



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: December 13, 2007  
RE: Skyline Corporation / 039-24905-00306  
FROM: Matthew Stuckey, Deputy 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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100 North Senate Avenue  
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Indianapolis, Indiana 46204-2251  
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## Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**Skyline Corporation  
401 County Road 15 South  
Elkhart, Indiana 46515**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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 MSOP under 326 IAC 2-6.1.

Operation Permit No.: M039-24905-00306	
Issued by:  <i>Original signed by</i> Chrystal Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 13, 2007  Expiration Date: December 13, 2012

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary recreational vehicle (RV) manufacturing.

Source Address:	401 County Road 15 South, Elkhart, Indiana 46515
Mailing Address:	P.O. Box 743, Elkhart, Indiana 46515
General Source Phone Number:	574-294-6521
SIC Code:	3792
County Location:	Elkhart
Source Location Status:	Attainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Source Description

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This recreational vehicle (RV) manufacturing company consists of two (2) plants and a service building:

- (a) All three (3) buildings are located at 401 County Road 15 South, Elkhart, Indiana 46515.

Since these plants are located on one or more contiguous properties, they have the same SIC code, and are under common ownership, they will be considered one (1) source, and will operate under one permit.

### A.3 Emission Units and Pollution Control Equipment Summary

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

- (a) Coating operations in assembly area, with a maximum production rate of 3 recreational vehicles per hour, constructed before 1980, including various aerosol cans and manual tube extrusion guns.
- (b) One (1) hot melt rollcoater, applying adhesives to vehicle wall panels, with a maximum production rate of 60 panels per hour.
- (c) One (1) fiberglass and luan machining process, including one (1) table saw controlled by a fabric filter, and two (2) hand routers, machining one quarter inch of luan or fiberglass at a maximum rate of 600 pounds of material per hour, and exhausting into the building.
- (d) Thirty-nine (39) stationary and hand-held wood cutting saws, with a maximum throughput rate of 2,820 pounds of wood per hour, exhausting into the building and controlled by a cyclone
- (e) One (1) welding process, consisting of one (1) metal inert gas (MIG) welder, welding

trailer wall frames with a maximum wire consumption rate of 4.7 pounds per hour.

- (f) Forty (40) natural gas fired space heaters, each with a maximum heat input of 0.3 MMBtu/hr, exhausting to stacks A, B and C of the service building, stacks E through K and stacks M through W of Plant 1, and stacks 1, 2, 6-11, and 21-27 of Plant 2.
- (g) Ten (10) natural gas fired space heaters, with a maximum total heat input of 1.6 MMBtu/hr, constructed in 2001.
- (h) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.
- (i) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (j) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.

## SECTION B GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-1.1-1]

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, M039-24905-00306, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

### B.4 Enforceability

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

### B.5 Severability

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

### B.6 Property Rights or Exclusive Privilege

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

### B.7 Duty to Provide Information

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

#### B.8 Certification

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

#### B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251
- (c) The notification 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.

#### B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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

**B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to M039-24905-00306 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.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

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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 ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

**B.13 Permit Renewal [326 IAC 2-6.1-7]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
  - (1) Submitted at least ninety (90) days 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 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

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

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

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

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.15 Source Modification Requirement**

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

**B.16 Inspection and Entry**

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

(a) Enter upon the Permittee's premises where a permitted 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.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

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

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

**B.18 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.

- (b) 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.19 Credible Evidence [326 IAC 1-1-6]**

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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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-6.1-5(a)(2)]**

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

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

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

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

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

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

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

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

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

## **Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]**

### **C.10 Compliance Monitoring [326 IAC 2-1.1-11]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

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

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

### **C.12 Instrument Specifications [326 IAC 2-1.1-11]**

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

## **Corrective Actions and Response Steps**

### **C.13 Response to Excursions or Exceedances**

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

- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.14 Actions Related to Noncompliance Demonstrated by a Stack Test**

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

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

**Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

**C.15 Malfunctions Report [326 IAC 1-6-2]**

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (b) 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.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) 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.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Coating operations in assembly area, with a maximum production rate of 3 recreational vehicles per hour, constructed before 1980, including various aerosol cans and manual tube extrusion guns.
- (b) One (1) hot melt rollcoater, applying adhesives to vehicle wall panels, with a maximum production rate of 60 panels 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 2-6.1-5(a)(1)]

#### D.1.1 Miscellaneous Metal Coating Operations [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating stations shall be limited to 3.5 pounds of VOCs per gallon of coating less water.
- (b) 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.

