



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: January 22, 2007  
RE: Keystone RV Company / 087-23448-00068  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures  
FNPER.dot 03/23/06



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## NEW SOURCE CONSTRUCTION AND MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Keystone RV Company  
7605 North State Road 9  
Howe, Indiana 46746**

(herein known as the Permittee) is hereby authorized to construct and 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 2-5.1, 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 FESOP under 326 IAC 2-8.

Operation Permit No.: 087-23448-00068	
Issued by: <i>Original document signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: January 22, 2007  Expiration Date: January 22, 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.2 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 stationary towable recreational vehicle (RV) manufacturing operation.

Authorized Individual:	Vice President
Source Address:	7605 North State Road 9, Howe, Indiana 46746
Mailing Address:	2642 Hackberry Drive, Goshen, Indiana 46526
General Source Phone Number:	574-535-1974
SIC Code:	3792
County Location:	LaGrange
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 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) One (1) woodworking operation, identified as WW1, permitted to construct in 2007, with a maximum throughput of 1,800 pounds per year, controlled by dust collectors DC1 through DC6.
- (b) Two (2) assembly operations, identified as AL01 and AL02, permitted to construct in 2007, controlled by dry particulate filters, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (c) One (1) welding and cutting operation, identified as WC1, permitted to construct in 2007, including six (6) metal inert gas (MIG) welders and three (3) stick welders, with a maximum throughput of 7.50 lbs electrode per hour, and two (2) oxyacetylene cutting torches.
- (d) Two (2) surface coating operations, for chassis preparation, identified as CP1 and CP2, permitted to construct in 2007, with a maximum throughput of two (2) prefabricated steel frames per hour, utilizing non-atomized application and aerosol spray cans.
- (e) Two (2) surface coating operations, for subfloor installation, identified as SF1 and SF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application.
- (f) Two (2) repair operations, identified as RO1 and RO2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (g) One (1) touch-up painting station, identified as TP1, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing HVLP application and aerosol spray cans.

- (h) Two (2) final finishing operations, identified as FF1 and FF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing brush or wipe application on wood cabinets and brush, wipe or aerosol spray application on metal and plastic substrates.
- (i) Two (2) natural gas-fired air make-up units, identified as A3 and A4, permitted to construct in 2007, each with a maximum heat input of 0.48 million British thermal units per hour.
- (j) Two (2) natural gas-fired air make-up units, identified as A1 and A2, each with a maximum heat input of 0.50 million British thermal units per hour.
- (k) One (1) natural gas-fired space heater, identified as H1, with a maximum heat input of 0.20 million British thermal units per hour.
- (l) One (1) natural gas-fired space heater, identified as H2, with a maximum heat input of 0.16 million British thermal units per hour.
- (m) Three (3) natural gas-fired water heaters, identified as WH1 – WH3, with a maximum heat input of 0.05 million British thermal units per hour each.
- (n) Two (1) natural gas-fired office heaters, identified as OH1 and OH2, with a maximum heat input of 0.10 million British thermal units per hour each.

## **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 Revocation of Permits [326 IAC 2-1.1-9(5)]**

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]**

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

### **B.4 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, M087-23448-00068, 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.5 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.6 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.7 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.8 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.9 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.10 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.11 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:  
  
Compliance Branch, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue,  
Indianapolis, 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.12 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; 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 Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

- (a) All terms and conditions of permits established prior to 087-23448-00068 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 2-6.1-7(a)]

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.15 Permit Renewal [326 IAC 2-6.1-7]

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

- (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 source.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
  
Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.17 Source Modification Requirement

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

B.18 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][IC13-17-3-2][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 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.19 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  
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.20 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.21 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 construct and 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 Stack Height [326 IAC 1-7]

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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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

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

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

#### **C.10 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.11 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.12 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.

**Corrective Actions and Response Steps**

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

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

**C.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 and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

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  
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) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. 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 [326 IAC 2-6.1-5(a)(1)]:

- (a) One (1) woodworking operation, identified as WW1, permitted to construct in 2007, with a maximum throughput of 1,800 pounds per year, controlled by dust collectors DC1 through DC6.

(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 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the woodworking facilities shall not exceed 3.82 pounds per hour when operating at a process weight rate of 1,800 pounds per hour.

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

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

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

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

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

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

### Compliance Determination Requirements

#### D.1.3 Particulate Control

- (a) In order to comply with condition D.1.1, the dust collectors DC1 through DC6 for particulate control shall be in operation and control emissions from the woodworking facilities at all times that the woodworking facilities are in operation.
- (b) In the event that bag failure has been 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.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

- (b) Two (2) assembly operations, identified as ALO1 and ALO2, to be constructed in 2007, controlled by dry particulate filters, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (d) Two (2) surface coating operations, for chassis preparation, identified as CP1 and CP2, permitted to construct in 2007, with a maximum throughput of two (2) prefabricated steel frames per hour, utilizing non-atomized application and aerosol spray cans.
- (e) Two (2) surface coating operations, for subfloor installation, identified as SF1 and SF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application.
- (f) Two (2) repair operations, identified as RO1 and RO2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (g) One (1) touch-up painting station, identified as TP1, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing HVLP application and aerosol spray cans.
- (h) Two (2) final finishing operations, identified as FF1 and FF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing brush or wipe application on wood cabinets and brush, wipe or aerosol spray application on metal and plastic substrates.

