst Case Single HAP input
 Limit: Less than a total of 9.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Single HAP input (tons)	Single HAP input (tons)	Single HAP input (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Carriage, Inc.
Source Address: 210 Wabash Street, Millersburg, Indiana 46543
Mailing Address: P.O. Box 246, Millersburg, Indiana 46543-0246
FESOP No.: F 039-28780-00456
Facilities: The surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A, including coatings, adhesives, dilution solvents and clean-up solvents
Parameter: Total HAP input
Limit: Less than a total of 24.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Total HAP input (tons)	Total HAP input (tons)	Total HAP input (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

Source Name: Carriage, Inc.
 Source Address: 210 Wabash Street, Millersburg, Indiana 46543
 Mailing Address: P.O. Box 246, Millersburg, Indiana 46543
 FESOP Permit No.: F039-28780-00456

Months: _____ **to** _____ **Year:** _____

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

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

Source Background and Description

Source Name:	Carriage, Inc.
Source Location:	210 Wabash Street, Millersburg, Indiana 46543
County:	Elkhart
SIC Code:	3716
Operation Permit No.:	F039-28780-00456
Permit Reviewer:	Janet Mobley

On March 29, 2010, the Office of Air Quality (OAQ) had a notice published in the Elkhart Truth, Elkhart, Indiana, stating that Carriage, Inc. had applied for a FESOP Renewal to continue operating their stationary recreational vehicle (RV) and class C motor home manufacturing operation. The notice also stated that the OAQ proposed to issue a FESOP Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

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

There were no comments submitted by the source or consultant, but IDEM is making additional changes:

Additional Changes:

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

(1) The updated language for the Preventative Maintenance Plan condition was in the draft but the sentence telling the source to implement the plan was omitted in the language.

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

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

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

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

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

* * *

- (2) For clarity, IDEM has changed references to the general conditions: "in accordance with Section B", "in accordance with Section C", or other similar language.

D.1.11 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters for the coating booths in Building #9 Counter Top Assembly Booth, Building #8 Coating Booths - SC1, SC2, SC3, and Building 17A. To monitor the performance of the dry filters, weekly observations shall be made of the overspray 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 Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.1.12 Visible Emissions Notations

- (a) Daily visible emission notations of the stack exhausts for the woodworking operations in Buildings 8, 9 and 18 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps ~~in accordance with Section C – Response to Excursions or Exceedances.~~ Failure to take response steps ~~in accordance with Section C – Response to Excursions or Exceedances~~ shall be considered a deviation from this permit.

D.1.14 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. 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). Failure to take response steps ~~in accordance with Section C – Response to Excursions or Exceedances,~~ shall be considered a deviation from this permit.

- (3) On page 43 of the Quarterly Deviation and Compliance Monitoring Report form the sentence at the bottom "Attach a signed certification to complete this report" was inadvertently left on the draft and should have been deleted.

Also the prior permit number was on the Quarterly Report Forms in the header. The new renewal number has replaced the old number.

IDEM Contact

Questions regarding this proposed MSOP can be directed to Janet Mobley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.

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

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

Source Background and Description

Source Name:	Carriage, Inc.
Source Location:	210 Wabash Street, Millersburg, Indiana 46543
County:	Elkhart
SIC Code:	3716
Permit Renewal No.:	039-28780-00456
Permit Reviewer:	Janet Mobley

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Carriage, Inc. relating to the operation of a stationary recreational vehicle (RV) and Class C motor home manufacturing operation.

History

On November 17, 2009, Carriage, Inc. submitted an application to the OAQ requesting to renew its operating permit. Carriage, Inc. was issued a FESOP on December 5, 2005.

Permitted Emission Units and Pollution Control Equipment

- (a) Building 1 (Slide-out Assembly, Final and Interior Finish, Cabinet Coating, Assembly and Cabinet Construction) coating wood and metal with no control, exhausting inside the building.
 - (1) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (slide-out assembly).
 - (2) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (final/interior finish).
 - (3) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.75 units per hour (assembly/final finish).
 - (4) miscellaneous VOC containing aerosol sprays and handwipe solvents, capacity: 0.25 units per hour (assembly/cabinets).
 - (5) four (4) chop saws, constructed in 2007, capacity: 23.2 pounds of wood per hour, each.

- (b) Buildings 3 and 7 (Assembly and Final Finish) coating wood and metal with no control, exhausting inside the building.
- miscellaneous VOC containing aerosol sprays and handwipe solvents, total capacity: 0.625 units per hour.
- (c) Building 8 (Cabinet Coating)
- three (3) spray booths, coating wood, constructed in 2000, identified as SC1, SC2 and SC3, equipped with a total of six (6) high-volume, low-pressure (HVLP) spray guns, using dry filters for particulate overspray control, exhausted through three (3) stacks, identified as F1, F2 and F3, respectively, capacity: 44.05 wood cabinet doors per hour, each.
- (d) Building 9 (Millwork Building)
- (1) one (1) airless counter top assembly adhesive spray booth, coating wood, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as #92, capacity: 10.0 units per hour.
- (2) three (3) table saws, one (1) radial arm saw, one (1) belt sander, one (1) shaper, and one (1) side lipper, capacity: 500 pounds of wood per hour. The three (3) table saws and one (1) belt sander are each connected to Central Control and exhaust inside the building.
- (3) three (3) table saws, one (1) radial arm saw, one (1) shaper, one (1) pin router, one (1) taping machine, and one (1) drill machine, capacity: 1,000 pounds of wood per hour. The three (3) table saws are each connected to central control and exhaust inside the building.
- (e) Building 17A (Steel Frame Painting/Surface Coating)
- one (1) high pressure air-assisted paint spray booth, coating metal, using dry filters as overspray particulate control, exhausting through one (1) stack, identified as 17A, capacity: 2.0 metal frames per hour.
- (f) Building 18 (Woodworking):
- one (1) woodworking operation, consisting of various woodworking tools, identified as WW, equipped with two (2) cyclones and three (3) baghouses, exhausted inside the building, capacity: 800 pounds of wood per hour.

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) The following natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour (mmBtu/hr):
- (1) Boilers (4 total)
two (2) boilers in Building 5, installed after September 1983, rated at 0.85 and 0.3 mmBtu/hr, and two (2) boilers in Building 18, installed in 2000, identified as H1 and H2, each rated at 0.15 mmBtu/hr. [326 IAC 6-2-4]