#### D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

### Compliance Determination Requirements

#### D.1.3 Miscellaneous Metal Coating Operations [326 IAC 8-2-9]

Compliance with the VOC content limit in condition D.1.1 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = \frac{\sum C \times U}{\sum U}$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;  
C is the VOC content of the coating in pounds VOC per gallon less water as applied; and  
U is the usage rate of the coating in gallons per day.

IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

## **Record Keeping Requirements [326 IAC 2-6.1-5(a)(2)]**

### **D.1.4 Record Keeping Requirement**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.1.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month; and
  - (5) The weight of VOC emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) fiberglass and luan machining process, including one (1) table saw controlled by a fabric filter, and two (2) hand routers, machining one quarter inch of luan or fiberglass at a maximum rate of 600 pounds of material per hour, and exhausting into the building.
- (b) Thirty-nine (39) stationary and hand-held wood cutting saws, with a maximum throughput rate of 2,820 pounds of wood per hour, exhausting into the building and controlled by a cyclone

(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 2-6.1-5(a)(1)]

#### D.2.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations, operating at 600 pounds per hour, shall be limited to 1.83 pounds per hour, determined 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:

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

- (b) Pursuant to 326 IAC 6-3-2, the particulate from the fiberglass and luan machining operations, operating at 600 pounds per hour, shall be limited to 1.83 pounds per hour, determined 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:

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

### Compliance Determination Requirements

#### D.2.2 Particulate Control

In order to comply with Condition D.2.1(b), the fabric filter for particulate control shall be in operation and control emissions from the fiberglass and luan machining operations at all times the fiberglass and luan machining operations are in operation.

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

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	Skyline Corporation
<b>Address:</b>	401 County Road 15 South
<b>City:</b>	Elkhart, Indiana 46515
<b>Phone #:</b>	574-294-6521
<b>MSOP #:</b>	M039-24905-00306

I hereby certify that Skyline Corporation is :

still in operation.

no longer in operation.

I hereby certify that Skyline Corporation is :

in compliance with the requirements of MSOP M039-24905-00306.

not in compliance with the requirements of MSOP M039-24905-00306.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

### MALFUNCTION REPORT

#### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER - 317 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_\_, 100TONS/YEAR CARBON MONOXIDE ?\_\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERM LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF >MALFUNCTION= AS LISTED ON REVERSE SIDE ?    Y    N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y    N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

\***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
MINOR SOURCE OPERATING PERMIT  
CERTIFICATION**

Source Name: Skyline Corporation  
Source Address: 401 County Road 15 South, Elkhart, Indiana 46515  
Mailing Address: P.O. Box 743, Elkhart, Indiana 46515  
MSOP No.: M039-24905-00306

**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:

Phone:

Date:

# Indiana Department of Environmental Management Office of Air Quality

## Addendum to the Technical Support Document for a Part 70 Operating Permit Renewal

Source Name: Skyline Corporation  
Source Location: 401 County Road 15 South, Elkhart, Indiana 46515  
County: Elkhart  
SIC Code: 3792  
Operation Permit No.: M039-24905-00306  
Permit Reviewer: Stephanie Wilkerson

On October 13, 2007, the Office of Air Quality (OAQ) had a notice published in the Elkhart Truth in Elkhart, Indiana, stating that Skyline Corporation had applied for a Minor Source Operating Permit renewal for a stationary recreational vehicle (RV) manufacturing plant. The notice also stated that OAQ proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit renewal 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 renewal should be issued as proposed.

Comments from Mr. Dana Armstrong of DECA Environmental & Associates, on behalf of Skyline Corporation, were received regarding the issuance of this permit renewal. The summary of the comments and corresponding responses is as follows (**bold** language has been added and ~~struck~~ language has been deleted):

### ***Permit Section D.1***

#### **Comment 1, Part 1:**

326 IAC 8-2-9 and 326 IAC 8-1-6 should not apply to the coating operations in the assembly area because these operations were constructed prior to 1980. Also, 326 IAC 8-6-1 does not apply because the sourcewide PTE is less than 100 tons VOC per year.