(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 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-11]

- (a) Pursuant to 326 IAC 8-2-11(b)(1)(a), the Permittee shall not allow, from coatings applied to fabric from the ALO1 and ALO2 assembly operations, the discharge into the atmosphere VOC in excess of two and nine-tenths (2.9) pounds of VOC per gallon of coating, excluding water, as delivered to the applicators.
- (b) Pursuant to 326 IAC 8-2-11(b)(1)(b), the Permittee shall not allow, from coatings applied to fabric and vinyl from the ALO1 and ALO2 assembly operations and the subfloor installation operations SF1 and SF2, the discharge into the atmosphere VOC in excess of four and eight-tenths (4.8) pounds of VOC per gallon of coating, excluding water, as delivered to the applicators.

#### D.2.2 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 furnishings and cabinets in the final finish operations, identified as FF1 and FF2, 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.2.3 Particulate [326 IAC 6-3-2(d)]

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- (a) Particulate from the assembly operations identified as ALO1 and ALO2, shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

### Compliance Determination Requirements

#### D.2.4 Volatile Organic Compounds (VOC)

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- (a) Compliance with the VOC content limitation contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.
- (b) If complying with the VOC content limits established in Condition D.2.1 using averaging, compliance 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:

$$A = [ \sum (C \times U) / \sum U ]$$

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

### Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

#### D.2.5 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.

- (1) The VOC content of each coating material and solvent used for the coating of vinyl and fabric substrates.
- (2) The amount of coating material and solvent used less water on daily 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) If complying with Condition D.2.1 using averaging, the volume weighted average VOC content of the coatings used for each day. If for a given day, all coating materials used for the coating of fabric and vinyl substrates are in compliance with Condition D.2.1, then the Permittee shall not be required to maintain records of the volume weighted average VOC content of the coatings used for the coating of fabric and vinyl substrates for that day.
  - (b) To determine compliance with Condition D.2.3, the Permittee shall maintain the records required by Condition D.2.3.
  - (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
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>	Keystone RV Company
<b>Address:</b>	7605 North State Road 9
<b>City:</b>	Howe, Indiana 46746
<b>Phone #:</b>	574-535-1974
<b>MSOP #:</b>	087-23448-00068

I hereby certify that Keystone RV Company is :

still in operation.

no longer in operation.

I hereby certify that Keystone RV Company is :

in compliance with the requirements of MSOP 087-23448-00068.

not in compliance with the requirements of MSOP 087-23448-00068.

<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

## Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

### Source Background and Description

Source Name:	Keystone RV Company
Source Location:	7605 North State Road 9, Howe, Indiana 46746
County:	LaGrange
SIC Code:	3792
Operation Permit No.:	M087-23448-00068
Permit Reviewer:	ERG/TDP

The Office of Air Quality (OAQ) has reviewed an application from Keystone RV Company relating to the construction and operation of a stationary recreational vehicle (RV) manufacturing operation.

### New Emission Units and Pollution Control Equipment

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

- (a) One (1) woodworking operation, identified as WW1, permitted to construct in 2007, with a maximum throughput of 1,800 pounds per year, controlled by dust collectors DC1 through DC6.
- (b) Two (2) assembly operations, identified as AL01 and AL02, permitted to construct in 2007, controlled by dry particulate filters, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (c) One (1) welding and cutting operation, identified as WC1, permitted to construct in 2007, including six (6) metal inert gas (MIG) welders and three (3) stick welders, with a maximum throughput of 7.50 lbs electrode per hour, and two (2) oxyacetylene cutting torches.
- (d) Two (2) surface coating operations, for chassis preparation, identified as CP1 and CP2, permitted to construct in 2007, with a maximum throughput of two (2) prefabricated steel frames per hour, utilizing non-atomized application and aerosol spray cans.
- (e) Two (2) surface coating operations, for subfloor installation, identified as SF1 and SF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application.
- (f) Two (2) repair operations, identified as RO1 and RO2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing non-atomized application and aerosol spray cans.
- (g) One (1) touch-up painting station, identified as TP1, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing HVLP application and aerosol spray cans.
- (h) Two (2) final finishing operations, identified as FF1 and FF2, permitted to construct in 2007, with a maximum throughput of two (2) RV units per hour, utilizing brush or wipe

application on wood cabinets and brush, wipe or aerosol spray application on metal and plastic substrates.

- (i) Two (2) natural gas-fired air make-up units, identified as A3 and A4, permitted to construct in 2007, each with a maximum heat input of 0.48 million British thermal units per hour.

### Unpermitted Existing Emission Units and Pollution Control Equipment

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

- (j) Two (2) natural gas-fired air make-up units, identified as A1 and A2, each with a maximum heat input of 0.50 million British thermal units per hour.
- (k) One (1) natural gas-fired space heater, identified as H1, with a maximum heat input of 0.20 million British thermal units per hour.
- (l) One (1) natural gas-fired space heater, identified as H2, with a maximum heat input of 0.16 million British thermal units per hour.
- (m) Three (3) natural gas-fired water heaters, identified as WH1 – WH3, with a maximum heat input of 0.05 million British thermal units per hour each.
- (n) Two (1) natural gas-fired office heaters, identified as OH1 and OH2, with a maximum heat input of 0.10 million British thermal units per hour each.

While the units were constructed without prior approval, they are exempt from construction permitting requirements by 326 IAC 2-1.1-3(e)(5)(A)(i).