- (2) Water heaters (4 total)
one (1) water heater in Building 2 rated at 0.04 mmBtu/hr, one (1) water heater in Building 5 rated at 0.04 mmBtu/hr, one (1) water heater in Building 9 rated at 0.036 mmBtu/hr, and one (1) water heater in Building 11 rated at 0.04 mmBtu/hr.
 - (3) Enclosed space heaters (29 total)
six (6) heaters in Building 1 each rated at 0.48 MMBtu/hr, two (2) heaters in Building 2 each rated at 0.15 mmBtu/hr, one (1) heater in Building 3 rated at 0.14 mmBtu/hr, two (2) heaters in Building 6 each rated at 0.05 mmBtu/hr, two (2) heaters in Building 7 each rated at 0.3 mmBtu/hr, three (3) heaters in Building 8 each rated at 0.15 mmBtu/hr, four (4) heaters in Building 9 each rated at 0.3 mmBtu/hr, two (2) heaters in Building 9 each rated at 0.15 mmBtu/hr, one (1) heater in Building 9 rated at 0.08 mmBtu/hr, two (2) heaters in Building 9 each rated at 0.13 mmBtu/hr, one (1) heater in Building 11 rated at 0.1 mmBtu/hr, and three (3) heaters in Building 22 each rated at 0.2 mmBtu/hr.
 - (4) Radiant space heaters (65 total)
twelve (12) heaters in Building 3 each rated at 0.05 mmBtu/hr, two (2) heaters in Building 4 each rated at 0.05 mmBtu/hr, twelve (12) heaters in Building 5 each rated at 0.05 mmBtu/hr, six (6) heaters in Building 6 each rated at 0.05 mmBtu/hr, fifteen (15) heaters in Building 7 each rated at 0.05 mmBtu/hr, five (5) heaters in Building 9 each rated at 0.1 mmBtu/hr, one (1) heater in Building 10 rated at 0.15 mmBtu/hr, ten (10) heaters in Building 11 each rated at 0.105 mmBtu/hr, and two (2) heaters in Building 17A each rated at 0.10 mmBtu/hr.
 - (5) Air make-up units (4 total)
one (1) unit in Building 8 rated at 1.0 mmBtu/hr, one (1) unit in Building 17 rated at 1.25 mmBtu/hr, and two (2) units in Building 17A each rated at 1.0 mmBtu/hr.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]
 - (c) The brazing, cutting, soldering and welding equipment related to manufacturing activities not resulting in the emissions of HAPs. [326 IAC 6-3-2]
 - (d) The following woodworking activities with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
 - (1) one (1) table saw in Building 3, equipped with one (1) cyclone dust collection system, capacity: 100 pounds of wood per hour;
 - (2) one (1) chop saw, one (1) radial arm saw, one (1) table saw, one (1) band saw, one (1) belt sander, one (1) "Time-Saver" sander, and two (2) work benches in Building 1, equipped with one (1) cyclone dust collection system, capacity: 250 pounds of wood per hour.
 - (e) The following welding activities, in Buildings 16 and 17, with particulate matter emissions equal to or below the insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
 - (1) five (5) stick welding stations using carbon electrodes with a maximum consumption rate of 15 electrodes per hour;
 - (2) three (3) metal inert gas (MIG) steel welding stations using carbon AWS A5.18 wire with a maximum consumption rate of 1.0 unit per hour;

- (3) five (5) MIG aluminum welding stations using type ER 4043 (aluminum) wire with a maximum consumption rate of 1.25 units per hour.
- (f) One (1) 3/16" metal and one (1) 1/8" aluminum saw, in Building 17, each with a maximum cutting rate of 2,400 inches per hour and with a potential particulate matter emissions of below insignificant threshold of 5 pounds per hour. [326 IAC 6-3-2]
- (g) Various VOC containing handwipe solvents for repair work in Building 6, at a maximum capacity of 0.10 units per hour and with a potential emissions of below insignificant threshold of 15 pounds per day.
- (h) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (i) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (k) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (l) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.
- (m) On-site fire and emergency response training approved by the department.
- (n) The following storage tanks with VOC emissions equal to or below insignificant threshold of 15 pounds per day:
 - (1) one (1) 4,000 gallon above ground gasoline storage tank;
 - (2) one (1) 8,000 gallon above ground diesel storage tank;
 - (3) five (5) 300 gallon motor oil storage totes.

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

The source does not have any emission units that were constructed and/or is operating without a permit during this review.

Emission Units and Pollution Control Equipment Removed From the Source

The portable dust collectors were removed from the six (6) table saws and one (1) belt sander that were located in Building 1.

Existing Approvals

Since the issuance of the FESOP 039-17622-00456 on December 5, 2005, the source has constructed or has been operating under the following approvals as well:

- (a) Administrative Amendment No. 039-24501-00456 issued on April 27, 2007;
- (b) Administrative Amendment No. No. 039-24735-00456 issued on June 28, 2007; and

(c) Administrative Amendment No. No. 039-25785-00456 issued on January 18, 2008.

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.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations. The calculations were submitted by the applicant have been verified and found to be accurate and correct.

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are 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.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 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	Not designated.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

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

- (b) **PM2.5**
Elkhart County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
Elkhart 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.

Unrestricted Potential Emissions

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10 and VOC is equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM10 and VOC emissions to less than Title V levels, therefore the source will be issued a FESOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the 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 Renewal.

Potential to Emit After Issuance

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

Process/ Emission Unit	Potential To Emit (tons/year)							HAPs
	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM ₁₀), not particulate matter (PM), is considered as a "regulated air pollutant". Additionally, US EPA has directed states to regulate PM ₁₀ emissions as surrogate for PM _{2.5} emissions. ** Toluene - single highest HAP								

The PM values for the significant woodworking operations represent the allowable emissions pursuant to 326 IAC 6-3-2. Due to the lack of condensable particulate matter from woodworking, the hourly PM₁₀ limits for the significant woodworking operations have been set equal to the allowable particulate emission rates pursuant to 326 IAC 6-3-2.

The PM and PM₁₀ values for surface coating represent the unrestricted potential emissions, or, for those units equipped with control equipment, the limited potential to emit as determined under 326 IAC 6-3-2 of the permit. The VOC usage at the surface coating operations is limited to less than a total of 97.0 tons per year.

All other values in the above table represent the unrestricted potential to emit.

- (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) 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.

Federal Rule Applicability

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) None of the boilers at this source are subject to the requirements of the New Source Performance Standard, 40 CFR 60.40c, Subpart Dc, because they each have a rated heat input capacity less than 10.0 million British thermal units per hour.
- (c) The insignificant storage tanks are not subject to the requirements of the New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60), 40 CFR 60.110b, Subpart Kb, because each tank has a storage capacity less than seventy-five (75) cubic meters.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (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.
- (e) The surface coating operations are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart Mmmm, because this source has

accepted a federally enforceable limitation that will ensure that this source is not a major source of HAPs, as defined in 40 CFR 63.2.

- (f) The surface coating operations are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63.4480, Subpart PPPP (Plastic Parts Surface Coating), because this source has accepted a federally enforceable limitation that will ensure that this source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (g) None of the natural gas-fired combustion units would have been subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD, because they have a rated capacity of less than or equal to ten (10) million British thermal units per hour heat input. However, pursuant to 40 CFR 63.7506(c), there are no applicable requirements from 40 CFR 63, Subpart DDDDD and 40 CFR 63, Subpart A for affected sources in the small gaseous fuel subcategory.

On June 8, 2007, the United States Court of appeals for the District of Columbia Circuit (in NRDC v. EPA, no. 04-1386) vacated in its entirety the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD. Additionally, since the state rule at 326 IAC 20-95 incorporated the requirements of the NESHAP 40 CFR 63, Subpart DDDDD by reference, the requirements of 326 IAC 20-95 are no longer effective. Therefore, the requirements of 40 CFR 63, Subpart DDDDD and 326 IAC 20-95 are not included in the permit.

- (h) This source is not subject to the requirements of 40 CFR Part 63, Subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources because, although this source meets the definition of an area source, as defined in 40 CFR § 63.2, no methylene chloride is used for paint stripping operations, the surface coating operations performed at this source do not include refinishing of mobile vehicles or equipment as described in § 63.11169(b) and the coatings used at this source do not contain the target HAP; chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), as defined in § 63.11180.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart JJ, are not applicable to the facilities at this source because this source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (j) The insignificant degreasing operations are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T (40 CFR 63.460-469) because no halogenated HAP solvents are used.