#### **Response to Comment 1, Part 1:**

Pursuant to the applicability requirements of 326 IAC 8-2-1(a)(3), facilities existing as of July 1, 1990, located in Clark, Elkhart, Floyd, Lake, Marion, Porter, and St. Joseph Counties, and having actual emissions of fifteen (15) pounds per day of VOC are subject to the requirements of one of the sections of 326 IAC 8-2.

The coating operations in the assembly area were in existence as of July 1, 1990, are located in Elkhart County, and have actual emissions greater than fifteen (15) pounds of VOC per day, based on PTE calculations made for the permit. Therefore, the coating operations in the assembly area are subject to the requirements of 326 IAC 8-2. The coating operations fall into the Miscellaneous Metal Coating Operations rule, and are thus regulated by, 326 IAC 8-2-9. The TSD and the permit reflect this fact and will not be changed.

Pursuant to the applicability requirements of 326 IAC 8-1-6(3)(A), the coating operations in the assembly area are exempt from the requirements of 326 IAC 8-1-6 (BACT) because the facilities were constructed prior to 1980 and are subject to the requirements of 326 IAC 8-2-9. No requirements for 326 IAC 8-1-6 are included in this permit.

Pursuant to the applicability requirements of 326 IAC 8-6-1, the coating operations in the assembly area are not subject to the requirements of 326 IAC 8-6 (Organic Solvent Emission Limitations) because the sourcewide PTE is less than 100 tons VOC per year and it is subject to the requirements of 326 IAC 8-2-9. No requirements for 326 IAC 8-6 are included in this permit.

**Comment 1, Part 2:**

326 IAC 8-2-9 should not apply to the hot melt rollcoater. It is a separate facility from the coating operations in the assembly area and does not perform a similar function. Because the PTE is less than 25 tons per year for this facility, 326 IAC 8-1-6 also does not apply.

**Response to Comment 1, Part 2:**

The hot melt rollcoater and the coating operations discussed above both perform surface coating activities, as the definition of surface coating is: "the application of a protective, functional, or decorative film" to a substrate (326 IAC 8-1-5(c)).

The hot melt rollcoater was in existence as of July 1, 1990, is located in Elkhart County, and has actual emissions greater than fifteen (15) pounds of VOC per day, based on PTE calculations made for this permit. Therefore, the hot melt rollcoater is subject to the requirements of 326 IAC 8-2. This facility falls into the Miscellaneous Metal Coating Operations rule, and thus is regulated by, 326 IAC 8-2-9. The TSD and permit reflect this fact and will not be changed.

Pursuant to the applicability requirements of 326 IAC 8-1-6(3)(A), the coating operations in the assembly area are exempt from the requirements of 326 IAC 8-1-6 (BACT) because the facilities are subject to the requirements of 326 IAC 8-2-9. No requirements for 326 IAC 8-1-6 are included in this permit.

**Comment 1, Part 3:**

If no sections of Article 8 apply to the entire Source, then it follows that D.1.3 and D.1.4 do not apply to the Source either.

**Response to Comment 1, Part 3:**

As explained above, the requirements of 326 IAC 8-2-9 are applicable to the facilities listed in Section D.1 of the permit. Therefore, the Compliance Determination and Recordkeeping Requirements found in Conditions D.1.3 and D.1.4 are also applicable. The permit will not be changed.

**Comment 1, Part 4:**

In addition, at least one permit has been issued in which it is stated that 326 IAC 8-2-9 does not apply because the construction date was before 1980. Please look up Freudenberg - NOK General Partnership, Morristown, IN. (T145-7643-00028).

**Response to Comment 1, Part 4:**

A review of permit T145-7643-00028 was performed as requested. It is correctly stated that the requirements of 326 IAC 8-2-9 do not apply to the Freudenberg - NOK General Partnership in Morristown, Indiana (Freudenberg - NOK). The applicability determination found in 326 IAC 8-2-1(a)(2) exempts Freudenberg - NOK because it was constructed before the applicability date of November 1, 1980. The applicability requirements of 326 IAC 8-2-1(a)(3) do not apply to Freudenberg - NOK because it is located in Shelby County, not in Clark, Elkhart, Floyd, Lake, Marion, Porter, or St. Joseph Counties. Skyline Corporation, the Permittee for this permit,

however, is located in Elkhart County, and thus must be regulated by the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) pursuant to 326 IAC 8-2-1(a)(3).