### Existing Approvals

There are no previous approvals issued to this source.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
H1	Space Heat	25	0.75	1,500	450
H2	Space Heat	25	0.75	1,500	450
WH1	Water Heater	25	0.33	1,000	375
WH2	Water Heater	25	0.33	1,000	375
WH3	Water Heater	25	0.33	1,000	375
OH1	Space Heater	25	0.50	1,250	400
OH2	Space Heater	25	0.50	1,250	400

### Recommendation

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

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

A complete application for the purposes of this review was received on July 31, 2006.

## Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 10).

## Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/year)
PM	66.7
PM10	66.7
SO <sub>2</sub>	0.007
VOC	26.1
CO	0.98
NO <sub>x</sub>	1.17

HAPs	Potential to Emit (tons/year)
Toluene	1.22
Methanol	0.14
MDI	0.59
Hexane	0.82
Total	3.00

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 100 tons per year and the PTE of PM, PM10, and VOC are each greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7 (Part 70 Permit Program).
- (c) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

## County Attainment Status

The source is located in LaGrange County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: On August 7, 2006, a temporary emergency rule took effect revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule.

- (a) LaGrange County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and nitrogen oxides (NOx) emissions 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. LaGrange County has been designated as attainment or unclassifiable for ozone. Therefore, VOC 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.
- (b) LaGrange County has been classified as attainment or unclassifiable in Indiana for CO, Pb, NO<sub>2</sub>, SO<sub>2</sub>, PM and PM10. 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.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	12.4
PM10	12.5
SO <sub>2</sub>	0.01
VOC	26.1
CO	0.98
NO <sub>x</sub>	1.17
Single HAP	1.22
Combination HAPs	3.00

This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, 40 CFR 63.3080, Subpart IIII, Surface Coating of Automobiles and Light-Duty Trucks (326 IAC 20-85), are not included in this permit. This facility manufactures towable recreational vehicles, which do not meet the definition of an automobile or light-duty truck as defined under 40 CFR 63.3176.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, 40 CFR 63.3880, Subpart MMMM, Surface Coating of Miscellaneous Metal Parts and Products, are not included in this permit. The potential to emit of a single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAP is less than twenty-five (25) tons per year. Therefore, this source is not a major source of HAP.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, 40 CFR 63.4480, Subpart PPPP, Surface Coating of Plastic Parts and Products, are not included in this permit. The potential to emit of a single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAP is less than twenty-five (25) tons per year. Therefore, this source is not a major source of HAP.

### **State Rule Applicability – Entire Source**

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

This source is a new minor source, permitted to construct in 2007, located in LaGrange County. This source is not one of the 28 source categories. The potential to emit of all criteria pollutants is less than two hundred fifty (250) tons per year. Therefore, this source is not subject to the requirements of 326 IAC 2-2.

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

This source is located in LaGrange County is not required to operate under a Part 70 permit, and has potential PM emissions that are less than five (5) tons per year. Therefore, 326 IAC 2-6 does not apply.

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

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

- (a) Opacity shall not exceed an average of 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.

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

The operation of this stationary RV manufacturing operation 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.

## State Rule Applicability – Surface Coating Operations

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

The chassis preparation operations, identified as CP1 and CP2, the repair operations, identified as RO1 and RO2, and the touch-up painting station, identified as TP1, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

The subfloor installation operations, identified as SF1 and SF2, are not subject to 326 IAC 6-3-2 because these operations use brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

The final finish operations, identified as FF1 and FF2, are not subject to 326 IAC 6-3-2 because these operations use brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

The assembly operations, identified as ALO1 and ALO2, are subject to 326 IAC 6-3-2 because the operations use aerosol coating spray cans in quantities greater than five (5) gallons per day. Pursuant to 326 IAC, 6-3-2, particulate from the assembly operations, identified as ALO1 and ALO2, shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

### 326 IAC 8-1-6 (Best Available Control Technology)

The chassis assembly operations (identified as CP1 and CP2), the subfloor installation operations (identified as SF1 and SF2), the assembly operations (identified as ALO1 and ALO2), the repair operations (identified as RO1 and RO2), the final finish operations (identified as FF1 and FF2), and the touch-up painting station (identified as TP1), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each operation is less than 25 tons per year. ALO1 and ALO2 are subject to another Article 8 rule.

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

The assembly operations (identified as ALO1 and ALO2), the chassis assembly operations (identified as CP1 and CP2), the subfloor installation operations (identified as SF1 and SF2), the repair operations (identified as RO1 and RO2), the final finish operations (identified as FF1 and FF2), and the touch-up painting station (identified as TP1), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities are to be constructed after July 1, 1990, because actual emissions of VOC from coatings applied to metals from these operations are less than fifteen (15) lbs per day. All other coatings in these operations are not applied to metal substrates.

### 326 IAC 8-2-11 (Fabric and vinyl coating)

The chassis assembly operations (identified as identified as CP1 and CP2), the repair operations (identified as RO1 and RO2), the final finish operations (identified as FF1 and FF2), and the touch-up painting station (identified as TP1), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these operations do not coat fabric.

The assembly operations (identified as ALO1 and ALO2), and the subfloor installation operations (identified as SF1 and SF2) are subject to 326 IAC 8-2-11 because these operations coat vinyl and fabric. Pursuant to 326 IAC 8-2-11:

The owner or operator of a coating line subject to this section must implement one (1) of the following means of reducing volatile organic compounds emissions:

- (a) Limit the VOC content of coating to:
  - (1) 0.35 kilograms of VOC per liter of coating (2.9 pounds per gallon) excluding water, delivered to the coating applicator from a fabric coating line; or
  - (2) 0.58 kilograms of VOC per liter of coating (4.8 pounds per gallon) excluding water, delivered to the coating applicator from a vinyl coating line.
- (b) Install add on capture and control devices with an overall control efficiency of not less than 67.5 percent which shall meet:
  - (1) Capture efficiency of at least seventy-five percent (75%); and
  - (2) Control efficiency from the control device(s) of at least ninety percent (90%). In the case of incineration, the system shall have a destruction efficiency of ninety percent (90%) which will reduce VOC to carbon dioxide and water.