Compliance Assurance Monitoring (CAM)

- (k) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM) is not included in this permit. This source is operating as a FESOP. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring are not applicable to this source.

State Rule Applicability - Entire Source

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

The source was constructed in 1994 and modified in 2000. The source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(y)(1). In this permit, the potential to emit PM, CO, NO_x and SO₂ are each less than 250 tons per year, and the emissions of PM₁₀ and VOC are limited to less

than one hundred (100) tons per year pursuant to 326 IAC 2-8-4. Therefore, the requirements of 326 IAC 2-2 are not applicable, and this source is a minor source with respect to this rule.

326 IAC 2-4.1 (New Source Toxics Control)

Pursuant to 326 IAC 2-8-4, HAPs emissions from this source are limited to less than ten (10) tons per year of the worst-case single HAP, and less than twenty-five (25) tons per year of total HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit of each criteria pollutant is less than one hundred (100) 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 forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

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

- (a) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 18 shall not exceed 2.22 pounds per hour when operating at a process weight rate of 0.4 tons per hour (800 pounds of wood per hour maximum capacity).
- (b) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 9 shall not exceed 3.38 pounds per hour when operating at a process weight rate of 0.75 tons per hour (1500 pounds of wood per hour maximum capacity).

These limitations are based upon the following:

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

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

The control equipment shall be in operation at all times the woodworking facilities are in operation, in order to comply with these limits.

326 IAC 6-3-2(d) (Particulate emission limitations, work practices, and control technologies)

- (a) Particulate from the surface coating operations in Buildings 8 and 17A, shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer=s specifications.

- (b) Pursuant to 326 IAC 6-3-1(b)(12), the use of aerosol coating products in Buildings 3, 5, 7 and 9 to repair minor surface damage and imperfections are exempt from the requirements of 326 IAC 6-3-2.
- (c) Pursuant to 326 IAC 6-3-2(d)(3), sources that operate according to a valid permit pursuant to 326 IAC 2-7 (Part 70) or 326 IAC 2-8 (FESOP) are exempt from 326 IAC 6-3-2(d)(2).

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

The surface coating operations in Buildings 1, 3, 7, 9 and 17A are coating metal parts, and are regulated by 326 IAC 8-2-9 (Miscellaneous Metal Coating). The surface coating operations at Booths SC1, SC-2 and SC-3 in Building 8 are coating wood parts, and are regulated by 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating).

Therefore, the requirements of 326 IAC 8-1-6, do not apply.

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

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), when coating metal, the volatile organic compound (VOC) content of coating delivered to the applicators at the surface coating operations in Buildings 1, 3, 7 and 17A shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the surface coating operations in Buildings 1, 3, 7, 8, 9 and 17A are in compliance with this requirement.

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

- (a) The wood furnishing surface coating operations in Buildings 8 and 9 are subject to the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating). Pursuant to this rule, the coatings applied to wood furnishings in Building 8 shall utilize one (1) or more of the following application systems:

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

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

The source is in compliance with this rule because they use HVLP applicators in Building 8 and airless spray application in Building 9.

- (b) The touch-up or repair operations in Building 6 have potential usage less than ten (10) gallons per day of coating. Therefore, pursuant to 326 IAC 8-2-12(b), the requirements of 326 IAC 8-2-12 do not apply to the touch-up or repair operations in Building 6.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This source is located in Elkhart County and was constructed in 1994 and modified in 2000. The facilities at this source did not commence operation prior to January 1, 1980, and the source is limited to less than one hundred (100) tons per year of VOC emissions in order to comply with the requirements of 326 IAC 2-8. Other Article 8 rules apply, therefore, the requirements 326 IAC 8-6 do not apply.

State Rule Applicability - Insignificant Activities

326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983)

- (a) The two (2) boilers in Building 5, with a total rated heat input capacity of 1.15 million British thermal units per hour, constructed after September 21, 1983, must comply with the requirements of 326 IAC 6-2-4. The emission limitation is based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

For the two (2) boilers:

$$Pt = 1.09/(1.15)^{0.26} = 1.05 \text{ lb/MMBtu heat input}$$

For Q less than 10 million British thermal unit per hour, Pt shall not exceed 0.6 pounds per million British thermal units. Therefore, for the two (2) boilers in Building 5:

Pt = 0.6 lbs of particulate per million British thermal units.

Based on Appendix A, the worst-case potential particulate emission rate is:

$$0.01 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.0023 \text{ lb/hr}$$

$$(0.0023 \text{ lb/hr} / 1.15 \text{ mmBtu/hr}) = 0.002 \text{ lb particulate per mmBtu}$$

The particulate emissions from the two (2) boilers are 0.002 pounds per million British thermal units, which is less than the allowable of 0.6 pounds per million British thermal units. Therefore, the two (2) boilers are in compliance with this rule.

- (b) The four (4) boilers, known as H1 through H4, constructed in 2000, with a total rated heat input capacity of 0.60 million British thermal units per hour, must comply with the requirements of 326 IAC 6-2-4. The emission limitation is based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

For the four (4) boilers, known as H1-H4:

The total heat input capacity of the four (4) boilers is 0.6 million British thermal units per hour. There are a total of six (6) boilers in operation at this source, with a total rated heat input capacity of 1.75 million British thermal units per hour.

$$Pt = 1.09/(1.75)^{0.26} = 0.94 \text{ lb/MMBtu heat input}$$

For Q less than 10 million British thermal unit per hour, Pt shall not exceed 0.6 pounds per million British thermal units. Therefore, for the four (4) boilers, known as H1 through H4:

Pt = 0.6 lbs of particulate per million British thermal units.

Based on Appendix A, the worst-case potential particulate emission rate is:

$$0.005 \text{ ton/yr} \times (2000 \text{ lbs/ton} / 8760 \text{ hrs/yr}) = 0.0011 \text{ lb/hr}$$
$$(0.0011 \text{ lb/hr} / 0.60 \text{ mmBtu/hr}) = 0.0019 \text{ lb particulate per mmBtu}$$

The particulate emissions from the four (4) boilers are 0.0019 pounds per million British thermal units, which is less than the allowable of 0.6 pounds per million British thermal units. Therefore, the four (4) boilers are in compliance with this rule.

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

- (a) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 3 shall not exceed 0.551 pounds per hour when operating at a process weight rate of 0.05 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking in Building 1 shall not exceed 1.02 pounds per hour when operating at a process weight rate of 0.125 tons per hour.

These limitations are based upon the following:

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

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

The control equipment shall be in operation at all times the woodworking facilities are in operation, in order to comply with these limits.

- (c) Pursuant to 326 IAC 6-3-2, the particulate emissions from the welding and metal cutting operations in Buildings 16 and 17 shall each be limited by the following:

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

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

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs existing as of July 1, 1990, located in Elkhart County, or for any cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32)

millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Determination and Monitoring Requirements

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

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds

for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

Control	Parameter	Frequency	Range	Excursions and Exceedances
Dry Filters	Placement, integrity and particle loading	Once per day	Conditions exist which would result in a response step	Response Steps
3 cyclones and 3 baghouses	Visible Emissions	Daily	Normal-Abnormal Failure Detection	Response Steps

These monitoring conditions are necessary because the dry filters, cyclones and baghouses for the surface coating booths and woodworking operations in Building #8, Coating Booths SC1, SC2, SC3, Building #9, Building 17A and Building 18 must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-8 (FESOP).

