



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: December 11, 2007  
RE: Heartland Recreational Vehicles / 039-25418-00670  
FROM: Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FN-REGIS.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
[www.IN.gov/idem](http://www.IN.gov/idem)

December 11, 2007

Mr. Ron Rogers  
Heartland Recreational Vehicles, LLC-Plant 8  
2950 Dexter Drive,  
Elkhart, IN 46514

Re: Registered Construction and Operation Status,  
R039-25418-00670

Dear Mr. Rogers:

An application from Heartland Recreational Vehicles, LLC-Plant 8, received on October 18, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following stationary wood working and recreational travel trailer assembly operation plant located at 2950 Dexter Drive, Elkhart, Indiana, is classified as registered:

- (a) One (1) travel trailer assembly and finishing operation, constructed in 2007, which assembles non-motorized travel trailers from primarily pre-manufactured and pre-coated components at a maximum throughput of 0.75 trailers per hour, venting to the indoors, including the following; surface coating operations using hand-held aerosol cans, manual application systems and caulk guns.
- (b) One (1) woodworking operation, designated as mill/counter top shop, constructed in 2007, consisting of cutting, sawing, drilling, and/or routing of wood, with a maximum throughput capacity of 0.6 tons of wood per hour, and with particulate emissions from the emission units controlled by two (2) baghouse dust collectors, identified as CNCDC1 and WWDC2, each with an internal return air system. The woodworking operation consists of the following emission units:
  - (1) Two (2) table saws, TS1 and TS2 for cutting of wood;
  - (2) Six (6) chop saws, CS1 through CS6, for cutting of wood;
  - (3) Two (2) band saws, BS1 and BS2 for cutting of wood;
  - (4) One (1) drill press for drilling and/or routing of wood;
  - (5) One (1) panel saw PS1, one (1) edge sander ES1, and one (1) Door Machine DM1;
  - (6) Miscellaneous hand operated saws, router, and drills.
- (c) Two (2) natural gas-fired forced air space heaters, identified as H1 and H2, thirteen (13) natural gas-fired radiant tube heaters, identified as H3 through H15, respectively, constructed in 2007, venting through fifteen (15) vents (SVH1 through SVH15), with a combined maximum heat input capacity of 1.725 mmBtu/hr.

The following conditions shall be applicable:

- (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:
  - (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 15 minutes (60 readings) in a 6-hour period 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.
- (2) Pursuant to 326 IAC 8-2-9 (a)(5)(d) (Miscellaneous Metal Coating Operations), when coating metal parts, the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating operations shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coating.

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

Compliance with this rule for the metal parts surface coating operation(s) shall be shown by use of the following equation to calculate daily volume weighted average:

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

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.

- (3) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (4) Pursuant to 326 IAC 6-3-2, particulate emissions from the wood working (WW1) and the routing (CNC1) operation shall be limited to five hundred fifty-one thousandths (0.551) pound per hour each, when each has a process rate less than one hundred (100) pounds of wood per hour. In order to comply with the allowable rate of emission, the two (2) baghouse dust collectors, WWDC1 and CNCDC1, shall be in operation at all times when the wood cutting saws (WW1), and the CNC1 router, are in operation.
- (5) Any change or modification which may increase the potential to emit of a single Hazardous Air Pollutant (HAP) to 10 tons per year or greater, or that of Volatile Organic Compounds (VOC) or any combination of HAPs to 25 tons per year or greater, shall require prior approval of the Office of Air Quality (OAQ).

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

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

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Swarna Prabha, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-5376 or at 1-800-451-6027 (ext 45376).

Sincerely,

*Original document signed by*

Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

IC/SP

cc: File - Elkhart County  
Elkhart County Health Department  
Air Compliance Section – Paul Karkiewicz  
Northern Regional Office  
Permit Tracking  
Compliance Data Section  
Permits Administrative and Development  
Billing, Licensing and Training Section – Dan Stamatkin

<b>Registration Annual Notification</b>
---------------------------------------------

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3)

<b>Company Name:</b>	<b>Heartland Recreational Vehicles, LLC-Plant 8</b>
<b>Address:</b>	<b>2950 Dexter Drive,</b>
<b>City:</b>	<b>Elkhart, Indiana 46526</b>
<b>Phone #:</b>	<b>(574) 264-4411</b>
<b>Registration Revision #:</b>	<b>R039-25418-00670</b>

<b>Certification by the Authorized Individual</b>
<b>I hereby certify that Heartland Recreational Vehicles, LLC, -Plant 8 is still in operation and is in compliance with the requirements of Registration R039-25418-00670</b>
<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a Registration

### Source Background and Description

**Source Name:** Heartland Recreational Vehicles, LLC-Plant 8  
**Source Location:** 2950 Dexter Drive, Elkhart, IN 46514  
**County:** Elkhart  
**SIC Code:** 3792 (Manufacturing of Travel Trailers and Campers)  
**Application No.:** 039-25418-00670  
**Reviewer:** Swarna Prabha

On October 18, 2007, the Office of Air Quality (OAQ) received an application from Heartland Recreational Vehicles, LLC-Plant 8, relating to the operation of a stationary non-motorized travel trailer manufacturing plant.