The source will comply with Compliant Coatings Compliance Option. The coatings utilized in the assembly and subfloor operations (ALO1, ALO2, SF1 and SF2) on vinyl and fabric are compliant with the VOC content limitations above.

### 326 IAC 8-2-12 (Wood furniture and cabinet coating)

The chassis assembly operations (identified as identified as CP1 and CP2), the subfloor installation operations (identified as SF1 and SF2), the repair operations (identified as RO1 and RO2), and the touch-up painting station (identified as TP1), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) even though these facilities are to be constructed after July 1, 1990, because actual emissions of VOC from coatings are less than fifteen (15) lbs per day. The assembly operations (identified as ALO1 and ALO2) are not subject to 326 IAC 8-2-12 because the operation does not apply adhesives to wood furnishings. The final finish operations (identified as FF1 and FF2), are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between

one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

The surface coatings for the final finish operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this operation are not applied to wood furnishings.

### **State Rule Applicability – Woodworking Operations WW1**

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

The woodworking operations, identified as WW1, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW1 shall be limited to 3.82 pounds of particulate emissions per hour when operating at a process weight rate of 1,800 pounds per hour. This limitation is 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 dust collectors, identified as DC1 through DC6, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

### **State Rule Applicability – Welding and Thermal Cutting Operations**

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

The welding operations are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9). The cutting operations are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

### **State Rule Applicability – Natural Gas Combustion**

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

The two (2) natural gas-fired air make-up units, identified as A1 and A2, the one (1) natural gas fired space heater, identified as H1, the one (1) natural gas-fired space heater, identified as H2, the three (3) natural gas-fired water heaters, identified as WH1 – WH3, the two (1) natural gas-fired office heaters, identified as OH1 and OH2, and the two (2) natural gas-fired air make-up units, identified as A3 and A4, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

#### **326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)**

The two (2) natural gas-fired air make-up units, identified as A1 and A2, the one (1) natural gas fired space heater, identified as H1, the one (1) natural gas-fired space heater, identified as H2, the three (3) natural gas-fired water heaters, identified as WH1 – WH3, the two (1) natural gas-fired office heaters, identified as OH1 and OH2, and the two (2) natural gas-fired air make-up units, identified as A3 and A4, are not subject to 326 IAC 6-2 because these are not sources of indirect heating.

### **Compliance Requirements**

Permits issued under 326 IAC 2-6.1 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the

requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

### **Conclusion**

The construction and operation of this stationary RV manufacturing operation shall be subject to the conditions of the New Source Construction and Minor Source Operating Permit 087-23448-00068.

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit (MSOP)

### Source Background and Description

Source Name:	Keystone RV Company
Source Location:	7605 North State Road 9, Howe, Indiana 46746
County:	LaGrange
SIC Code:	3792
Operation Permit No.:	M087-23448-00068
Permit Reviewer:	ERG/TDP

On December 18, 2006, the Office of Air Quality (OAQ) had a notice published in the LaGrange Standard, LaGrange, Indiana, stating that Keystone RV Company had applied for a Minor Source Operating Permit (MSOP) to construct and operate a stationary towable recreational vehicle (RV) manufacturing plant with control. The notice also stated that OAQ proposed to issue a permit 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.

On December 20, 2006, Keystone RV Company submitted comments on the proposed MSOP. (Bolded language has been added, the language with a line through it has been deleted). The summary of the comments is as follows:

#### Comment 1:

In the recordkeeping requirements of Section D.2.5(a) of the draft permit, it appears that this condition is required for the purpose of determining compliance with Condition D.2.1. Condition D.2.1 references 326 IAC 8-2-11 which establishes the volatile organic compound ("VOC") content limits for the coating of fabric and vinyl substrates. If this is the case, then the source should have the option of either:

1. Using materials that comply with the VOC content limits as supplied by the coating manufacturer (i.e., coating materials are applied as supplied by the manufacturer).
2. Using a combination of coating materials that averaged on a daily basis comply with the VOC content limits.

#### Response to Comment 1:

Language has been incorporated in Section D.2 to allow the facility to comply with Condition D.2.1 utilizing either compliant coatings or daily volume weighted averaging. The permit has been updated as follows:

#### D.2.4 Volatile Organic Compounds (VOC)

- 
- (a) Compliance with the VOC content limitation contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

- (b) **If complying with the VOC content limits established in Condition D.2.1 using averaging, compliance 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:**

$$A = \left[ \frac{\sum (C \times U)}{\sum U} \right]$$

**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**

#### D.2.5 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through ~~(2)~~ **(3)** below. Records maintained for (1) through ~~(2)~~ **(3)** shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.
- (1) The VOC content of each coating material and solvent used **for the coating of vinyl and fabric substrates.**
- (2) The amount of coating material and solvent used less water on daily 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) If complying with Condition D.2.1 using averaging, the volume weighted average VOC content of the coatings used for each day. If for a given day, all coating materials used for the coating of fabric and vinyl substrates are in compliance with Condition D.2.1, then the Permittee shall not be required to maintain records of the volume weighted average VOC content of the coatings used for the coating of fabric and vinyl substrates for that day.**
- (b) To determine compliance with Condition D.2.3, the Permittee shall maintain the records required by Condition D.2.3.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations  
Chassis Preparation (CP1 & CP2)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Reviewer: **ERG/TDP**  
Date: **September 24, 2006**