Testing Requirements

There are no testing requirements for the emission units at this source.

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 November 17, 2009.

Conclusion

The operation of this recreational vehicle (RV) and Class C motor home manufacturing operation shall be subject to the conditions of the attached FESOP Renewal No. 039-28780-00456.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Janet Mobley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Emissions Calculations
Summary Emissions

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS LIMITED POTENTIAL TO EMIT

Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Limited HAPS	* Highest Single HAP	Limited HAPS	Combined HAP
Building 1 (Slideout Assembly)	0.03	0.03	0.03	0.00	0.00	Less than 97.0	0.00	Less than 9.0	0.51	Less than 24.0	0.63
Building 1 (Final and Interior Finish)	0.16	0.16	0.16	0.00	0.00		0.00		0.57		0.70
Building 1 (Assembly and Final Finish)	0.36	0.36	0.36	0.00	0.00		0.00		1.87		2.22
Building 1 (Cabinet Construction Chop Saws)	1.17	1.17	1.17	0.00	0.00		0.00		0.00		0.00
Building 1 (Assembly and Cabinet Construction)	0.02	0.02	0.02	0.00	0.00		0.00		0.05		0.06
Buildings 3 & 7 (Assembly and Final Finish)	0.30	0.30	0.30	0.00	0.00		0.00		1.56		1.85
Building 8 (Cabinet Coating)	4.35	4.35	4.35	0.00	0.00		0.00		13.67		17.27
Building 9 (Counter Tops)(Adhesive Spray Booth)	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Building 17A (Steel Frame Painting/Surface Coating)	77.26	77.26	77.26	0.00	0.00		0.00		4.10		5.03
Building 9 Woodworking (Millwork Building)	0.14	0.14	0.14	0.00	0.00		0.00		0.00		0.00
Building 18 (cyclones and baghouses)	0.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00			
Insignificant Activities											
Four (4) Boilers (Building 5 B1 & B2, Building 18 H1 & H2)	0.01	0.05	0.05	0.004	0.64	0.03	0.53	0.01	0.01	0.01	0.01
Four (4) Water Heaters (Buildings 2, 5, 9, and 11)	0.001	0.004	0.004	0.0000	0.05	0.00	0.04	0.00	0.00	0.00	0.00
Twenty nine (29) Enclosed Space Heaters (Buildings 1, 2, 3, 6, 7, 8, 9, 11, and 22)	0.06	0.23	0.23	0.02	3.07	0.17	2.58	0.06	0.06	0.06	0.06
Sixty five (65) Radiant Space Heaters (Buildings 3, 4, 5, 6, 7, 9, 10, 11, and 17A)	0.04	0.14	0.14	0.01	1.86	0.10	1.56	0.03	0.03	0.04	0.04
Four (4) Air Makeup Units (Buildings 8, 17, and 17A)	0.04	0.14	0.14	0.01	1.86	0.10	1.56	0.03	0.03	0.04	0.04
Buildings 1 & 3 (cyclones)	0.29	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 16 & 17 (Welding and Thermal Cutting)	1.43	1.43	1.43	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07
Building 17 (Miscellaneous Metal Fabrication)	4.10	4.10	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 6 (Service Operations)	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.21	0.21	0.25	0.25
Unpaved Roads	3.84	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	93.64	91.08	91.08	0.04	7.48	97.72	6.28	9.42	22.75	24.46	28.22

Emissions Calculations
Summary Emissions

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS	POTENTIAL TO EMIT							
Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Building 1 (Slideout Assembly)	0.03	0.03	0.00	0.00	1.92	0.00	0.51	0.63
Building 1 (Final and Interior Finish)	0.16	0.16	0.00	0.00	1.59	0.00	0.57	0.70
Building 1 (Assembly and Final Finish)	0.36	0.36	0.00	0.00	21.41	0.00	1.87	2.22
Building 9 Woodworking (Millwork Building)	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Cabinet Construction Chop Saws)	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Assembly and Cabinet Construction)	0.02	0.02	0.00	0.00	0.16	0.00	0.05	0.06
Buildings 3 & 7 (Assembly and Final Finish)	0.30	0.30	0.00	0.00	17.84	0.00	1.56	1.85
Building 9 (Counter Tops)	0.00	0.00	0.00	0.00	10.23	0.00	0.00	0.00
Building 8 (Cabinet Coating)	4.35	4.35	0.00	0.00	48.73	0.00	13.67	17.27
Building 17A (Steel Frame Painting/Surface Coating)	77.26	77.26	0.00	0.00	42.34	0.00	4.10	5.03
Building 18 (cyclones and baghouses)	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Four (4) Boilers (Building 5 B1 & B2, Building 18 H1 & H2)	0.01	0.05	0.004	0.64	0.03	0.53	0.00	0.01
Four (4) Water Heaters (Buildings 2, 5, 9, and 11)	0.001	0.004	0.0003	0.05	0.00	0.04	0.00	0.00
Twenty nine (29) Enclosed Space Heaters (Buildings 1, 2, 3, 6, 7, 8, 9, 11, and 22)	0.06	0.23	0.02	3.07	0.17	2.58	0.00	0.06
Sixty five (65) Radiant Space Heaters (Buildings 3, 4, 5, 6, 7, 9, 10, 11, and 17A)	0.04	0.14	0.01	1.86	0.10	1.56	0.00	0.04
Four (4) Air Makeup Units (Buildings 8, 17, and 17A)	0.04	0.14	0.01	1.86	0.10	1.56	0.00	0.04
Unpaved Roads	3.84	0.85	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 1 & 3 (cyclones)	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 16 & 17 (Welding and Thermal Cutting)	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.07
Building 17 (Miscellaneous Metal Fabrication)	4.31	4.31	0.00	0.00	0.00	0.00	0.00	0.00
Building 6 (Service Operations)	0.00	0.00	0.00	0.00	0.31	0.00	0.21	0.25
TOTALS	93.86	91.29	0.04	7.48	144.95	6.28	22.55	28.24