**Comment 2:**

The daily averaging requirements to show compliance with the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) are overly burdensome for the facility.

**Response to Comment 2:**

At the current time, there are four (4) options for demonstrating compliance with the requirements of 326 IAC 8-2-9. These options are:

1. Use of compliant coatings;
2. Daily averaging;
3. Use of a VOC control device; and
4. Comply with the alternative equivalent emission limitations pursuant to 326 IAC 8-1-2(a)(5), 326 IAC 8-1-2(a)(9), 326 IAC 8-1-5, or 326 IAC 8-1-7.

Because the Permittee does not use compliant coatings, the first option is not available. The Permittee does not want to install a VOC control device. The alternative equivalent emission limitations are calculated in units of pounds of VOC per gallon of solids deposited, baseline transfer efficiencies, and baseline volume percent solids. The Permittee does not use coatings that have a volume percent solids in any of its coatings that would allow for the use of this option. Therefore, the only option is the daily averaging that is described in the Compliance Determination and Recordkeeping Requirements of the permit, specifically in Conditions D.1.3 and D.1.4. Since these requirements are already included, the TSD and permit will not be changed.

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

Technical Support Document (TSD) for a Minor Source Operating Permit Renewal

**Source Background and Description**

<b>Source Name:</b>	<b>Skyline Corporation</b>
<b>Source Location:</b>	<b>401 County Road 15 South, Elkhart, Indiana 46515</b>
<b>County:</b>	<b>Elkhart</b>
<b>SIC Code:</b>	<b>3792</b>
<b>Permit Renewal No.:</b>	<b>M039-24905-00306</b>
<b>Permit Reviewer:</b>	<b>Stephanie Wilkerson</b>

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Skyline Corporation relating to the operation of a stationary recreational vehicle (RV) manufacturing plant.

**History**

On June 11, 2007, Skyline Corporation submitted an application to the OAQ requesting to renew its operating permit. Skyline Corporation was issued a Minor Source Operating Permit, M039-16017-00306, on October 31, 2002.

**Source Definition**

This Source Definition from the previously issued Minor Source Operating Permit was incorporated into this permit as follows:

This recreational vehicle (RV) manufacturing company consists of two (2) plants and a service building:

- (a) All three (3) buildings are located at 401 County Road 15 South, Elkhart, Indiana 46515.

Since these plants are located on one or more contiguous properties, they have the same SIC code, and are under common ownership, they will be considered one (1) source, and will operate under one permit.

**Permitted Emission Units and Pollution Control Equipment**

- (a) Coating operations in assembly area, with a maximum production rate of 3 recreational vehicles per hour, constructed before 1980, including various aerosol cans and manual tube extrusion guns.
- (b) One (1) hot melt rollcoater, applying adhesives to vehicle wall panels, with a maximum production rate of 60 panels per hour.
- (c) One (1) fiberglass and luan machining process, including one (1) table saw controlled by a fabric filter, and two (2) hand routers, machining one quarter inch of luan or fiberglass at a maximum rate of 600 pounds of material per hour, and exhausting into the building.
- (d) Thirty-nine (39) stationary and hand-held wood cutting saws, with a maximum throughput rate of 2,820 pounds of wood per hour, exhausting into the building and controlled by a cyclone.
- (e) One (1) welding process, consisting of one (1) metal inert gas (MIG) welder, welding trailer wall frames with a maximum wire consumption rate of 4.7 pounds per hour.

- (f) Forty (40) natural gas fired space heaters, each with a maximum heat input of 0.3 MMBtu/hr, exhausting to stacks A, B and C of the service building, stacks E through K and stacks M through W of Plant 1, and stacks 1, 2, 6-11, and 21-27 of Plant 2.
- (g) Ten (10) natural gas fired space heaters, with a maximum total heat input of 1.6 MMBtu/hr, constructed in 2001.
- (h) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.
- (i) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (j) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.

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

At the time of permit renewal, there are no unpermitted emission units or pollution control equipment at the source.

#### **Existing Approvals**

Since the issuance of the MSOP 039-16017-00306 on October 31, 2002, the source has constructed or has been operating under the following approvals as well:

- (a) Notice-Only Change No. 039-18911-00306 issued on April 22, 2004; and
- (b) Notice-Only Change No. 039-19078-00306 issued on July 30, 2004.