**CRITERIA POLLUTANTS**

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
Foam - Black - Gun - CP-100	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0403	2.000	5.39	5.39	0.43	10.42	1.90	0.00	13.43	100%	Metal
Undercoating - Rubberized - C-34	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0005	2.000	7.40	3.74	0.00	0.09	0.02	0.01	16.85	50%	Metal
<b>Potential to Emit</b>											<b>0.44</b>	<b>10.51</b>	<b>1.92</b>	<b>0.01</b>			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

**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

**HAZARDOUS AIR POLLUTANTS**

Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)			
Foam - Black - Gun - CP-100	8.42	4.03E-02	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.59			
Undercoating - Rubberized - C-34	9.34	5.00E-04	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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			
<b>Uncontrolled Potential Emissions</b>															<b>0.00</b>	<b>0.00</b>	<b>0.00E+00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.59</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.60</b>

**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  
Subfloor Installation (SF1 & SF2)**

Company Name: Keystone RV Company  
Address City IN Zip: 7605 State Route 9 North, Howe, Indiana 46746  
Reviewer: ERG/TDP  
Date: September 24, 2006

**CRITERIA POLLUTANTS**

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
Sub Floor Const - DAP 4000	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0272	2.000	0.45	0.42	0.02	0.54	0.10	0.00	0.66	100%	Wood
Sub Floor Const - T202	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0426	2.000	3.29	3.29	0.28	6.73	1.23	0.00	7.30	100%	Wood/Metal
Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0610	2.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood

<b>Potential to Emit</b>											<b>0.30</b>	<b>7.28</b>	<b>1.33</b>	<b>0.00</b>			
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

**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

**HAZARDOUS AIR POLLUTANTS**

Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)	
Sub Floor Const - DAP 4000	11.01	2.72E-02	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	0.00	0.00	0.00	0.00	0.00	0.00
Sub Floor Const - T202	9.03	4.26E-02	2.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.67	
Low VOC Hardener - Blk Wood Coating	9.01	6.10E-02	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	0.00	0.00	0.00	0.00	0.00	0.00

<b>Uncontrolled Potential Emissions</b>															<b>0.00</b>	<b>0.00</b>	<b>0.00E+00</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.44</b>	<b>0.00</b>	<b>0.67</b>
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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  
Assembly Operations (ALO1 & ALO2)**

**Company Name:** Keystone RV Company  
**Address City IN Zip:** 7605 State Route 9 North, Howe, Indiana 46746  
**Reviewer:** ERG/TDP  
**Date:** September 24, 2006

**CRITERIA POLLUTANTS**

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
Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0074	2.000	2.78	2.54	0.04	0.90	0.16	0.09	29.45	50%	Metal
Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	2.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1730	2.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1100	2.000	1.12	0.56	0.12	2.95	0.54	0.83	1.56	50%	Wood/Fabric
Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0300	2.000	4.65	3.48	0.21	5.01	0.91	0.20	24.29	50%	Wood/Fabric
Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.1100	2.000	1.05	0.56	1.24	29.78	5.44	9.51	1.42	50%	Wood/Fabric
Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	2.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0023	2.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	2.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0310	2.000	7.39	6.17	0.38	9.18	1.68	0.00	--	100%	Plastic

<b>Potential to Emit</b>											<b>1.99</b>	<b>47.83</b>	<b>8.73</b>	<b>10.63</b>			
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

**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**

Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Aerosol - SuperTak - Gen Purpose	5.75	7.40E-03	2.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
Glue - Super - 2Pk - SUP-28	8.76	1.00E-04	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	0.00	0.00	0.00	0.00	0.00
Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.73E-01	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	0.00	0.00	0.00	0.00	0.00
Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.10E-01	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	0.00	0.00	0.00	0.00	0.00
Spray - Hi-Performance	6.66	3.00E-02	2.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
Spray - Valu-Tac -Clear	5.59	1.11E+00	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	0.00	0.00	0.00	0.00	0.00
Super Glue	9.17	1.00E-04	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	0.00	0.00	0.00	0.00	0.00
Pipe Joint Compound	16.68	2.30E-03	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	0.00	0.00	0.00	0.00	0.00
Thread Locker - Blue	9.17	1.00E-04	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	0.00	0.00	0.00	0.00	0.00
Weld-On Pipe Cement	7.26	3.10E-02	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	0.00	0.00	0.00	0.00	0.00

<b>Uncontrolled Potential Emissions</b>															<b>0.00</b>	<b>0.00</b>	<b>0.00E+00</b>	<b>0.59</b>	<b>0.00</b>	<b>0.59</b>						
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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  
Repair Operations (RO1 & RO2)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Reviewer: **ERG/TDP**  
Date: **September 24, 2006**

