



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: May 2, 2007
RE: Duncan RV Repair, LLC / 039-24539-00662
FROM: Nisha Sizemore
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, 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
FN-REGIS.dot 03/23/06



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

May 2, 2007

Mr. Jim Deavers
Duncan RV Repair, LLC
29393 Old US 33
Elkhart, Indiana 46516

Re: Registered Construction and Operation Status,
039-24539-00662

Dear Mr. Deavers:

The application from Duncan RV Repair, LLC received on March 29, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1 and 326 IAC 2-5.5, it has been determined that the following recreational vehicle (RV) repair operation, located at 29393 Old US 33, Elkhart, Indiana, is classified as registered:

- (a) One (1) natural gas-fired space heater, constructed in 1995, identified as H1, with a maximum heat input capacity of 0.10 MMBtu per hour, and exhausting to stack H1.
- (b) One (1) natural gas-fired space heater, constructed in 1995, identified as H2, with a maximum heat input capacity of 0.10 MMBtu per hour, and exhausting to stack H1.
- (c) Eight (8) natural gas-fired radiant space heaters, constructed in 1995, identified as R1 through R8, each with a maximum heat input capacity of 0.15 MMBtu per hour, and exhausting to stacks R1 through R8.
- (d) Four (4) MIG welding stations, constructed in 2006, each with a maximum throughput capacity of 0.60 pounds of electrode per hour.
- (e) One (1) plasma cutter, constructed in 2006, with a maximum cutting rate of 5.0 inches per minute.
- (f) Two (2) oxyacetylene cutting torches, constructed in 2006, each with a maximum cutting rate of 2.5 inches per minute.
- (g) One (1) RV repair operation, constructed in 2006, identified as RVR, with a maximum throughput capacity of 0.125 units per hour, used for application of caulk or finishing material to RVs using manual caulk guns and hand buffers.
- (h) One (1) natural gas-fired air makeup unit, approved for construction in 2007, identified as AM1, with a maximum heat input capacity of 5.184 MMBtu per hour.

- (i) One (1) paint booth, approved for construction in 2007, identified as B1, with a maximum throughput capacity of 0.125 units per hour, using three HVLP spray guns identified as SG1, SG2, and SG3 to apply surface coating materials to plastic RV parts, with particulate emissions controlled by dry filters, and exhausting to stacks S1 through S4.

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 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.
- (2) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), 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.
- (3) Pursuant to 326 IAC 6-3-2(d), the Permittee shall comply with the following:
 - (a) Particulate from the surface coating booth identified as B1 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.

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) and 326 IAC 2-5.5-4(a)(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.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Stacie Enoch, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7895 to speak directly to Ms. Enoch. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,
Original signed by

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

ERG/SE

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

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Duncan RV Repair, LLC
Address:	29393 Old US 33
City:	Elkhart
Authorized individual:	Jim Deavers
Phone #:	574-296-7555
Registration #:	039-24539-00662

I hereby certify that Duncan RV Repair, LLC is still in operation and is in compliance with the requirements of Registration 039-24539-00662.

Name (typed):
Title:
Signature:
Date:

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

Technical Support Document (TSD) for a New Source Construction and Registration

Source Background and Description

Source Name:	Duncan RV Repair, LLC
Source Location:	29393 Old US 33, Elkhart Indiana 46516
County:	Elkhart
SIC Code:	3799
Registration No.:	039-24539-00662
Permit Reviewer:	ERG/SE

The Office of Air Quality (OAQ) has reviewed an application from Duncan RV Repair, LLC relating to the construction and operation of a recreational vehicle (RV) repair facility.

History

This source was initially constructed in Elkhart County in 1995, was modified in 2006, and will be modified again in 2007. At the time of initial construction, the potential to emit of all regulated pollutants from the entire source was less than the Exemption thresholds listed in 326 IAC 2-1.1-3(e). In 2006, the source added four (4) MIG welding stations, one (1) plasma cutter, two (2) oxyacetylene cutting torches, and an RV repair operation. After adding these units in 2006, the source-wide potential to emit of all regulated pollutants remained less than the Exemption thresholds. In 2007, the source plans to add a surface coating booth and a natural gas-fired air makeup unit. After the addition of these units, the source-wide potential to emit VOC is greater than 10 tons per year, and the source-wide potential to emit hazardous air pollutants is greater than 1.00 ton per year of a single HAP and 2.5 tons per year of a combination of HAPs. Therefore, the source will be above the Exemption thresholds after the proposed 2007 modification and has applied for a Registration.