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.

**Stack Summary**

	Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
Service Building	A	Space Heater	23	0.5	300	400
	B	Space Heater	23	0.5	300	400
	C	Space Heater	23	0.5	300	400
Plant 1	E	Space Heater	19	0.5	300	400
	F	Space Heater	19	0.5	300	400
	G	Space Heater	19	0.5	300	400
	H	Space Heater	24	0.67	300	400
	I	Space Heater	23	0.5	300	400
	J	Space Heater	24	0.67	300	400
	K	Space Heater	24	0.67	300	400
	M	Space Heater	24	0.67	300	400
	N	Space Heater	23	0.5	300	400
	O	Space Heater	23	0.5	300	400
	P	Space Heater	23	0.5	300	400
	Q	Space Heater	23	0.5	300	400
	R	Space Heater	24	0.67	300	400
	S	Space Heater	23	0.5	300	400
	T	Space Heater	18	0.5	300	400
Plant 2	U	Space Heater	23	0.5	300	400
	V	Space Heater	24	0.67	300	400
	W	Space Heater	23	0.5	300	400
	1	Space Heater	23	0.5	300	400
	2	Space Heater	23	0.5	300	400
	6	Space Heater	23	0.5	300	400
	7	Space Heater	18	0.5	300	400
	8	Space Heater	24	0.67	300	400
	9	Space Heater	24	0.67	300	400
	10	Space Heater	23	0.5	300	400
	11	Space Heater	24	0.67	300	400
	21	Space Heater	23	0.5	300	400
	22	Space Heater	23	0.5	300	400
	23	Space Heater	20	1.5	300	400
	24	Space Heater	23	0.5	300	400
25	Space Heater	23	0.5	300	400	
26	Space Heater	23	0.5	300	400	
27	Space Heater	23	0.5	300	400	

## Emission Calculations

See Appendix A of this document for detailed emission calculations.

## County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM <sub>10</sub>	Attainment
PM <sub>2.5</sub>	Attainment
SO <sub>2</sub>	Attainment
NOx	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: On September 6, 2007 the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.

- (a) Elkhart County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability – Entire Source section.
- (b) 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 emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) Elkhart County has been classified as attainment in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) 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 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD or Emission Offset applicability.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	13.31
PM-10	13.71
SO <sub>2</sub>	0.0
VOC	82.76
CO	5.0
NO <sub>x</sub>	6.0

HAPs	tons/year
Hexane	0.107
Formaldehyde	0.0045
Manganese	0.01
Xylene	0.8
Toluene	0.66
Methanol	0.05
<b>Total</b>	<b>1.63</b>

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

#### Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

### Actual Emissions

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

Pollutant	Actual Emissions (tons/year)
<b>PM</b>	0.704
<b>PM-10</b>	0.530
<b>SO<sub>2</sub></b>	-
<b>VOC</b>	4.370
<b>CO</b>	-
<b>NO<sub>x</sub></b>	-
<b>HAP</b>	-

### Potential to Emit After Issuance

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 MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Fiberglass/Luan Machining	0.45	0.45	-	-	-	-	-
Surface and Roll Coating	Neg.*	Neg.*	-	82.46	-	-	1.51
Natural Gas Heating	0.1	0.5	Neg.*	0.3	5.0	6.0	0.11
Woodworking	0.83	0.83	-	-	-	-	-
Welding	0.11	0.11	-	-	-	-	Neg.*
<b>Total Emissions</b>	<b>1.49</b>	<b>1.89</b>	<b>Neg.*</b>	<b>82.76</b>	<b>5.0</b>	<b>6.0</b>	<b>1.63</b>

\*Neg. = Negligible amount of pollutant (less than 0.1 tons/per year)

- (a) This existing stationary source is not major for Emission Offset because the emissions of VOC and NO<sub>x</sub> are each less than one hundred (<100) tons per year.
- (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

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
  - (1) This source is not subject to 40 CFR Part 60, Subpart EE (Standards for Performance of Surface Coating of Metal Furniture), because the source does not apply surface coatings to metal furniture. Therefore, these requirements are not included in this permit.
  - (2) This source is not subject to 40 CFR Part 60, Subpart MM (Standards for Performance of Automobile and Light Duty Truck Surface Coating Operations), because the source does not apply surface coatings to automobiles or light trucks. Therefore, these requirements are not included in this permit.
- (b) 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.
  - (1) This source is not a Title V (Part 70) major source of hazardous air pollutants (HAPs); therefore, it is not subject to the requirements of 326 IAC 14, 326 IAC 20, or 40 CFR Part 63.