**CRITERIA POLLUTANTS**

Product	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	
iller - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0024	2.000	0.26	0.26	0.00	0.03	0.01	0.00	0.27	100%	Plastic	
iller - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0004	2.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic	
MultiPurpose -Aerosol 10011	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0014	2.000	3.37	3.37	0.01	0.23	0.04	0.02	12.97	50%	Metal	
Silicone - Aerosol C-33	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0095	2.000	3.35	3.35	0.06	1.53	0.28	0.09	20.58	50%	Metal	
Silicone - Aerosol C-33V	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0076	2.000	4.99	4.99	0.08	1.82	0.33	0.01	138.13	50%	Metal	
<b>Potential to Emit</b>											<b>0.15</b>	<b>3.61</b>	<b>0.66</b>	<b>0.13</b>				

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

**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**

Product	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)				
iller - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions	10.40	2.40E-03	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01				
iller - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions	14.90	4.00E-04	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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				
MultiPurpose -Aerosol 10011	6.81	1.40E-03	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	0.00	0.00	0.00	0.00	0.00				
Silicone - Aerosol C-33	5.59	9.50E-03	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	0.00	0.00	0.00	0.00	0.00				
Silicone - Aerosol C-33V	5.42	7.60E-03	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	0.00	0.00	0.00	0.00	0.00				
<b>Uncontrolled Potential Emissions</b>															<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>

**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  
Touchup Painting Station (TP1)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Reviewer: **ERG/TDP**  
Date: **September 24, 2006**

**CRITERIA POLLUTANTS**

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
Aerosol - Enamel - Royal Blue - ColorTouch - 10001	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	2.000	4.76	3.78	0.00	0.05	0.01	0.00	54.04	50%	Metal
Aerosol - Gen Purpose - Gloss Black - Work Day - 4402	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0360	2.000	4.71	3.59	0.26	6.21	1.13	0.10	59.86	50%	Metal
Aerosol - Primer - Gray - ColorTouch - 10010	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	2.000	4.47	3.35	0.00	0.05	0.01	0.00	47.88	50%	Metal
Aerosol - Primer - Spot Prime - Aero-Max - AM800	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0007	2.000	5.50	4.90	0.01	0.16	0.03	0.00	54.44	50%	Metal
Basecoats - NLR Bases	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0005	2.000	6.10	6.10	0.01	0.15	0.03	0.00	29.05	75%	Metal
Blender - Chromaclear - 7601S	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0016	2.000	6.90	6.90	0.02	0.53	0.10	0.00	242.96	75%	Metal
Clearcoat - Diamont - Turbo Clear - DC76NR	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0020	2.000	4.89	4.40	0.02	0.42	0.08	0.01	19.13	75%	Metal
Hardener - Acrylic -Repair Limco 1-2-3-4 - LH200	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0004	2.000	2.50	2.50	0.00	0.05	0.01	0.01	3.79	75%	Metal
Primer - Spot Blender Reducer - Glasruit - 352-500	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	2.000	7.50	7.50	0.00	0.04	0.01	0.00	749.97	75%	Metal
Reducer - Medium Temp - Universal - Diamont - UR50	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0024	2.000	6.22	6.10	0.03	0.70	0.13	0.00	152.49	75%	Metal

<b>Potential to Emit</b>											<b>0.35</b>	<b>8.36</b>	<b>1.53</b>	<b>0.13</b>			
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Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 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 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

**HAZARDOUS AIR POLLUTANTS**

Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Aerosol - Enamel - Royal Blue - ColorTouch - 10001	5.84	3.00E-04	2.000	0.00%	0.00%	0.00%	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	0.00	0.00	0.00	0.00	0.00
Aerosol - Gen Purpose - Gloss Black - Work Day - 4402	5.80	3.60E-02	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.26
Aerosol - Primer - Gray - ColorTouch - 10010	6.09	3.00E-04	2.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Aerosol - Primer - Spot Prime - Aero-Max - AM800	6.90	7.00E-04	2.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basecoats - NLR Bases	8.83	5.00E-04	2.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.04
Blender - Chromaclear - 7601S	7.18	1.60E-03	2.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.04
Clearcoat - Diamont - Turbo Clear - DC76NR	7.58	2.00E-03	2.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.02	
Hardener - Acrylic -Repair Limco 1-2-3-4 - LH200	8.92	4.00E-04	2.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	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
Primer - Spot Blender Reducer - Glasruit - 352-500	7.60	1.00E-04	2.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reducer - Medium Temp - Universal - Diamont - UR50	6.59	2.40E-03	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	0.00	0.00	0.00	0.00	0.00

<b>Uncontrolled Potential Emissions</b>															<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.30</b>	<b>0.04</b>	<b>0.37</b>
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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  
Final Finish Operations (FF1 & FF2)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Reviewer: **ERG/TDP**  
Date: **September 24, 2006**

**CRITERIA POLLUTANTS**

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
Imperial Hand Glaze - 5990	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	2.000	2.92	0.76	0.0002	0.00	0.001	0.00	4.60	100%	Metal/Plastic
Perfect-It III X Cut Rubbing Compound - 5936	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	2.000	4.83	3.09	0.001	0.03	0.01	0.00	16.49	100%	Metal/Plastic
# 10 Lacquer Thinner - Acrylic -Fast Dry - DT-10	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0118	2.000	7.09	6.09	0.14	3.45	0.63	0.00	--	100%	Solvent/Cleaner
Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0020	2.000	--	0.00	0.00	0.00	0.00	0.00	--	100%	Solvent/Cleaner
Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0080	2.000	6.59	0.11	2.53	0.46	0.00	--	100%	Solvent/Cleaner	
Citrus Cleaner - CC-911	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1730	2.000	6.51	6.51	2.25	54.05	9.86	0.00	--	100%	Solvent/Cleaner
Glass Clean - Foam Aerosol - C-31	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0115	2.000	4.16	0.98	0.02	0.54	0.10	0.04	1,089.33	50%	Solvent/Cleaner
Max Clean - All Purpose - C-192	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0045	2.000	6.42	1.67	0.02	0.36	0.07	0.01	83.40	50%	Solvent/Cleaner
Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0100	2.000	6.59	6.59	0.13	3.16	0.58	0.00	--	100%	Solvent/Cleaner
Poly Clean Foam - CP-200	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0145	2.000	6.53	0.99	0.03	0.69	0.13	0.00	--	50%	Metal
Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	2.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Touch Up - Oak Light - Ultra Mark II - M280-0014	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	2.000	5.94	5.94	0.00	0.03	0.01	0.00	51.29	100%	Wood
<b>Potential to Emit</b>											<b>2.70</b>	<b>64.85</b>	<b>11.84</b>	<b>0.05</b>			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