Existing Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

- (a) One (1) natural gas-fired space heater, constructed in 1995, identified as H1, with a maximum heat input capacity of 0.10 MMBtu per hour, and exhausting to stack H1.
- (b) One (1) natural gas-fired space heater, constructed in 1995, identified as H2, with a maximum heat input capacity of 0.10 MMBtu per hour, and exhausting to stack H1.
- (c) Eight (8) natural gas-fired radiant space heaters, constructed in 1995, identified as R1 through R8, each with a maximum heat input capacity of 0.15 MMBtu per hour, and exhausting to stacks R1 through R8.
- (d) Four (4) MIG welding stations, constructed in 2006, each with a maximum throughput capacity of 0.60 pounds of electrode per hour.
- (e) One (1) plasma cutter, constructed in 2006, with a maximum cutting rate of 5.0 inches per minute.

- (f) Two (2) oxyacetylene cutting torches, constructed in 2006, each with a maximum cutting rate of 2.5 inches per minute.
- (g) One (1) RV repair operation, constructed in 2006, identified as RVR, with a maximum throughput capacity of 0.125 units per hour, used for application of caulk or finishing material to RVs using manual caulk guns and hand buffers.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-5.1:

- (h) One (1) natural gas-fired air makeup unit, approved for construction in 2007, identified as AM1, with a maximum heat input capacity of 5.184 MMBtu per hour.
- (i) One (1) paint booth, approved for construction in 2007, identified as B1, with a maximum throughput capacity of 0.125 units per hour, using three HVLP spray guns identified as SG1, SG2, and SG3 to apply surface coating materials to plastic RV parts, with particulate emissions controlled by dry filters, and exhausting to stacks S1 through S4.

Existing Approvals

This is the first air approval 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	Heat Stack	23.0	1.0	1,250	375
H2	Heat Stack	23.0	1.0	1,250	375
R1	Heat Stack	23.0	1.0	1,500	400
R2	Heat Stack	23.0	1.0	1,500	400
R3	Heat Stack	23.0	1.0	1,500	400
R4	Heat Stack	23.0	1.0	1,500	400
R5	Heat Stack	23.0	1.0	1,500	400
R6	Heat Stack	23.0	1.0	1,500	400
R7	Heat Stack	23.0	1.0	1,500	400
R8	Heat Stack	23.0	1.0	1,500	400
S1	Paint Booth	22.0	3.5	15,000	85
S2	Paint Booth	22.0	3.5	15,000	85
S3	Paint Booth	22.0	3.5	15,000	85
S4	Paint Booth	22.0	3.5	15,000	85

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 March 29, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 5).

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/yr)
PM	1.96
PM-10	2.13
SO ₂	0.02
VOC	19.6
CO	2.37
NO _x	2.83

HAPs	Potential to Emit (tons/yr)
Xylene	7.25
Ethyl Benzene	2.00
Other HAPs	1.01
Total	10.3

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all pollutants are less than 25 tons per year, the potential to emit VOC is greater than 10 tons per year, and the potential to emit hazardous air pollutants is greater than 1.0 ton per year of a single HAP and greater than 2.5 tons per year of combined HAPs. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration 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). A registration will be issued.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

Note: 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.

- (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 PM2.5 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 standards. 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. See the State Rule Applicability - Entire Source section.
- (c) Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire 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.

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	1.96
PM10	2.13
SO ₂	0.02
VOC	19.6
CO	2.37
NO _x	2.83
Single HAP	7.25
Combination HAPs	10.3

- (a) 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, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.
- (b) These emissions were based on the application submitted by the company on March 29, 2007.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This 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) The requirements of 40 CFR 60, Subpart MM (New Source Performance Standards for Automobile and Light Duty Truck Surface Coating Operations) are not included in this Registration for this source, because this source only coats plastic body components of RVs and is not an automobile or light-duty truck assembly plant.
- (b) The requirements of 40 CFR 63, Subpart IIII (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Automobiles and Light-Duty Trucks) are not included in this Registration for this source, because this source is not a major source of HAPs.
- (c) The requirements of 40 CFR 63, Subpart PPPP (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products) are not included in this Registration for this source, because this source is not a major source of HAPs.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset)