### State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)  
 This source does not have the potential to emit more than more than 250 tons of any criteria pollutant per year. Therefore, 326 IAC 2-2 does not apply to this source.

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

The operation of this stationary recreational vehicle (RV) manufacturing facility will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not required to have a Part 70 permit and it is not located in Lake, Porter, or LaPorte Counties. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of 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 operations, operating at 600 pounds per hour, shall be limited to 1.83 pounds per hour, determined 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:

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

The potential uncontrolled PM emissions from this operation are 0.9 pounds per hour. Therefore, the source is able to comply with the limit above without the cyclone operating as a control device.

- (b) Pursuant to 326 IAC 6-3-2, the particulate from the fiberglass and luan machining operations, operating at 600 pounds per hour, shall be limited to 1.83 pounds per hour, determined 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:

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

The potential PM uncontrolled emissions from this operation are 2.1 pounds per hour. The fabric filter shall be in operation at all times the fiberglass and luan machining operations are in operation, in order to comply with this limit.

- (c) The coating operations in the assembly area are aerosol coating or manual tube extrusion guns. The operation of extrusion guns does not emit any particulate emissions. The application of aerosol coating products is exempt from the requirements of 326 IAC

6-3, pursuant to 326 IAC 6-3-1(a)(12). Therefore, the requirements of 326 IAC 6-3 are not applicable to the coating operations in the assembly area.

- (d) The welding activities at the source consume less than 625 pounds of rod or wire per day. Therefore, the welding activities at the source are exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(a)(9).

#### 326 IAC 8-1-6 (BACT)

This source was constructed before 1980. Therefore, pursuant to 326 IAC 8-1-6, this source is not subject to BACT.

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

The source applies paints and other coatings to metal substrates as part of the production process. Therefore, pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating stations shall be limited to 3.5 pounds of VOCs per gallon of coating less water.

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.

Compliance with the VOC content limit in 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = \frac{\sum C \times U}{\sum U}$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;  
C is the VOC content of the coating in pounds VOC per gallon less water as applied; and  
U is the usage rate of the coating in gallons per day.

IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

### Recommendation

The staff recommends to the Commissioner that the MSOP 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 June 11, 2007. Additional information was received on June 20, 2007, June 28, 2007, and July 3, 2007.

### Conclusion

The operation of this stationary recreational vehicle (RV) manufacturing plant shall be subject to the conditions of the attached MSOP renewal No. 039-24905-00306.

**Appendix A: Emission Calculations**  
**PM/PM10 Emissions**  
**From the Fiberglass and Luan Machining Process**

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Plt ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

**Machining Process Description:**

Max. Process Rate: 600 lbs/hr  
PM Control Equipment: Fabric Filter  
\*Grain Loading: 0.01 grains/acf  
Air Flow Rate: 1200 acf/m  
\*Control Efficiency: 95%

**1. Potential to Emit After Control:**

**Hourly PM/PM10 Emissions** =  $0.004 \text{ (gr/acf)} \times 1200 \text{ (acf/min)} \times 60 \text{ (min/hr)} \times 1/7000 \text{ (lb/gr)} =$  **0.10 lbs/hr**  
**Annual PM/PM10 emissions** =  $0.04 \text{ lbs/hr} \times 8760 \text{ hr/yr} \times 1/2000 \text{ (ton/lb)} =$  **0.45 tons/yr**

**2. Potential Uncontrolled Emissions:**

**Hourly PM/PM10 emissions** =  $0.04 \text{ lbs/hr} / (1-85.0\%) =$  **2.1 lbs/hr**  
**Annual PM/PM10 emissions** =  $0.18 \text{ tons/yr} / (1-85.0\%) =$  **9.0 tons/yr**

\* Source does not have grain loading or control efficiency information for the baghouse (fabric filter).  
Assumptions for each were made with information from US EPA's Air Pollution Control Technology fact sheet for baghouses (EPA-452/F-03-024)

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

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Pit ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

13.6

119.1

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.1	0.5	0.0	6.0	0.3	5.0

\*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

See page 3 for HAPs emissions calculations.