### Unpermitted Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following:

- (a) one (1) travel trailer assembly and finishing operation, constructed in 2007, which assembles non-motorized travel trailers from primarily pre-manufactured and pre-coated components at a maximum throughput of 0.75 trailers per hour, venting to the indoors, including the following; surface coating operations using hand held aerosol cans, manual application systems and caulk guns.
- (b) One (1) woodworking operation, designated as mill/counter top shop, constructed in 2007, consisting of cutting, sawing, drilling, and/or routing of wood, with a maximum throughput capacity of 0.6 tons of wood per hour, and with particulate emissions from the emission units controlled by two (2) baghouse dust collectors, identified as CNCDC1 and WWDC2, each with an internal return air system. The woodworking operation consists of the following emission units:
  - (1) Two (2) table saws, TS1 and TS2 for cutting of wood;
  - (2) Six (6) chop saws, CS1 through CS6, for cutting of wood;
  - (3) Two (2) band saws, BS1 and BS2 for cutting of wood;
  - (4) One (1) drill press for drilling and/or routing of wood;
  - (5) One (1) panel saw PS1, one (1) edge sander ES1, and one (1) Door Machine DM1;
  - (6) Miscellaneous hand operated saws, router CNC1, and drills.
- (c) two (2) natural gas-fired forced air space heaters, identified as H1 and H2, thirteen (13) natural gas-fired radiant tube heaters, identified as H3 through H15, respectively, constructed in 2007, venting through fifteen (15) vents (SVH1 through SVH15), with a combined maximum heat input capacity of 1.725 MMBtu/hr,

### Existing Approvals

No previous air approvals have been issued to this source.

**Enforcement Issue**

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operation permit rules.

**Stack Summary**

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
H-01-H15	Natural Gas-Fired Heaters	24.0	0.55	100.0	200.0

**Emission Calculations**

- (a) See Appendix A of this TSD for detailed emissions calculations (Appendix A, pages 1 through 5).
- (b) Based on information provided by the source, the source applies sealers, caulks, adhesives, and touch-up paint surface coatings to wood, plastic, and metal surfaces. These coating are applied using hand-held aerosol cans or hand-held caulk guns. The table below summarizes the types of surfaces being coated and the surface coatings applied to these surfaces:

Type of Surface Coated	Surface Coating Material
Metal	Silkaflex 552 Adhesive
Plastic*	502 Silicone Sealant Caulk Sta-put Big Sticky Econobond Adhesive Cor014 Joint Adhesive

\*Plastic consists primarily of RV exterior, which is made of fiber reinforced plastic

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit (PTE) 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.®

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential To Emit (tons/year)
PM	24.61
PM-10	24.66
SO <sub>2</sub>	negligible
NO <sub>x</sub>	0.76
VOC	17.61
CO	0.63

HAPs	Potential To Emit (tons/year)
Xylenes	0.22
n-Hexane	2.48
Toluene	2.48
Methanol	2.53
MIBK	negligible
<b>TOTAL HAPs</b>	<b>7.71</b>

- (a) The PTE (as defined in 326 IAC 2-1.1-1(16)) of regulated criteria pollutants are less than twenty-five (25) tons per year, but the PTE of particulate matter (PM or PM-10) is greater than five (5) tons per year and/or the PTE of all other regulated criteria pollutants are greater than ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The PTE (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE 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.

**County Attainment Status**

The source is located in Elkhart County.

Pollutant	Status
PM10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
1-Hour Ozone	Attainment
8-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Elkhart 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) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standard. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (c) Elkhart County has been classified as attainment or unclassifiable for all the other regulated criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (d) 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.

- (e) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

### 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/yr)
PM	0.26
PM-10	0.30
SO <sub>2</sub>	negligible
NO <sub>x</sub>	negligible
VOC	17.61
CO	0.63
Worst Single HAP	2.53
Combination HAPs	7.71

This new source is not a major PSD stationary source because no attainment regulated 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 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/year.