This source was initially constructed in Elkhart County in 1995, was modified in 2006, and will be modified again in 2007. This source is not in 1 of 28 source categories listed under PSD or Emission Offset. Elkhart County was designated as nonattainment for the 8-hour Ozone standard in June 2004. At the time of initial construction, the potential to emit for all regulated pollutants was less than 100 tons per year. In 2006, the welding, cutting, and RV repair operations were added to the source. These additional units did not result in a significant increase of the potential to emit of any regulated pollutant. In 2007, the source will add a surface coating booth. This addition will not result in a significant increase of the potential to emit of any regulated pollutant. After the addition of the paint booth in 2007, the source-wide potential to emit of all regulated pollutants will still be less than 100 tons per year. Therefore, the PSD and Emission Offset requirements are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County, is not required to operate under a Part 70 permit, and emits less than five (5) tons per year of lead. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

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)

The requirements of 326 IAC 2-4.1 are not applicable to this source, because this source is not a major source of HAPs.

326 IAC 6-4 (Fugitive Dust Emissions)

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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is not a source of fugitive particulate matter emissions. Therefore, the requirements of 326 IAC 6-5 are not applicable.

State Rule Applicability – Natural Gas-fired Space Heaters and Air Makeup Unit

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

The natural gas-fired combustion units are not subject to 326 IAC 6-2 because 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), the natural gas-fired combustion units are exempt from the requirements of 326 IAC 6-3, because they have potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The natural gas-fired combustion units are not subject to the requirements of 326 IAC 7-1.1, because the potential sulfur dioxide emissions are less than twenty-five (25) tons per year and ten (10) pounds per hour.

State Rule Applicability – Welding and Cutting

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

Pursuant to 326 IAC 6-3-1(b)(14), the welding and cutting operations are exempt from the requirements of 326 IAC 6-3 because the potential to emit particulates is less than five hundred fifty-one thousandths (0.551) pound per hour.

State Rule Applicability – RV Repair and Surface Coating

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

- (a) Pursuant to 326 IAC 6-3-2(d), particulate emissions from the surface coating booth identified as B1 shall be controlled by dry filters. The dry filters shall be operated 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.
- (d) The materials used in the RV repair operation identified as RVR are applied using methods that have 100% transfer efficiency; therefore, RVR does not have the potential to emit particulates and 326 IAC 6-3 is not applicable to that unit.

326 IAC 8-1-6 (Volatile Organic Compounds)

The RV repair and surface coating operations do not have the potential to emit equal to or greater than twenty-five (25) tons of VOC per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-2 (Surface Coating Emission Limitations)

This source was constructed after July 1, 1990 in Elkhart County. The RV repair operation identified as RVR does not have potential emissions of twenty-five (25) tons of VOC per year or actual emissions of fifteen (15) pounds of VOC per day. Therefore, RVR is not subject to the requirements of 326 IAC 8-2. The surface coating booth identified as B1 does not have potential VOC emissions of twenty-five (25) tons of VOC per year, but does have actual emissions of fifteen (15) pounds of VOC per day. However, there are no relevant rules under 326 IAC 8-2. The requirements of 326 IAC 8-2-2 (Automobile and Light-Duty Truck Surface Coating Operations) are not applicable to B1, because the RVs that are painted at this source are not automobiles or light duty trucks as defined in 326 IAC 8-2-2(a). The requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) are not applicable to B1, because this paint booth is only used to paint plastic.

326 IAC 8-10 (Automobile Refinishing)

This source is located in Elkhart County; therefore, the paint booth identified as B1 and the RV repair operation identified as RVR are not subject to the requirements of 326 IAC 8-10.

Conclusion

The construction and operation of this recreational vehicle (RV) repair facility shall be subject to the conditions of the Registration 039-24539-00662.

**Appendix A: Emission Calculations
Emissions From Natural Gas Combustion**

Company Name: Duncan RV Repair, LLC
Address: 29393 Old US 33, Elkhart, Indiana 46516
Registration: 039-24539-00662
Reviewer: ERG/SE
Date: April 11, 2007

Total Heat Input Capacity (MMBtu/hr) 6.58

Potential Throughput (MMscf/yr) 56.5
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Emission Factor (lbs/MMscf)	Pollutant						
	PM*	PM10*	SO ₂	NO _x **	VOC	CO	HAPs
Potential to Emit (tons/yr)	0.05	0.21	0.02	2.83	0.16	2.37	0.05

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

**Emission factor for NO_x (Uncontrolled) = 100 lb/MMscf.

Emission factors are from AP-42, Chapter 1.4, 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 (7/98).

All Emission factors are based on normal firing.