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

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Pit ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.251E-04	7.148E-05	4.468E-03	1.072E-01	2.025E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.978E-05	6.552E-05	8.340E-05	2.264E-05	1.251E-04

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  
Welding and Thermal Cutting**

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Pit ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)	
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr		
<b>WELDING</b>												
Submerged Arc	0	0	0.036	0.011			0.000	0.000	0.000	0	0.000	
Metal Inert Gas (MIG)(E70S)	1	4.7	0.0052	0.0003	0.000001	0.000001	0.024	0.001	0.000	0.0000047	0.001	
Stick (E7018 electrode)	0	0	0.0211	0.0009			0.000	0.000	0.000	0	0.000	
Tungsten Inert Gas (TIG)(carbon steel)	0	0	0.0055	0.0005			0.000	0.000	0.000	0	0.000	
Oxyacetylene(carbon steel)	0	0	0.0055	0.0005			0.000	0.000	0.000	0	0.000	
<b>FLAME CUTTING</b>												
	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	
Oxyacetylene	0	0	0	0.1622	0.0005	0.0001	0.0003	0.000	0.000	0.000	0.000	0.000
Oxymethane	0	0	0	0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma**	0	0	0	0.0039				0.000	0.000	0.000	0.000	0.000
<b>EMISSION TOTALS</b>												
Potential Emissions lbs/hr								0.02				0.00
Potential Emissions lbs/day								0.59				0.03
Potential Emissions tons/year								0.11				0.01

**METHODOLOGY**

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

\*\*Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

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

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

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

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  
VOC and Particulate  
From Surface and Roll Coating Operations**

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Pit ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 21, 2007

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	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)
Anti-Skid Paint	12.6	59.00%	0.0%	59.0%	0.0%	0.00%	0.25000	1.250	7.43	7.43	2.32	55.71	10.17	0.00
3M 92 Tape Primer Adhesive Promoter	6.8	91.00%	0.0%	91.0%	0.0%	0.00%	0.00200	1.250	6.22	6.22	0.02	0.37	0.07	0.00
Colorimetric Silicon Sealant	8.7	9.00%	0.0%	9.0%	0.0%	0.00%	0.29000	1.250	0.78	0.78	0.28	6.78	1.24	0.00
Colorimetric MS-101, MS-101 Clear	8.0	35.00%	0.0%	35.0%	0.0%	0.00%	0.00400	1.250	2.80	2.80	0.01	0.34	0.06	0.00
Crown TS127 Lacquer Thinner	6.5	100.00%	0.0%	100.0%	0.0%	0.00%	0.01000	1.250	6.55	6.55	0.08	1.96	0.36	0.00
Dow Enerfoam 42	10.2	40.00%	0.0%	40.0%	0.0%	0.00%	0.01000	1.250	4.08	4.08	0.05	1.22	0.22	0.00
Oatey ABS Cleaner	6.7	80.00%	0.0%	80.0%	0.0%	0.00%	0.34000	1.250	5.40	5.40	2.29	55.06	10.05	0.00
Pittsburg 77-130 Paint	10.7	76.00%	0.0%	76.0%	0.0%	0.00%	0.00400	1.250	8.13	8.13	0.04	0.98	0.18	0.00
Rollie Williams Denatured Alcohol	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.01000	1.250	6.62	6.62	0.08	1.99	0.36	0.00
Rollie Williams HM Isopropanol	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.01000	1.250	6.55	6.55	0.08	1.97	0.36	0.00
Rollie Williams HM Lacquer Thinner	7.1	100.00%	0.0%	100.0%	0.0%	0.00%	0.01000	1.250	7.07	7.07	0.09	2.12	0.39	0.00
Sika Flex 221 White	9.9	4.00%	0.0%	4.0%	0.0%	0.00%	0.02000	1.250	0.40	0.40	0.01	0.24	0.04	0.00
Sika 268523 SikaTac Ultrafast	10.0	30.00%	0.0%	30.0%	0.0%	0.00%	0.21000	1.250	3.00	3.00	0.79	18.89	3.45	0.00
Warsaw Sunny Streakless	8.3	15.00%	0.0%	15.0%	0.0%	0.00%	0.03000	1.250	1.25	1.25	0.05	1.13	0.21	0.00
Beaver 250355 Terp A Clean	7.0	93.00%	0.0%	93.0%	0.0%	0.00%	0.09000	1.250	6.52	6.52	0.73	17.59	3.21	0.00
Colorimetric 88-5606 Butyl Caulk	12.5	30.00%	0.0%	30.0%	0.0%	0.00%	0.00400	1.250	3.75	3.75	0.02	0.45	0.08	0.00
Colorimetric MS-102, MS-102	8.0	35.00%	0.0%	35.0%	0.0%	0.00%	0.00400	1.250	2.80	2.80	0.01	0.34	0.06	0.00
Franklin 50667 Thin Spread Floor Adhesive	8.5	68.00%	0.0%	68.0%	0.0%	0.00%	0.34200	1.250	5.78	5.78	2.47	59.28	10.82	0.00
Oatey 75A773 ABS Cement	7.4	75.00%	0.0%	75.0%	0.0%	0.00%	0.85000	1.250	5.56	5.56	5.91	141.79	25.88	0.00
Orange AYD 635 Cleaner	8.7	5.00%	0.0%	5.0%	0.0%	0.00%	0.00700	1.250	0.43	0.43	0.00	0.09	0.02	0.00
Rectorseal 5C Pipe Dope	11.5	30.00%	0.0%	30.0%	0.0%	0.00%	0.04000	1.250	3.45	3.45	0.17	4.14	0.76	0.00
Rigid Thread Cutting Oil	7.2	100.00%	0.0%	100.0%	0.0%	0.00%	0.02000	1.250	7.25	7.25	0.18	4.35	0.79	0.00
Stabond Anti-Wick	9.2	70.00%	0.0%	70.0%	0.0%	0.00%	0.39000	1.250	6.41	6.41	3.13	75.04	13.70	0.00