*Toluene as Determined Below

HAZARDOUS AIR POLLUTANTS

Emission Units	Benzene	Cadmium	Chromium	Dichloro-Benzene	Formaldehyde	Glycol Ether	Hexane	Lead	Manganese	Methanol	Nickel	Methylene Chloride	MIBK	Touene	Xylene	Total HAP
	Emissions (ton/yr)															
Building 1 (Slideout Assembly)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.51	0.04	0.63
Building 1 (Final and Interior Finish)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.57	0.06	0.70
Building 1 (Assembly and Final Finish)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	1.87	0.13	2.22
Building 9 Woodworking (Millwork Building)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Cabinet Construction Chop Saws)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Assembly and Cabinet Construction)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.06
Buildings 3 & 7 (Assembly and Final Finish)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	1.56	0.11	1.85
Building 9 (Counter Tops)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 8 (Cabinet Coating)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61	0.00	0.00	0.00	13.67	0.00	17.27
Building 17A (Steel Frame Painting/Surface Coating)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	4.10	0.35	5.03
Building 18 (cyclones and baghouses)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Four (4) Boilers (Building 5 B1 & B2, Building 18 H1 & H2)	1.33E-05	6.99E-06	8.89E-06	7.62E-06	4.76E-04	0.00	0.01	3.18E-06	2.41E-06	0.00	1.33E-05	0.00	0.00	2.16E-05	0.00	0.01
Four (4) Water Heaters (Buildings 2, 5, 9, and 11)	1.10E-06	5.78E-07	7.36E-07	6.31E-07	3.94E-05	0.00	0.001	2.63E-07	2.00E-07	0.00	1.10E-06	0.00	0.00	1.79E-06	0.00	0.001
Twenty nine (29) Enclosed Space Heaters (Buildings 1, 2, 3, 6, 7, 8, 9, 11, and 22)	6.45E-05	3.38E-05	4.30E-05	3.68E-05	2.30E-03	0.00	0.06	1.54E-05	1.17E-05	0.00	6.45E-05	0.00	0.00	1.04E-04	0.00	0.06
Sixty five (65) Radiant Space Heaters (Buildings 3, 4, 5, 6, 7, 9, 10, 11, and 17A)	3.91E-05	2.05E-05	2.61E-05	2.23E-05	1.40E-03	0.00	0.03	9.31E-06	7.07E-06	0.00	3.91E-05	0.00	0.00	6.33E-05	0.00	0.04
Four (4) Air Makeup Units (Buildings 8, 17, and 17A)	3.91E-05	2.05E-05	2.61E-05	2.23E-05	1.40E-03	0.00	0.03	9.31E-06	7.07E-06	0.00	3.91E-05	0.00	0.00	6.33E-05	0.00	0.04
Unpaved Roads	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 1 & 3 (cyclones)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 16 & 17 (Welding and Thermal Cutting)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Building 17 (Miscellaneous Metal Fabrication)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 6 (Service Operations)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.21	0.02	0.25
Total Emissions (TPY) by HAP	1.57E-04	0.00	1.05E-04	8.98E-05	0.01	0.00	0.13	3.74E-05	0.07	4.77	1.57E-04	0.00	0.00	22.55	0.71	28.24

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Building 1 (Slideout Assembly)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Building 1 (Slideout Assembly)	Russell 676 Aerosol Adhesive	6.66	90.00%	25.00%	65.00%	25.19%	9.32%	0.0234	0.250	5.8	4.3	0.03	0.61	0.11	0.01	46.45	50%	Wood
Building 1 (Slideout Assembly)	Spider Glue Airless Flowcoat	6.80	46.03%	2.00%	44.03%	2.06%	44.20%	0.2941	0.250	3.1	3.0	0.22	5.28	0.96	0.00	6.77	100%	Metal/Wood
Building 1 (Slideout Assembly)	Silicone Sealant Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	54.43%	0.0203	0.250	3.4	3.4	0.02	0.41	0.07	0.02	6.16	50%	Metal
Building 1 (Slideout Assembly)	Acetone Hand Applied	6.61	100.00%	100.00%	0.00%	100.00%	0.00%	0.1000	0.250	0.0	0.0	0.00	0.00	0.00	0.00	#DIV/0!	100%	Cleanup
Building 1 (Slideout Assembly)	Lacquer Thinner Hand Applied	7.07	100.00%	0.00%	100.00%	0.00%	0.00%	0.1000	0.250	7.1	7.1	0.18	4.24	0.77	0.00	#DIV/0!	100%	Cleanup
Potential to Emit											0.44	10.54	1.92	0.03				

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)			
Building 1 (Slideout Assembly)	Russell 676 Aerosol Adhesive	6.66	0.0234	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Building 1 (Slideout Assembly)	Spider Glue Airless Flowcoat	6.80	0.2941	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Building 1 (Slideout Assembly)	Silicone Sealant Aerosol	5.59	0.0203	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Building 1 (Slideout Assembly)	Acetone Hand Applied	6.61	0.1000	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Building 1 (Slideout Assembly)	Lacquer Thinner Hand Applied	7.07	0.1000	0.250	0.00%	0.00%	0.00%	9.38%	0.00%	0.00%	66.28%	5.59%	0.00	0.00	0.00	0.07	0.00	0.00	0.51	0.04	0.63			
Uncontrolled Potential Emissions													0.00	0.00	0.00	0.07	0.00	0.00	0.51	0.04	0.63			

METHODOLOGY

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

**Process Particulate Emissions
Building 9 Woodworking (Millwork Building)**

**Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley**

Woodworking Process (control equipment)	Process Weight Rate	Total PM collected*	Control Efficiency	Actual Hours of Operation	Potential Hours of Operation	Potential Emissions	Potential Emissions	Potential Emissions after Control	Potential Emissions after Control
	(lbs/hr)	(lbs/year)	(%)	(hours/year)	(hours/year)	(lbs/hour)	(tons/year)	(lbs/hour)	(tons/year)
Building 9 (cyclone and baghouse) **	1,500	65,700	99.9%	2,000	8,760	32.88	144.03	0.033	0.144
						Total	144.03	Total	0.144

METHODOLOGY

* Based on 2,000 hours of operation per year

Potential Emissions (lbs/hr) = PM collected (lbs/year) / (Control Eff.) / Actual Hours of Operation (hours/year)

Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)

**Equipment includes six (6) table saws, two (2) radial arm saws, two (2) shapers, one (1) belt sander, one (1) side lipper, one (1) pin router, one (1) tapping machine, and one (1) drill machine connected to a central cyclone and baghouse venting inside of the building

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimb: Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are 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.

**Appendix A: Emissions Calculations
Building 1 Cabinet Construction Chop Saws**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

Process/Operation	Description	Number of Units	Material Thickness (in)	Cutting Surface (Blade) Thickness (in)	Process Rate (in/hr)	Material Loss (in ³ /hr)	Material Density (lb/in ³)	Material Loss (lb/hr)
Cutting	Chop Saws	4	0.75	0.125	7.00	0.66	0.02	0.06
Estimated Losses (lb/hr)								0.06
Estimated Emissions (tons/year)								0.27
<p>METHODOLOGY</p> <p>Pounds Material Processed (lb/hr) = 2.0 (boards/saw/hr) x 4.0 (saws) x 0.29 (ft³/board) x 40 (lb/ft³) = 92.80 lb/hr</p> <p>Material Loss (in³/hr) = Material Thickness (in) x Cutting Surface Thickness, e.g., Blade (in) x Process Rate (in/hr)</p> <p>Material Density (lb/in³) = Pine = 40.0 lb/ft³</p> <p>Material Loss (lb/hr) = Number of Units (n) x Material Loss (in³/hr) x Material Density (lb/in³)</p> <p>Emissions (tons/year) = Material Loss (lb/hr) x 8,760 (hrs/year) x 1/2,000 (lb/ton)</p>								
Estimated Losses (lb/hr) - All Equipment								0.27
Estimated Emissions (tons/year) - All Equipment								1.17
Total Throughput - All Equipment (lb/hr) =					100.00	Process Weight < 100 lb/hr = 100 lb/hr		
Allowable Emission Rate (E) < 30 ton/hr =		0.13	x	4.10	=	0.551	lb/hr	
<p>METHODOLOGY</p> <p>Presume all loss of mass as particulate matter emissions as "worst case scenario".</p> <p>Allowable Emission Rate (E) < 30 ton/hr = 4.1 (Process Weight Rate (tons)^{0.67})</p>								