Methodology

Potential Throughput (MMscf/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMscf/1,020 MMBtu

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

**Appendix A: Emission Calculations
VOC, PM/PM10, and HAP Emissions
Surface Coating Booth (B1)**

Company Name: Duncan RV Repair, LLC
Address: 29393 Old US 33, Elkhart, Indiana 46516
Registration: 039-24539-00662
Reviewer: ERG/SE
Date: April 11, 2007

1. VOC and PM/PM10 Emissions

*Material	Density (lbs/gal)	Weight % Volatile (H ₂ O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Material (gal/unit)	Maximum Throughput (units/hr)	Material Usage (lbs/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	**Transfer Efficiency %
Primer Application - Step 1																
Chroma Premier 42440S	12.9	33.4%	0.00%	33.4%	0.00%	40.5%	0.30769	0.125	0.49	4.30	4.30	0.17	3.97	0.72	0.36	75%
Chroma Premier 12305S	8.45	35.5%	0.00%	35.5%	0.00%	56.9%	0.07692	0.125	0.08	3.00	3.00	0.03	0.69	0.13	0.06	75%
Chroma Premier 42475S	7.68	82.0%	0.00%	82.0%	0.00%	18.5%	0.11538	0.125	0.11	6.30	6.30	0.09	2.18	0.40	0.02	75%
Basecoat Application - Step 2											Totals for Step 1	0.29	6.84	1.25	0.44	
ChromaBase Basecoat 845J	7.91	72.1%	0.00%	72.1%	0.00%	20.8%	2.97030	0.125	2.94	5.70	5.70	2.12	50.8	9.27	0.90	75%
Basemaker 7175S	6.64	99.4%	9.04%	90.4%	9.08%	0.13%	2.97030	0.125	2.47	6.60	6.00	2.23	53.5	9.76	0.02	75%
Chroma Premier 12305S	8.45	35.5%	0.00%	35.5%	0.00%	56.9%	0.05941	0.125	0.06	3.00	3.00	0.02	0.53	0.10	0.04	75%
Clearcoat Application - Step 3											Totals for Step 2	4.37	105	19.1	0.96	
ChromaClear 4700S	8.05	48.4%	0.00%	48.4%	0.00%	44.5%	2.10000	0.125	2.11	3.90	3.90	1.02	24.6	4.48	1.19	75%
ChromaClear 4507S	8.84	27.1%	0.00%	27.1%	0.00%	67.0%	0.70000	0.125	0.77	2.40	2.40	0.21	5.04	0.92	0.62	75%
Chroma Premier 12375S	7.09	100%	0.00%	100%	0.00%	0.00%	0.70000	0.125	0.62	7.09	7.09	0.62	14.9	2.72	0.00	75%
Cleaning Solvents											Totals for Step 3	1.85	44.5	8.12	1.81	
909S Wiping Solvent (Unit Clean)	8.30	100%	94.0%	6.00%	93.8%	0.00%	0.04688	0.125	0.05	8.01	0.50	0.00	0.07	0.01	0.00	100%
Pure Grade Lacquer (Cleanup)	7.07	100%	0.00%	100%	0.00%	0.00%	0.06250	0.125	0.06	7.07	7.07	0.06	1.33	0.24	0.00	100%
Total Worst Case PTE												4.42	106	19.4	1.81	

*Step 1, Step 2, and Step 3 are mutually exclusive. With the exception of the cleaning solvents, only one step can be done at a time.

** Coating applied using high volume, low pressure (HVLP) spray application and manual (hand wiping) cleaning. Overspray controlled by dry filters.

Methodology

Pounds of VOC per Gallon Coating less Water = Density (lbs/gal) * Weight % Organics / (1-Volume % Water)

Pounds of VOC per Gallon Coating = Density (lbs/gal) * Weight % Organics

PTE VOC (lbs/hr) = Pounds of VOC per Gallon of Coating (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr)

PTE VOC (lbs/day) = PTE VOC (lbs/hr) * 24 hrs/day

PTE VOC (tons/yr) = PTE VOC (lbs/hr) * 8,760 hrs/yr * 1 ton/2,000 lbs

PTE PM/PM10 (tons/yr) = Maximum Throughput (units/hr) * Gal of Material (gal/unit) * Density (lbs/gal) * (1- Weight % Volatile) * (1-Transfer Efficiency %) * 8,760 hrs/yr * 1 ton/2,000 lbs