**Potential Emissions** **Worst case coating added to all solvents** **18.83** **451.83** **82.46** **0.00**

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 hr/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



**Appendix A: Emission Calculations**  
**HAP Emission Calculations**  
**Surface Coating and Rollcoating Operations**

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Plt ID:** 039-00306  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethylbenzene	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Methanol Emissions (ton/yr)
Crown TS127 Lacquer Thinner	6.55	0.010000	1.67	0.00%	67.00%	0.00%	0.00%	0.00	0.32	0.00	0.00
Rollie Williams HM Lacquer Thinner	7.07	0.010000	1.67	6.00%	66.00%	0.00%	9.00%	0.03	0.34	0.00	0.05
Sikatac Ultrafast	9.996	0.210000	1.67	5.00%	0.00%	0.00%	0.00%	0.77	0.00	0.00	0.00

**Potential Emissions** **0.80      0.66      0.00      0.05**

**METHODOLOGY** Total HAPs      1.51 tons/year

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: Emission Calculations  
PM/PM10 Emissions  
From the Woodworking and Cabinet Areas**

**Company Name:** Skyline Corporation  
**Address City IN Zip:** 401 County Road 15 South, Elkhart, IN 46515  
**Permit Number:** M039-24905-00306  
**Plt ID:** 039-00306  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 27, 2007

**1. Woodworking Process Description:**

Max. Process Rate: 600 lbs/hr  
PM Control Equipment: Cyclone  
Grain Loading: 0.004 grains/acf  
Air Flow Rate: 5500 acf/m  
Control Efficiency: 80%

**1. Potential to Emit After Control:**

**Hourly PM/PM10 Emissions** =(outlet grain loading gr/dscf)\*(air flow dscf/cfm)\*(60 min/hr)/(7000 gr/lb) **0.19 lbs/hr**  
**Annual PM/PM10 emissions** =(hourly PM emissions lb/hr)\*(8760 hr/yr)\*(1 ton/2000 lbs) **0.83 tons/yr**

**2. Potential Uncontrolled Emissions:**

**Hourly PM/PM10 emissions** =(controlled emission rate lb/hr)/(1-control efficiency) **0.9 lbs/hr**  
**Annual PM/PM10 emissions** =(controlled hourly emissions lb/hr)\*(8760 hr/yr)\*(1 ton/2000 lbs) **4.1 tons/yr**