This status is based on the potential to emit calculations of the source (see Appendix A).

### Federal Rule Applicability

- (a) This source is not subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subpart MM, Automobile and Light Duty Truck Surface Coating Operations (40 CFR Parts 60.390 - 60.398) (326 IAC 12), is not involved in the surface coating of automobiles or light duty trucks. This source assembles non-motorized travel trailers for attachment to passenger cars or other vehicles using pre-manufactured components.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart JJ, Wood Furniture Manufacturing (40 CFR Part 63.800 - 63.808) (326 IAC 20-14-1), because this source is not a major source of HAPs as defined in 40 CFR 63.2 and does not manufacture wood furniture or wood furniture components. All wood furniture and wood furniture components installed in the travel trailers are shipped to the source pre-manufactured and pre-coated.
- (d) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart IIII, Surface Coating of Automobiles and Light-Duty Trucks (40 CFR Part 63.3080 - 63.3176), because this source is

not a major source of HAPs as defined in 40 CFR 63.2 and does not surface coat automobiles or light duty trucks as defined by 63.3176. This source assembles non-motorized travel trailers for attachment to passenger cars or other vehicles using pre-manufactured components.

- (e) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart Mmmm, Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63.3880 - 63.3981), because this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (f) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart Pppp, Surface Coating of Plastic Parts and Products (40 CFR Part 63.4480 - 63.4581), because the source is not a major source of HAPs as defined in 40 CFR 63.2.
- (g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

### **State Rule Applicability - Entire Source**

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

This source was constructed after the applicability date of August 7, 1977, however, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1), and the uncontrolled potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### **326 IAC 2-3 (Emission Offset)**

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. The requirements of 326 IAC 2-3 (Emission Offset) will not be applicable because Elkhart County is attainment.

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

The requirements of 326 IAC 2-4.1 are not applicable to this source, since the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

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

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Elkhart County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year.

#### **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 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) in a six (6) hour period 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 6-4 (Fugitive Dust Emissions Limitations)

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

**State Rule Applicability - Individual Facilities**

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable, since each of the emission units at this source does not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

**State Rule Applicability - Surface Coating Operations**

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

Pursuant to 326 IAC 6-3-1(b)(14), each of the surface coating activities is exempt from the requirements of 326 IAC 6-3, because the potential particulate emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 8-2-2 (Volatile Organic Compounds, Automobile and Light Duty Truck Coating Operations)

The requirements of 326 IAC 8-2-2 are not applicable to this source, since this source does not perform surface coating of automobiles or light duty trucks as defined in 326 IAC 8-2-2(a). This source assembles non-motorized travel trailers for attachment to passenger cars or other vehicles using pre-manufactured components.

326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal Coating Operations)

This source performs surface coating of metal parts under the SIC code of major group #37 and potential to emit of VOC from the surface coating operation is greater than fifteen (15) pounds per day. There fore, 326 IAC 8-2-9 applies.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), when coating metal parts, the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating operations shall be limited to 3.5 pounds per gallon of coating less water, for extreme performance coatings.

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

Compliance with this rule for the metal parts surface coating operation(s) shall be shown by use of the following equation to calculate daily volume weighted average:

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

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.

326 IAC 8-2-10 (Volatile Organic Compounds, Flat Wood Panels Manufacturing Operations)

The requirements of 326 IAC 8-2-10 are not applicable to this source, since this source does not

perform manufacturing of flat wood panels.

326 IAC 8-2-11 (Volatile Organic Compounds, Fabric and Vinyl Coating)

The requirements of 326 IAC 8-2-11 are not applicable to this source, since this source does not perform surface coating of fabric or vinyl as defined by 326 IAC 8-2-11(a).

326 IAC 8-2-12 (Volatile Organic Compounds, Wood Furniture and Cabinet Coating)

The requirements of 326 IAC 8-2-12 are not applicable to this source, since this source does not perform surface coating of wood furniture or cabinets. All wood furniture and wood furniture components installed in the travel trailers are shipped to the source pre-manufactured and pre-coated. Surface coating of wood at this source consists of surface coating of structural wood with adhesives, which is not subject to this rule.

326 IAC 8-11-3 (Volatile Organic Compounds, Wood Furniture Coatings)

The requirements of 326 IAC 8-11-3 are not applicable to this source, since this source does not perform manufacturing of wood furniture.

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

326 IAC 4-2-2 (Incinerators)

The natural gas-fired space heaters and furnaces are not incinerators, as defined by 326 IAC 1-2-34, since they do not burn waste substances. Therefore, these ovens are not subject to 326 IAC 4-2-2.