2. Hazardous Air Pollutant (HAP) Emissions

*Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum Throughput (units/hr)	Weight % Ethyl Benzene	Weight % Isocyanate Compounds	Weight % Methanol	Weight % MIBK	Weight % Toluene	Weight % Xylene	PTE Ethyl Benzene (tons/yr)	PTE Isocyanate Compounds (tons/yr)	PTE Methanol (tons/yr)	PTE MIBK (tons/yr)	PTE Toluene (tons/yr)	PTE Xylene (tons/yr)	Total PTE HAPs (tons/yr)		
Primer Application - Step 1																		
Chroma Premier 42440S	12.9	0.30769	0.125	4.20%	0.00%	0.00%	0.00%	0.00%	15.0%	0.09	0.00	0.00	0.00	0.00	0.32	0.42		
Chroma Premier 12305S	8.45	0.07692	0.125	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00	0.0004	0.00	0.00	0.00	0.00	0.0004		
Chroma Premier 42475S	7.68	0.11538	0.125	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Basecoat Application - Step 2											Totals for Step 1	0.09	0.0004	0.00	0.00	0.32	0.42	
ChromaBase Basecoat 845J	7.91	2.97030	0.125	13.00%	0.00%	0.00%	0.00%	0.00%	47.0%	1.67	0.00	0.00	0.00	0.00	6.05	7.72		
Basemaker 7175S	6.64	2.97030	0.125	3.00%	0.00%	0.00%	5.00%	2.00%	11.0%	0.32	0.00	0.00	0.54	0.22	1.19	2.27		
Chroma Premier 12305S	8.45	0.05941	0.125	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00	0.0003	0.00	0.00	0.00	0.00	0.0003		
Clearcoat Application - Step 3											Totals for Step 2	2.00	0.0003	0.00	0.54	0.22	7.23	9.99
ChromaClear 4700S	8.05	2.10000	0.125	7.40%	0.00%	0.00%	1.00%	0.00%	27.0%	0.68	0.00	0.00	0.09	0.00	2.50	3.28		
ChromaClear 4507S	8.84	0.70000	0.125	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00	0.003	0.00	0.00	0.00	0.00	0.003		
Chroma Premier 12375S	7.09	0.70000	0.125	6.30%	0.00%	0.00%	10.0%	0.00%	23.0%	0.17	0.00	0.00	0.27	0.00	0.62	1.07		
Cleaning Solvents											Totals for Step 3	0.86	0.003	0.00	0.36	0.00	3.12	4.35
909S Wiping Solvent (Unit Clean)	8.30	0.04688	0.125	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Pure Grade Lacquer (Cleanup)	7.07	0.06250	0.125	0.00%	0.00%	9.38%	0.00%	66.3%	5.59%	0.00	0.00	0.02	0.00	0.16	0.01	0.20		
Total Worst Case PTE												2.00	0.003	0.02	0.54	0.38	7.25	10.2

*Step 1, Step 2, and Step 3 are mutually exclusive. With the exception of the cleaning solvents, only one step can be done at a time.

Methodology

PTE HAPs (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr) * Weight % HAP * 8,760 hrs/yr * 1 ton/2,000 lbs

**Appendix A: Emission Calculations
VOC, PM/PM10, and HAP Emissions
RV Repair Operations (RVR)**

Company Name: Duncan RV Repair, LLC
Address: 29393 Old US 33, Elkhart, Indiana 46516
Registration: 039-24539-00662
Reviewer: ERG/SE
Date: April 11, 2007

1. VOC and PM/PM10 Emissions

Material	Density (lbs/gal)	Weight % Volatile (H ₂ O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Material (gal/unit)	Maximum Throughput (units/hr)	Material Usage (lbs/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	**Transfer Efficiency %
DAP Acrylic Latex Caulk	14.1	1.70%	0.00%	1.70%	0.00%	92.3%	0.07891	0.125	0.14	0.30	0.30	0.003	0.07	0.013	0.00	100%
Finesse IT II Finishing Material	8.59	87.0%	70.0%	17.0%	72.1%	8.93%	0.07813	0.125	0.08	5.30	1.50	0.015	0.35	0.064	0.00	100%
Total											0.018	0.42	0.077	0.00		

** Applied using manual caulk guns and hand buffers.

Methodology

Pounds of VOC per Gallon Coating less Water = Density (lbs/gal) * Weight % Organics / (1-Volume % Water)

Pounds of VOC per Gallon Coating = Density (lbs/gal) * Weight % Organics

PTE VOC (lbs/hr) = Pounds of VOC per Gallon Coating (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr)