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Building 1 (Assembly and Cabinet Construction)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Building 1 (Assembly and Cabinet Construction)	Russell 676 Aerosol Adhesive	6.66	90.00%	25.00%	65.00%	25.19%	9.32%	0.0100	0.250	5.8	4.3	0.01	0.26	0.05	0.00	46.45	50%	Wood
Building 1 (Assembly and Cabinet Construction)	Silicone Sealant Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	54.43%	0.0100	0.250	3.4	3.4	0.01	0.20	0.04	0.01	6.16	50%	Metal (Tools)
Building 1 (Assembly and Cabinet Construction)	Acetone Hand Applied	6.61	100.00%	100.00%	0.00%	100.00%	0.00%	0.0100	0.250	#DIV/0!	0.0	0.00	0.00	0.00	0.00	#DIV/0!	100%	Cleanup
Building 1 (Assembly and Cabinet Construction)	Lacquer Thinner Hand Applied	7.07	100.00%	0.00%	100.00%	0.00%	0.00%	0.0100	0.250	7.1	7.1	0.02	0.42	0.08	0.00	#DIV/0!	100%	Cleanup

Potential to Emit	0.04	0.89	0.16	0.02
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
Building 1 (Assembly and Cabinet Construction)	Russell 676 Aerosol Adhesive	6.66	0.0100	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Assembly and Cabinet Construction)	Silicone Sealant Aerosol	5.59	0.0100	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Assembly and Cabinet Construction)	Acetone Hand Applied	6.61	0.0100	0.250	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 1 (Assembly and Cabinet Construction)	Lacquer Thinner Hand Applied	7.07	0.0100	0.250	0.00%	0.00%	0.00%	9.38%	0.00%	0.00%	66.28%	5.59%	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.06	

Uncontrolled Potential Emissions	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00
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METHODOLOGY

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

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Buildings 3 and 7 (Assembly and Final Finish)

Company Name: Carriage, Inc.
 Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
 Prepared By: D&B Environmental Services, Inc.
 FESOP Permit No.: 039-28780-00456
 Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Buildings 3 & 7 (Assembly and Final Finish)	Russell 676 Aerosol Adhesive	6.66	90.00%	25.00%	65.00%	25.19%	9.32%	0.0375	0.625	5.8	4.3	0.10	2.44	0.44	0.03	46.45	50%	Wood
Buildings 3 & 7 (Assembly and Final Finish)	Silicone Sealant Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	54.43%	0.0406	0.625	3.4	3.4	0.09	2.04	0.37	0.12	6.16	50%	Metal
Buildings 3 & 7 (Assembly and Final Finish)	Spray Paint Aerosol	6.38	83.80%	30.00%	53.80%	28.96%	8.00%	0.1000	0.625	4.8	3.4	0.21	5.15	0.94	0.14	42.91	50%	Plastic/FRP
Buildings 3 & 7 (Assembly and Final Finish)	Trempro Sealant Hand Applied	8.61	5.00%	0.00%	5.00%	0.00%	94.15%	0.5000	0.625	0.4	0.4	0.13	3.23	0.59	0.00	0.46	100%	Metal
Buildings 3 & 7 (Assembly and Final Finish)	Oatey ABS Cement Hand Applied	7.34	70.00%	10.00%	60.00%	11.10%	30.19%	0.0500	0.625	5.0	4.4	0.14	3.30	0.60	0.00	14.59	100%	Plastic
Buildings 3 & 7 (Assembly and Final Finish)	Oatey Cleaner Hand Applied	7.09	100.00%	20.00%	80.00%	21.45%	0.00%	0.0250	0.625	7.2	5.7	0.09	2.13	0.39	0.00	0.00	100%	Plastic
Buildings 3 & 7 (Assembly and Final Finish)	Northstar Adhesive Airless Flowcoat	6.00	86.00%	9.50%	76.50%	8.62%	21.94%	1.0000	0.625	5.0	4.6	2.87	68.85	12.57	0.00	20.92	100%	Plastic/Wood
Buildings 3 & 7 (Assembly and Final Finish)	Acetone Hand Applied	6.61	100.00%	100.00%	0.00%	100.00%	0.00%	0.1000	0.625	0.0	0.0	0.00	0.00	0.00	0.00	0.00	100%	Cleanup
Buildings 3 & 7 (Assembly and Final Finish)	Lacquer Thinner Hand Applied	7.07	100.00%	0.00%	100.00%	0.00%	0.00%	0.1000	0.625	7.1	7.1	0.44	10.61	1.94	0.00	#DIV/0!	100%	Cleanup

Potential to Emit	4.07	97.74	17.84	0.30
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
Buildings 3 & 7 (Assembly and Final Finish)	Russell 676 Aerosol Adhesive	6.66	0.0375	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Silicone Sealant Aerosol	5.59	0.0406	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Spray Paint Aerosol	6.38	0.1000	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.28
Buildings 3 & 7 (Assembly and Final Finish)	Trempro Sealant Hand Applied	8.61	0.5000	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Oatey ABS Cement Hand Applied	7.34	0.0500	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Oatey Cleaner Hand Applied	7.09	0.0250	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Northstar Adhesive Airless Flowcoat	6.00	1.0000	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Acetone Hand Applied	6.61	0.1000	0.625	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buildings 3 & 7 (Assembly and Final Finish)	Lacquer Thinner Hand Applied	7.07	0.1000	0.625	0.00%	0.00%	0.00%	9.38%	0.00%	0.00%	66.28%	5.59%	0.00	0.00	0.00	0.18	0.00	0.00	1.28	0.11	1.57	

Uncontrolled Potential Emissions	0.00	0.00	0.00	0.18	0.00	0.00	1.56	0.11	1.85
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METHODOLOGY

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

Appendix A: Emissions Calculations
 VOC and Particulate
 From Surface Coating Operations
 Building 9 (Counter Tops)

Company Name: Carriage, Inc.
 Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
 Prepared By: D&B Environmental Services, Inc.
 FESOP Permit No.: 039-28780-00456
 Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate	
Building 9 (Counter Tops)	StarStuck Adhesive Airless Flowcoat	5.84	67.00%	65.00%	2.00%	50.36%	57.43%	2.0000	10.000	0.2	0.1	2.34	56.06	10.23	0.00	0.20	100%	Wood	
Building 9 (Counter Tops)	Acetone	6.61	100.00%	100.00%	0.00%	100.00%	0.00%	0.1250	10.000	0.0	0.0	0.00	0.00	0.00	0.00	0.00	100%	Cleanup	
Potential to Emit												2.34	56.06	10.23	0.00				

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)		
Building 9 (Counter Tops)	StarStuck Adhesive Airless Flowcoat	5.84	2.0000	10.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Building 9 (Counter Tops)	Acetone	6.61	0.1250	10.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uncontrolled Potential Emissions													0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

METHODOLOGY

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

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Building 8 (Cabinet Coating)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Building 8 (Cabinet Coating)	Wood Stain	6.88	81.72%	0.00%	81.72%	0.00%	14.47%	0.01600	44.050	5.6	5.6	3.96	95.10	17.36	0.97	38.86	75%	Wood
Building 8 (Cabinet Coating)	Sealer/Topcoat	7.59	64.03%	8.17%	55.86%	9.38%	33.97%	0.02564	44.050	4.7	4.2	4.79	114.93	20.97	3.38	12.48	75%	Wood
Building 8 (Cabinet Coating)	Hydrite Lacquer Thinner	6.48	100.00%	42.30%	57.70%	41.47%	0.00%	0.01442	44.050	6.4	3.7	2.37	57.00	10.40	0.00	0.00	100%	Cleanup