**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

**HAZARDOUS AIR POLLUTANTS**

Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Imperial Hand Glaze - 5990	8.31	1.00E-04	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	0.00	0.00	0.00	0.00	0.00
Perfect-It III X Cut Rubbing Compound - 5936	9.67	2.00E-04	2.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00	0.00	1.61E-06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69E-04	0.00
# 10 Lacquer Thinner - Acrylic -Fast Dry - DT-10	7.02	1.18E-02	2.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.49	0.00	0.62
Acetone	6.59	2.00E-03	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	0.00	0.00	0.00	0.00	0.00
Alcohol - Isopropyl	6.59	8.00E-03	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	0.00	0.00	0.00	0.00	0.00
Citrus Cleaner - CC-911	9.37	1.73E-01	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	0.00	0.00	0.00	0.00	0.00
Glass Clean - Foam Aerosol - C-31	8.17	1.15E-02	2.000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	4.12E-02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Max Clean - All Purpose - C-192	8.34	4.50E-03	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	0.00	0.00	0.00	0.00	0.00
Mineral Spirits	6.59	1.00E-02	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	0.00	0.00	0.00	0.00	0.00
Poly Clean Foam - CP-200	6.59	1.45E-02	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	0.00	0.00	0.00	0.00	0.00
Livestock - Paint Markers	11.18	2.00E-04	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	0.00	0.00	0.00	0.00	0.00
Touch Up - Oak Light - Ultra Mark II - M280-0014	7.29	1.00E-04	2.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	6.39E-05	0.00	0.00	0.00	0.00	0.00	0.00	1.92E-04	0.00
<b>Uncontrolled Potential Emissions</b>															<b>0.00</b>	<b>0.04</b>	<b>1.61E-06</b>	<b>6.39E-05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.14</b>	<b>0.00</b>	<b>0.00</b>	<b>0.49</b>	<b>3.61E-04</b>	<b>0.67</b>

**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

**Emissions Calculations  
Welding and Thermal Cutting (WC1)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Reviewer: **ERG/TDP**  
Date: **September 24, 2006**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
WELDING														
Metal Inert Gas (MIG)(E70S)	6	1.00	6.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.03120	0.01908	0.00006	0.00006	0.00006	0.01926
Stick (E5154 electrode)	3	0.50	1.50	0.02410	0.00034	-	-	0.00010	0.03615	0.00051	-	-	0.00015	0.00066
		Total Electrodes	7.50											
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	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	2	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.17518	0.00054	0.00011	-	0.00032	0.00097
<b>EMISSION TOTALS</b>														
Potential Emissions lbs/hr									0.24	0.02	0.0002	0.00006	0.0005	0.02
Potential Emissions lbs/day									5.82	0.48	0.004	0.001	0.01	0.50
Potential Emissions tons/year									1.06	8.82E-02	7.36E-04	2.63E-04	2.34E-03	0.09

**METHODOLOGY**

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.

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

**Process Particulate Emissions  
Woodworking Activities (WW1)**

Company Name: **Keystone RV Company**  
Address City IN Zip: **7605 State Route 9 North, Howe, Indiana 46746**  
Prepared By: **ERG/TDP**  
Date: **September 24, 2006**

<b>Uncontrolled Potential Emissions (tons/year)</b>							
<b>DUST COLLECTOR</b>							
Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Total (tons/yr)
DC1	1	3,300	0.002	4.6	720.00	99.00%	24.78
DC2 - DC4	3	105	0.007	4.8	22.00	99.00%	8.28
DC5	1	700	0.005	38.9	18.00	99.00%	13.14
DC6	1	450	0.005	36.0	12.50	99.00%	8.45
Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices							<b>54.64</b>
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices							<b>12.48</b>
<b>Controlled Potential Emissions (tons/year)</b>							
<b>DUST COLLECTOR</b>							
Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft <sup>2</sup> )	Total Filter Area (ft <sup>2</sup> )	Control Efficiency	Total (tons/yr)
DC1	1	3,300	0.002	4.6	720.00	99.00%	0.25
DC2 - DC4	3	105	0.003	4.8	22.00	99.00%	0.04
DC5	1	700	0.003	38.9	18.00	99.00%	0.08
DC6	1	450	0.003	36.0	12.50	99.00%	0.05
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year)							<b>0.36</b>
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr)							<b>0.08</b>
<b>Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate ]<sup>0.67</sup> =</b>				<b>3.82</b>			
<b>Material Input Rate (lb/hr) =</b>				<b>1,800.0</b>			
<b>Methodology:</b>							
<b>Potential Emission (uncontrolled):</b>							
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft <sup>2</sup> ) * Filter Area (ft <sup>2</sup> ) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]							
<b>Potential Emission (controlled):</b>							
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft <sup>2</sup> ) * Filter Area (ft <sup>2</sup> ) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]							