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired heaters and furnaces are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), each of the natural gas-fired heaters and furnaces are exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired heaters and furnaces are each not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

**State Rule Applicability - Woodworking Operations WW1 and routing CNC1**

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

The requirements of 326 IAC 6-3 are applicable to woodworking and routing facilities at this source. Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the woodworking and routing facilities shall not exceed five hundred fifty-one thousandths (0.551) pound per hour each, when each has a process weight rate less than one hundred pounds of wood per hour (100 pounds of wood per hour).

In order to comply with the allowable rate of emission, the two (2) baghouse dust collectors shall be in operation at all times when the woodworking and routing facilities are in operation.

**Recommendation**

The staff recommends to the Commissioner that the application be approved as a registration.

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

An application for the purposes of this review was received on October 19, 2007. Additional information was submitted by the source by email on October 30, 2007.

**Conclusion**

The construction and operation of this source shall be subject to the conditions of the attached registration, No 039-25418-00670.

**Appendix A: Emissions Calculations  
Summary Emissions**

**Company Name:** Heartland Recreational Vehicles, LLC-Plant 8  
**Address:** 2950 Dexter drive, Elkhart, Indiana 46514  
**Registration No.** 039-25418-00670  
**Prepared By:** D&B Environmental Services, Inc.  
**Reviewer:** S. Prabha

**POTENTIAL TO EMIT IN TONS PER YEAR**

<b>Emission Units</b>	<b>PM</b>	<b>PM10</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>PM After Control</b>	<b>PM10 After Control</b>	<b>CO</b>	<b>* Highest Single HAP</b>	<b>Combined HAPs</b>
Miscellaneous Woodworking (WW1 & CNC1)	24.60	24.60	0.00	0.00	0.00	0.25	0.25	0.00	0.00	0.00
Natural Gas Combustion (H1 - H15)	0.0144	0.0574	0.0045	0.0000	0.0416	0.0144	0.0574	0.6347	0.00	0.0007
Surface Coating (Line 1)	0.00	0.00	0.00	0.00	17.57	0.00	0.00	0.00	2.53	7.71
<b>TOTAL</b>	<b>24.61</b>	<b>24.66</b>	<b>0.00</b>	<b>0.00</b>	<b>17.61</b>	<b>0.26</b>	<b>0.30</b>	<b>0.63</b>	<b>2.53</b>	<b>7.71</b>

Total Emissions based on rated capacity at 8,760 hours/year

\*Methanol

**Appendix A: Emission Calculations  
Woodworking & CNC Operations - WW1 & CNC1**

**Company Name:** Heartland Recreational Vehicles, LLC-Plant 8  
**Address City IN Zip:** 2950 Dexter drive, Elkhart, Indiana 46514  
**Registration No.** 039-25418-00670  
**Preaperd By:** D&B Environmental Services, Inc.  
**Reviewer** S. Prabha

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
WWDC1	99.0%	0.000728	4,500	2.81	12.30	0.03	0.12
CNCDC1	99.0%	0.000728	4,500	2.81	12.30	0.03	0.12
<b>TOTALS</b>				<b>5.62</b>	<b>24.60</b>	<b>0.06</b>	<b>0.25</b>

**Methodology**

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Allowable Rate of Emissions**

Emission Units	Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)
WWDC1	60.0	0.03	0.551
CNCDC1	60.0	0.03	0.551

**Appendix A: Emissions Calculations  
VOC and PM/PM10 Emissions  
One (1) Fabrication Line (L1)**

**Company Name:** Heartland Recreational Vehicles, LLC-Plant 8  
**Address:** 2950 Dexter drive, Elkhart, Indiana 46514  
**Registration No.** 039-25418-00670  
**Prepared By:** D&B Environmental Services, Inc.  
**Reviewer:** S. Prabha