Potential to Emit												11.13	267.03	48.73	4.35			
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%, HVLP = 75%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
Building 8 (Cabinet Coating)	Wood Stain	6.88	0.01600	44.050	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 8 (Cabinet Coating)	Sealer/Topcoat	7.59	0.02564	44.050	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.26	0.00	8.26
Building 8 (Cabinet Coating)	Hydrite Lacquer Thinner	6.48	0.01442	44.050	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	30.00%	0.00%	0.00	0.00	0.00	3.61	0.00	0.00	5.41	0.00	0.00	9.01

Uncontrolled Potential Emissions													0.00	0.00	0.00	3.61	0.00	0.00	13.67	0.00	17.27
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METHODOLOGY

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

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Building 17A (Steel Frame Painting/Surface Coating)

Company Name: Carriage, Inc.
 Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
 Prepared By: D&B Environmental Services, Inc.
 FESOP Permit No.: 039-28780-00456
 Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate	
Building 17A (Steel Frame Painting/Surface Coating)	HAP Free Primer/Paint	14.51	18.96%	0.00%	18.96%	0.00%	60.26%	1.5000	2.000	2.8	2.8	8.25	198.08	36.15	77.26	4.57	50%	Metal	
Building 17A (Steel Frame Painting/Surface Coating)	Lacquer Thinner	7.07	100.00%	0.00%	100.00%	0.00%	0.00%	0.1000	2.000	7.1	7.1	1.41	33.94	6.19	0.00	0.00	100%	Cleanup	
Potential to Emit												9.67	232.01	42.34	77.26				

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
Building 17A (Steel Frame Painting/Surface Coating)	HAP Free Primer/Paint	14.51	1.5000	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building 17A (Steel Frame Painting/Surface Coating)	Lacquer Thinner	7.07	0.1000	2.000	0.00%	0.00%	0.00%	9.38%	0.00%	0.00%	66.28%	5.59%	0.00	0.00	0.00	0.58	0.00	0.00	4.10	0.35	5.03	
Uncontrolled Potential Emissions														0.00	0.00	0.00	0.58	0.00	0.00	4.10	0.35	5.03

METHODOLOGY

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

**Appendix A: Emissions Calculations
Woodworking Operations**

**Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley**

Woodworking Process (control equipment)	Process Weight Rate (lbs/hr)	Total PM collected* (lbs/year)	Control Efficiency (%)	Actual Hours of Operation (hours/year)	Potential Hours of Operation (hours/year)	Potential Emissions (lbs/hour)	Potential Emissions (tons/year)	Potential Emissions after Control (lbs/hour)	Potential Emissions after Control (tons/year)
Building 18 (cyclones and baghouses)	800	25,580	99.9%	2,000	8,760	12.80	56.08	0.013	0.056
Allowable Emission Rate (lb/hr)	2.22					Emission Totals	56.08	Total	0.056

METHODOLOGY

* Based on 2,000 hours of operation per year

Potential Emissions (lbs/hr) = PM collected (lbs/year) / (Control Eff.) / Actual Hours of Operation (hours/year)

Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate (tons)]^{0.67}

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Four (4) Boilers (Building 5 B1 & B2, Building 18 H1 & H2)

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
Date: May 3, 2010

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.450	12.70

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	0.012	0.048	0.004	0.64	0.035	0.53

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Four (4) Boilers (Building 5 B1 & B2, Building 18 H1 & H2)

Company Name: Carriage, Inc.

Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543

Prepared by: D&B Environmental Services, Inc.

FESOP Permit No.: 039-28780-00456

Reviewer: Janet Mobley

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00001	0.000008	0.0005	0.011	0.00002

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	Total HAPs
Potential Emission in tons/yr	0.000003	0.000007	0.000009	0.000002	0.00001	0.012

Methodology is the same as Previous Page.

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

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Four (4) Water Heaters (Buildings 2, 5, 9, and 11)

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
Date: May 3, 2010

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.120	1.05

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.600	100 **see below	5.50	84.0
Potential Emission in tons/yr	0.001	0.004	0.000	0.05	0.003	0.04

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions
Four (4) Water Heaters (Buildings 2, 5, 9, and 11)

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared by: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.000001	0.000001	0.00004	0.001	0.000002

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	Total HAPs
Potential Emission in tons/yr	0.0000003	0.000001	0.000001	0.0000002	0.0000011	0.001

Methodology is the same as Previous Page.

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Twenty nine (29) Enclosed Space Heaters (Buildings 1, 2, 3, 6, 7, 8, 9, 11, and 22)

Company Name: Carriage, Inc.
 Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
 Prepared By: D&B Environmental Services, Inc.
 Date: May 3, 2010

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

7.010

61.41

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	0.058	0.233	0.018	3.07	0.169	2.58

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Twenty nine (29) Enclosed Space Heaters (Buildings 1, 2, 3, 6, 7, 8, 9, 11, and 22)

Company Name: Carriage, Inc.

Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543

Prepared by: D&B Environmental Services, Inc.

FESOP Permit No.: 039-28780-00456

Reviewer: Janet Mobley

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00006	0.000037	0.0023	0.055	0.00010

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	Total HAPs
Potential Emission in tons/yr	0.000015	0.000034	0.000043	0.000012	0.00006	0.058

Methodology is the same as Previous Page.

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

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Sixty five (65) Radiant Space Heaters (Buildings 3, 4, 5, 6, 7, 9, 10, 11, and 17A)

Company Name: Carriage, Inc.
 Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
 Prepared By: D&B Environmental Services, Inc.
 Date: May 3, 2010

Heat Input Capacity
 MMBtu/hr

Potential Throughput
 MMCF/yr

4.250

37.23

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	0.035	0.141	0.011	1.86	0.102	1.56

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Sixty five (65) Radiant Space Heaters (Buildings 3, 4, 5, 6, 7, 9, 10, 11, and 17A)

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared by: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00004	0.000022	0.0014	0.034	0.00006

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	Total HAPs
Potential Emission in tons/yr	0.000009	0.000020	0.000026	0.000007	0.00004	0.035

Methodology is the same as Previous Page.

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Four (4) Air Makeup Units (Buildings 8, 17, and 17A)

Company Name: Carriage, Inc.

Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543

Prepared By: D&B Environmental Services, Inc.

Date: May 3, 2010

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

4.250	37.23
-------	-------

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.600	100 **see below	5.50	84.0
Potential Emission in tons/yr	0.035	0.141	0.011	1.86	0.102	1.56

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Four (4) Air Makeup Units (Buildings 8, 17, and 17A)

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared by: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00004	0.000022	0.0014	0.034	0.00006

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	Total HAPs
Potential Emission in tons/yr	0.000009	0.000020	0.000026	0.000007	0.00004	0.035

Methodology is the same as Previous Page.