PTE VOC (lbs/day) = PTE VOC (lbs/hr) * 24 hrs/day

PTE VOC (tons/year) = PTE VOC (lbs/hr) * 8,760 hrs/yr * 1 ton/2,000 lbs

PTE PM/PM10 (tons/year) = Maximum Throughput (units/hr) * Gal of Material (gal/unit) * Density (lbs/gal) * (1- Weight % Volatile) * (1-Transfer Efficiency) * 8,760 hrs/yr * 1 ton/2,000 lbs

2. Hazardous Air Pollutant (HAP) Emissions

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum Throughput (units/hr)	Weight % Acrylonitrile	Weight % Acetaldehyde	Weight % Ethyl Acrylate	Weight % Ethylene Glycol	Weight % Formaldehyde	PTE Acrylonitrile (tons/yr)	PTE Acetaldehyde (tons/yr)	PTE Ethyl Acrylate (tons/yr)	PTE Ethylene Glycol (tons/yr)	PTE Formaldehyde (tons/yr)	Total PTE HAPs (tons/yr)
DAP Acrylic Latex Caulk	14.1	0.07891	0.125	0.0003%	0.002%	0.009%	1.00%	0.02%	1.83E-06	1.22E-05	5.48E-05	0.01	1.22E-04	0.01
Finesse IT II Finishing Material	8.59	0.07813	0.125	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Total									1.83E-06	1.22E-05	5.48E-05	0.01	1.22E-04	0.01

Methodology

PTE HAPs (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr) * Weight % HAP * 8,760 hrs/yr * 1 ton/2,000 lbs

**Appendix A: Emission Calculations
PM/PM10 and HAP Emissions
Welding and Cutting Operations**

Company Name: Duncan RV Repair, LLC
Address: 29393 Old US 33, Elkhart, Indiana 46516
Registration: 039-24539-00662
Reviewer: ERG/SE
Date: April 11, 2007

1. Welding

Process Type	Number of Stations	Max. Electrode Consumption Per Station (lbs/hr)	Emission Factors (lb pollutant/lb electrode)				Potential to Emit (lbs/hr)				
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	Total HAPs
Metal Inert Gas (MIG)(carbon steel)	4.00	0.600	0.0055	0.0005	0.000	0.000	0.013	0.001	0.00	0.00	0.001

2. Flame Cutting

Process Type	Number of Stations	Max. Metal Thickness Cut (in)	Max. Metal Cutting Rate (in/min)	Emission Factors (lb pollutant/1,000 inches cut, 1 " thick)**				Potential to Emit (lbs/hr)				
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	Total HAPs
Plasma**	1.00	0.179	5.0	0.0039	0.00	0.00	0.00	1.17E-03	0.00	0.00	0.00	0.00
Oxyacetylene	2.00	0.179	2.5	0.1622	0.0005	0.0001	0.0003	8.72E-03	2.69E-05	5.38E-06	1.61E-05	4.84E-05

3. Emission Totals

	PM = PM10	Mn	Ni	Cr	Total HAPs
Total Potential to Emit (lbs/hr)	0.023	0.001	0.000	0.000	0.001
Total Potential to Emit (lbs/day)	0.55	0.029	1.29E-04	3.87E-04	0.030
Total Potential to Emit (tons/yr)	0.10	0.005	2.36E-05	7.07E-05	0.005

Methodology

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

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

An equivalence of carbon steel to pounds of weld wire consumed was assumed for spot welding. Also, a conservative assumption was made that half of the process weight rate of the welding activities (75 lbs Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma/Oxyacetylene cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

Appendix A: Emission Calculations
Emission Summary

Company Name: Duncan RV Repair, LLC
Address: 29393 Old US 33, Elkhart, Indiana 46516
Registration: 039-24539-00662
Reviewer: ERG/SE
Date: April 11, 2007

Potential to Emit (tons/yr)

	PM	PM10	SO ₂	NO _x	VOC	CO	HAPs*
Combustion	0.05	0.21	0.02	2.83	0.16	2.37	0.05
Surface Coating	1.81	1.81	--	--	19.4	--	10.2
RV Repair	0.00	0.00	--	--	0.08	--	0.01
Welding/Cutting	0.10	0.10	--	--	--	--	0.01
Total	1.96	2.13	0.02	2.83	19.6	2.37	10.3

*The single HAP with the highest PTE is Xylene with a PTE of 7.25 tons/yr