Material	Density (lb/gal)	Weight % Volatile (H <sub>2</sub> O & 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	PTE VOC (lbs/hour)	PTE VOC (lbs/day)	PTE VOC (tons/year)	PTE PM/PM10 (tons/year)	**Transfer Efficiency	PTE PM/PM10 (lbs/hour)
Sikaflex Adhesive	10.60	2.28%	0.00%	2.28%	0.00%	98.00%	0.229	0.750	0.24	0.24	0.04	1.00	0.18	0.00	100%	0.000
502 Silicone Sealant	8.50	5.00%	0.00%	5.00%	0.00%	95.00%	0.740	0.750	0.43	0.43	0.24	5.66	1.03	0.00	100%	0.00
Sta-Put Big Sticky	6.08	63.90%	10.40%	53.50%	10.00%	46.00%	0.750	0.750	3.61	3.25	1.83	43.91	8.01	0.00	100%	0.00
Econobond Adhesive	5.76	63.90%	9.98%	53.92%	10.00%	47.00%	0.189	0.750	3.45	3.11	0.44	10.57	1.93	0.00	100%	0.00
Cor014 Joint Adhesive	9.18	69.99%	0.00%	69.99%	10.00%	30.00%	0.006	8.500	7.14	6.42	0.32	7.72	1.41	0.00	100%	0.00
Lacquer Thinner	7.02	100.00%	13.20%	86.80%	13.00%	0.00%	0.250	0.750	7.00	6.09	1.14	27.42	5.00	0.00	100%	0.00
<b>Potential Emission Rate (Add Worst Case Coating to All Solvents Used)</b>											<b>4.01</b>	<b>96.27</b>	<b>17.57</b>	<b>0.00</b>		<b>0.00</b>

\*\* Coating applied using hand held manual application systems

**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)  
PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency) \*8760 hours/year \*1ton/2000 lbs  
PTE PM/PM10 (lbs/hour) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency)

**Appendix A: Emissions Calculations**

**HAP Emissions**

**One (1) Fabrication Line (L1)**

**Company Name:** Heartland Recreational Vehicles, LLC-Plant 8

**Address:** 2950 Dexter drive, Elkhart, Indiana 46514

**Registration No.** 039-25418-00670

**Prepared By:** D&B Environmental Services, Inc.

**Reviewer:** S. Prabha

Material	Density (lb/gal)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Weight % Hexane	Weight % Methanol	Weight % MIBK	Weight % Toluene	Weight % Xylene	Hexane	Methanol	MIBK	Toluene	Xylene	Total HAP
									Potential To Emit (tons/year)					
Sikaflex Adhesive	10.60	0.23	0.7500	0.00%	0.00%	0.00%	0.00%	2.80%	0.00	0.00	0.00	0.00	0.22	0.22
Econobond Adhesive	5.76	0.19	0.7500	15.00%	0.00%	0.00%	0.00%	0.00%	0.54	0.00	0.00	0.00	0.00	0.54
Sta-Put Big Sticky	6.08	0.75	0.7500	13.00%	0.00%	0.00%	0.00%	0.00%	1.95	0.00	0.00	0.00	0.00	1.95
Lacquer Thinner	7.02	0.25	0.7500	0.00%	43.80%	0.00%	43.00%	0.00%	0.00	2.53	0.00	2.48	0.00	5.00
<b>Potential Emission Rate (Add Worst Case Coating to All Solvents Used)</b>									<b>2.48</b>	<b>2.53</b>	<b>0.00</b>	<b>2.48</b>	<b>0.22</b>	<b>7.71</b>

**METHODOLOGY**

PTE HAPs (tons/year) = Density (lb/gal) \* Gal of Mat. (gal/unit) \* Maximum (unit/hour) \* Weight % HAP \* 8760 hours/year \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Emissions Calculations  
Natural Gas Fired Heaters**

TSD Appendix A: Page 5 of 5

**Company Name:** Heartland Recreational Vehicles, LLC-Plant 8  
**Address:** 2950 Dexter drive, Elkhart, Indiana 46514  
**Registration No.** 039-25418-00670  
**Prepared By:** D&B Environmental Services, Inc.  
**Reviewer:** S. Prabha

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Space Heater	1	H1	0.125	1.1
Forced Air Space Heater	1	H2	0.060	0.5
Radiant Heater	6	H3 - H8	0.140	7.4
Radiant Heater	7	H9 - H15	0.100	6.1
<b>Totals</b>	<b>15</b>		<b>1.725</b>	<b>15.1</b>

Emission Factor (lbs/MMCF)						
PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub> **	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	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	HAPs
H1	0.00	0.00	0.000	0.05	0.05	0.00	4.8E-05
H2	0.00	0.00	0.000	0.03	0.02	0.00	2.3E-05
H3 - H8	0.01	0.03	0.002	0.37	0.31	0.02	3.2E-04
H9 - H15	0.01	0.02	0.002	0.31	0.26	0.02	2.7E-04
<b>TOTALS</b>	<b>0.01</b>	<b>0.06</b>	<b>0.00</b>	<b>0.76</b>	<b>0.63</b>	<b>0.04</b>	<b>6.6E-04</b>

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

\*\*Emission factor for NO<sub>x</sub>: Uncontrolled = 100 lb/MMCF

Emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (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.