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

**Appendix A: Emissions Calculations
Unpaved Roads**

**Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley**

0.875	trips/hr x
0.142	miles/roundtrip x

1088 miles per year

Constants			
where:	For PM	For PM-10	
k =	10	2.6	(particle size multiplier for PM-10) (k=10 for PM-30 or TSP)
s =	4.8	4.8	mean % silt content of unpaved roads
b =	0.5	0.4	Constant for PM-10 (b = 0.5 for PM-30 or TSP)
c =	0.4	0.3	Constant for PM-10 (c = 0.4 for PM-30 or TSP)
W =	15	15	tons average vehicle weight
Mdry =	0.2	0.2	surface material moisture content, % (default is 0.2 for dry conditions)
p =	125	125	number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)
Particulate Emission Factor			
Ef =	7.06	1.56	$Ef = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(Mdry/0.2)^c] \cdot [(365-p)/365]\}$ (lb/mile)

$$\text{PM Emissions} = \frac{7.06 \text{ lb/mi} \times 1088.43 \text{ mi/yr}}{2000 \text{ lb/ton}} =$$

3.84 tons/yr
0.88 lb/hr

$$\text{PM-10 Emissions} = \frac{1.56 \text{ lb/mi} \times 1088.43 \text{ mi/yr}}{2000 \text{ lb/ton}} =$$

0.85 tons/yr
0.19 lb/hr

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

**Appendix A: Emissions Calculations
Buildings 1 and 3 (Insignificant Woodworking Operations)**

**Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley**

Woodworking Process (control equipment)	Process Weight Rate (lbs/hr)	Total PM collected* (lbs/year)	Control Efficiency (%)	Actual Hours of Operation (hours/year)	Potential Hours of Operation (hours/year)	Potential Emissions (lbs/hour)	Potential Emissions (tons/year)	Potential Emissions after Control (lbs/hour)	Potential Emissions after Control (tons/year)
Building 1 (cyclone)	250	4,400	99.0%	2,000	8,760	2.22	9.73	0.022	0.097
Building 3 (cyclone)	100	8,760	99.0%	2,000	8,760	4.42	19.38	0.044	0.194
Total							29.11	Total	0.291

METHODOLOGY

* Based on 2,000 hours of operation per year

Potential Emissions (lbs/hr) = PM collected (lbs/year) / (Control Eff.) / Actual Hours of Operation (hours/year)

Potential Emissions (tons/year) = Potential Emissions (lbs/hr) x (8760 hours/year) x (1 ton/2000 lbs)

**Appendix A: Emissions Calculations
Buildings 16 and 17 (Welding and Thermal Cutting)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

PROCESS	Number of Stations	Max. electrode or carbon steel consumption per station (lbs/hr)	Electrode Usage (lb/hr)	EMISSION FACTORS* (lb pollutant/lb electrode or carbon steel)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Metal Inert Gas (MIG)(carbon steel)	3.00	0.33	1.00	0.0055	0.0005			0.006	0.001	0.000	0.000	0.001
Metal Inert Gas (MIG)(aluminum)	5.00	0.25	1.25	0.0035	0.0019			0.004	0.002	0.000	0.000	0.002
Stick (E7018 electrode)	5.00	3.00	15.00	0.0211	0.0009			0.317	0.014	0.000	0.000	0.0135
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
				0.0039				0.000	0.000	0.000	0.000	0.00
				0.0039				0.000	0.000	0.000	0.000	0.00
EMISSION TOTALS												
Potential Emissions lbs/hr								0.33	0.02	0.00	0.00	0.02
Potential Emissions lbs/day								7.83	0.39	0.00	0.00	0.39
Potential Emissions tons/year								1.43	0.07	0.00	0.00	0.07

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

**Appendix A: Emissions Calculations
Building 17 (Miscellaneous Metal Fabrication)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

Cutting

Process/Operation	Description	ID	Material Throughput Rate (lb/hr)	Material Thickness (in)	Cutting Surface Thickness (in)	Process rate (in/hr)	Material Loss (in ³ /hr)	Material Density (lb/in ³)	Material Loss (lb/hr)
Shearing/Cutting	Steel Chop Saw	CS17S	1,500.00	0.0625	0.1875	2,400.0	28.125	0.025	0.70
Shearing/Cutting	Aluminum Chop Saw	CS17A	500.00	0.0625	0.125	2,400.0	18.750	0.015	0.28
Estimated Emissions (lb/hr)									0.98
Estimated Emissions (tons/yr)									4.31
Material Throughput Rate (lbs/hr)			2,000.00						
Allowable Emission (lb 4.10 X [Process Weight Rate (tons)]^{0.67} =									4.10

METHODOLOGY

Material Loss (in³/hr) = Surface Thickness (in) X Surface Width (in) X Surface Distance (in/hr)
 Material Density (lbs/in³) = Data from O'Neal Steel, Inc. Stock List and Reference Book, 1999
 Estimated Emissions (lb/hr) = Material Loss (in³/hr) X Material Density (lb/in³)
 Estimated Emissions (tons/yr) = Material Loss (in³/hr) X 8,760 (hrs/yr) X 1/2,000 (lbs/ton)

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Building 6 (Service Operations)**

Company Name: Carriage, Inc.
Address City IN Zip: 210 Wabash Street, Millersburg, Indiana 46543
Prepared By: D&B Environmental Services, Inc.
FESOP Permit No.: 039-28780-00456
Reviewer: Janet Mobley

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate	
Building 6 (Service Operations)	Acetone Hand Applied	6.61	100.00%	100.00%	0.00%	100.00%	0.00%	0.1000	0.100	0.0	0.0	0.00	0.00	0.00	0.00	0.00	100%	Cleanup	
Building 6 (Service Operations)	Lacquer Thinner Hand Applied	7.07	100.00%	0.00%	100.00%	0.00%	0.00%	0.1000	0.100	7.1	7.1	0.07	1.70	0.31	0.00	0.00	100%	Cleanup	
Potential to Emit												0.07	1.70	0.31	0.00				

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol & Air Assisted Airless = 50%

METHODOLOGY

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

HAZARDOUS AIR POLLUTANTS

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cadmium	Weight % Glycol Ethers	Weight % Hexane	Weight % Methanol	Weight % Methylene Chloride	Weight % MIBK	Weight % Toluene	Weight % Xylene	Cadmium Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methanol Emissions (ton/yr)	Methylene Chloride (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)		
Building 6 (Service Operations)	Acetone Hand Applied	6.61	0.1000	0.100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Building 6 (Service Operations)	Lacquer Thinner Hand Applied	7.07	0.1000	0.100	0.00%	0.00%	0.00%	9.38%	0.00%	0.00%	66.28%	5.59%	0.00	0.00	0.00	0.03	0.00	0.00	0.21	0.02	0.25		
Uncontrolled Potential Emissions													0.00	0.00	0.00	0.03	0.00	0.00	0.21	0.02	0.25		

METHODOLOGY

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



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

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

TO: Kathy Fuller
Carriage, Inc
P.O. Box 246
Millersburg, IN 46543

DATE: May 3, 2010

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

SUBJECT: Final Decision
FESOP - Renewal
039-28780-00456

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
Kevin Parks, (D&B Environmental Services, Inc)
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

May 3, 2010

TO: Goshen Public Library

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

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

Applicant Name: Carriage, Inc
Permit Number: 039-28780-00456

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 5/3/2010 Carriage, Inc 039-28780-00456 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Kathy Fuller Carriage, Inc PO Box 246 Millersburg IN 46543-0246 (Source CAATS) via confirmed delivery										
2		Pres or CFO Carriage, Inc PO Box 246 Millersburg IN 46543-0246 (RO CAATS)										
3		Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)										
4		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
5		Mr. Kevin Parks D & B Environmental Services, Inc. 401 Lincoln Way West Ocoola IN 46561 (Consultant)										
6		Goshen Public Library 601 S 5th St Goshen IN 46526-3994 (Library)										
7		Millersburg Town Council P.O. Box 278, 201 West Washington Street Millersburg IN 46543 (Local Official)										
8		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)										
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