### Natural Gas Combustion (NGC1)

**Company Name:** Keystone RV Company  
**Address City IN Zip:** 7605 State Route 9 North, Howe, Indiana 46746  
**Permit Number:** To Be Determined  
**Reviewer:** ERG/TDP  
**Date:** September 24, 2006

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Air Makeup Units - Existing	2	A1-A2	0.500	8.8
Air Makeup Units - New	2	A3-A4	0.480	8.4
Heating Unit - Reznor	1	H1	0.200	1.8
Heating Unit - Johnson	1	H2	0.160	1.4
Water Heaters	3	WH1-WH3	0.050	1.3
Office Heater	2	OH1-OH2	0.100	1.8
<b>TOTALS</b>	<b>11</b>		<b>2.67</b>	<b>23.4</b>

Emission Factor (lbs/MMCF)						
PM*	PM10*	SO2	NOX**	CO	VOC	HAPs
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	PM	PM10	SO2	NOX	CO	VOC	HAPs
A1-A2	0.01	0.03	0.00	0.44	0.37	0.02	3.8E-04
A3-A4	0.01	0.03	0.00	0.42	0.35	0.02	3.7E-04
H1	0.00	0.01	0.00	0.09	0.07	0.00	7.6E-05
H2	0.00	0.01	0.00	0.07	0.06	0.00	6.1E-05
WH1-WH3	0.00	0.00	0.00	0.07	0.06	0.00	5.7E-05
OH1-OH2	0.00	0.01	0.00	0.09	0.07	0.00	7.6E-05
<b>TOTALS</b>	<b>0.022</b>	<b>0.089</b>	<b>0.007</b>	<b>1.169</b>	<b>0.982</b>	<b>0.064</b>	<b>1.0E-03</b>

\* PM and PM10 emission factor are for condensable and filterable PM and PM10 combined.

\*\*Emission factor for NOx: Uncontrolled = 100 lb/MMCF

03-006-03. (AP-42 Supplement D 7/98)

1 MMBtu = 1,000,000 Btu

1 MMCF = 1,000,000 cubic feet of gas

All Emission factors are based on normal firing.

#### METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu

PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

**Emissions Calculations  
Summary Emissions**

**Company Name:** Keystone RV Company  
**Address City IN Zip:** 7605 State Route 9 North, Howe, Indiana 46746  
**Reviewer:** ERG/TDP  
**Date:** September 24, 2006

**POTENTIAL TO EMIT IN TONS PER YEAR**

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP1 & CP2)	0.01	0.01	0.00	0.00	1.92	0.00	0.00	0.60
Subfloor Installation (SF1 & SF2)	0.00	0.00	0.00	0.00	1.33	0.00	0.44	0.67
Assembly Line Operations (ALO1 & ALO2)	10.63	10.63	0.00	0.00	8.73	0.00	0.00	0.59
Repair Operations (RO1 & RO2)	0.13	0.13	0.00	0.00	0.66	0.00	0.00	0.01
Touchup Paint Operation (TP1)	0.13	0.13	0.00	0.00	1.53	0.00	0.30	0.37
Final Finish (FF1 & FF2)	0.05	0.05	0.00	0.00	11.84	0.00	0.49	0.67
Welding/Cutting/Brazing (WC1)	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.09
Miscellaneous Woodworking (WW1)	54.64	54.64	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC1)	0.022	0.089	0.007	1.169	0.064	0.982	0.00	1.02E-03
<b>TOTALS</b>	<b>66.68</b>	<b>66.74</b>	<b>0.007</b>	<b>1.169</b>	<b>26.06</b>	<b>0.982</b>	<b>1.22</b>	<b>3.00</b>

**\*Toluene as Determined Below**

Emission Units	Ethyl Benzene	Glycol Ether	Formaldehyde	Hexane	Hex 16 Iso	MDI	Methanol	MIBK	Styrene	Toluene	Xylene	Manganese	Nickel	Cobalt	Chromium	Total HAP
	Emissions (ton/yr)															
Chasis Preparation (CP1 & CP2)	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subfloor Installation (SF1 & SF2)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.67
Assembly Line Operations (ALO1 & ALO2)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
Repair Operations (RO1 & RO2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP1)	0.01	0.01	0.00	0.00	3.13E-04	0.00	0.00	0.03	0.00	0.30	0.04	0.00	0.00	0.00	0.00	0.37
Final Finish (FF1 & FF2)	0.00	0.04	1.61E-06	0.00	0.00	0.00	0.14	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.67
Welding/Cutting/Brazing (WC1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.82E-02	7.36E-04	2.63E-04	2.34E-03	0.09
Miscellaneous Woodworking (WW1)	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
Natural Gas Combustion (NGC1)	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	1.02E-03
<b>Total Emissions (TPY) by HAP</b>	<b>0.01</b>	<b>0.05</b>	<b>1.61E-06</b>	<b>0.82</b>	<b>3.13E-04</b>	<b>0.59</b>	<b>0.14</b>	<b>0.03</b>	<b>0.01</b>	<b>1.22</b>	<b>0.04</b>	<b>0.09</b>	<b>7.36E-04</b>	<b>2.63E-04</b>	<b>2.34E-03</b>	<b>3.00</b>