



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

July 13, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Potomac RV, LLC / 039-17938-00585

FROM: Paul Dubenetzky
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 9/16/03



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

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Indianapolis, Indiana 46206-6015
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Terrence W. Sappington
Potomac RV, LLC
57974 CR 3 South
Elkhart, IN 46517

July 13, 2004

Re: Registered Construction and Operation Status,
039-17938-00585

Dear Mr. Sappington:

The application from Potomac RV, LLC, received on September 3, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following travel trailer and fifth wheel trailer manufacturing source, located at 57974 CR 3 South, Elkhart, Indiana, is classified as registered:

- (a) One (1) trailer assembly area, constructed in 2002, using brushes, aerosol spray, rollers, caulk guns, foam guns and HVLP spray applicators to apply coatings, equipped with a dust collector, capacity: 0.171 trailers per hour.
- (b) Two (2) natural gas-fired tube heaters, identified as TH-1 and TH-2, capacity: 0.2 million British thermal units per hour, each.
- (c) Four (4) natural gas-fired unit heaters, identified as UH-1 through UH-4, capacity: 0.2 million British thermal units per hour, each.
- (d) One (1) stick welder, capacity: 0.0078 pounds of electrodes per hour.
- (e) One (1) oxyacetylene flame cutter, maximum cutting rate: 0.00469 inches per minute.

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 6-3-2(d), Particulate Emission Limitations for Manufacturing Processes, particulate from the surface coating operations and gelcoat operations in the assembly area shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, 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:

- (a) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (b) 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.

3. Any change or modification that increases the welding wire or rod consumption rate to six hundred and twenty-five (625) pounds per day or more shall cause the welding operations to become subject to 326 IAC 6-3-2 and shall require prior IDEM, OAQ, approval.
4. Any change or modification that increases the cutting rate at the flame cutting operations at this source to three thousand four hundred (3,400) inches per hour or more shall cause the flame cutting operations to become subject to 326 IAC 6-3-2 and shall require prior IDEM, OAQ, approval.
5. Any change or modification that increases the use of VOC for metal coating operations to fifteen (15) pounds per day or more shall cause actual VOC emissions from metal coating of fifteen (15) pounds per day or more. Therefore, the source would become subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating) and such change shall require prior IDEM, OAQ, approval.
6. To document compliance with Condition 5, the following records shall be maintained. Records maintained for (a) through (c) shall be taken daily and shall be complete and sufficient to establish compliance with Condition 5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
 - (a) The amount and VOC content of each coating material and solvent used on metal. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (b) The total VOC usage for metal coating operations for each day; and
 - (c) The weight of VOCs emitted from metal coating operations for each compliance period.

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
P.O. Box 6015
Indianapolis, IN 46206-6015

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.

Sincerely,
Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

CAP/MES

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Tony Pelath
Northern Regional Office
Permit Tracking
Compliance Data Section
Office of Enforcement

Registration Annual Notification

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

Company Name:	Potomac RV, LLC
Address:	57974 CR 3 South
City:	Elkhart
Authorized individual:	Terrence W. Sappington, VP Operations
Phone #:	(574) 970-0559
Registration #:	039-17938-00585

I hereby certify that Potomac RV, LLC is still in operation and is in compliance with the requirements of Registration 039-17938-00585.

Name (typed):
Title:
Signature:
Date:

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

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Potomac RV, LLC
Source Location:	57974 CR 3 South, Elkhart, Indiana 46517
County:	Elkhart
SIC Code:	3792
Registration No.:	039-17938-00585
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed an application from Potomac RV, LLC relating to the operation of a travel trailer and fifth wheel trailer manufacturing source.

Permitted Emission Units and Pollution Control Equipment

There are no permitted emission units operating at this source.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted emission units:

- (a) One (1) trailer assembly area, constructed in 2002, using brushes, aerosol spray, rollers, caulk guns, foam guns and HVLP spray applicators to apply coatings, equipped with a dust collector, capacity: 0.171 trailers per hour.
- (b) Two (2) natural gas-fired tube heaters, identified as TH-1 and TH-2, capacity: 0.2 million British thermal units per hour, each.
- (c) Four (4) natural gas-fired unit heaters, identified as UH-1 through UH-4, capacity: 0.2 million British thermal units per hour, each.
- (d) One (1) stick welder, capacity: 0.0078 pounds of electrodes per hour.
- (e) One (1) oxyacetylene flame cutter, maximum cutting rate: 0.00469 inches per minute.

Existing Approvals

There are no existing approvals for this source.

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper approval. The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment".

- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the registration rules.

Stack Summary

There are no stacks at this source.

Recommendation

The staff recommends to the Commissioner that the 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.

An application for the purposes of this review was received on September 8, 2003, with additional information received on February 2 and 8, March 30, and May 5, 2004.

Emission Calculations

See pages 1 through 6 of Appendix A of this document for detailed emission calculations.

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	2.54
PM ₁₀	2.57
SO ₂	0.003
VOC	10.2
CO	0.442
NO _x	0.526

HAPs	Potential to Emit (tons/yr)
Methanol	0.045
MIBK	0.063
MEK	0.380

Hexane	0.122
Styrene	0.254
Vinyl acetate	4.41
Ethyl benzene	0.002
Benzene	0.00001
Dichlorobenzene	0.00001
Formaldehyde	0.0004
Toluene	0.00002
Lead	0.000003
Cadmium	0.000006
Chromium	0.000007
Nickel	0.00001
Manganese	0.00003
Total	8.72

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is greater than ten (10) tons per year and less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1 and 326 IAC 2-5.5. A registration will be issued.
- (b) 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 Elkhart County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Maintenance Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x 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 NO_x emissions were reviewed pursuant to the requirements for nonattainment new source review. See 326 IAC 2-2 and 326 IAC 2-1.1-5 under the *State Rule Applicability - Entire Source* section of this document.
- (b) Elkhart County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See 326 IAC 2-2 under the *State Rule Applicability - Entire Source* section of this document.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing 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) each 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 status is based on all the air approvals issued to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source.
- (c) This source is not a major source of HAPs. Therefore, this source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart M for miscellaneous metal parts coating and Subpart P for plastic parts coating.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

The unrestricted potential emissions of PM, PM₁₀, SO₂, and CO are less than 250 tons per year at this source, constructed in 2002, which is located in an attainment county for those pollutants and is not one (1) of the twenty-eight (28) listed source categories. Therefore, this source is a minor source pursuant to 326 IAC 2-2, PSD and the requirements of 326 IAC 2-2, PSD, are not applicable.

326 IAC 2-1.1-5 (Air quality requirements)

The unrestricted potential VOC and NO_x emissions are less than 100 tons per year. Therefore, this source is also a minor source pursuant to 326 IAC 2-1.1-5 for nonattainment new source review.

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

The operation of trailer manufacturing source emits less than ten (10) tons per year of a single HAP and twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County with potential to emit greater than twenty-five (25) tons per year (tpy) of NO_x, does not emit five (5) tons per year or more of lead and does not required a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply.

326 IAC 5-1 (Opacity Limitations)

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

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

State Rule Applicability – Individual Facilities

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

- (a) Particulate from the surface coating operations and gelcoat operations in the assembly area shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, 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:

- (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.

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.

- (b) The welding operations at this source consume less than six hundred and twenty-five (625) pounds of rod or wire per day. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the requirements of 326 IAC 6-3-2 are not applicable.
- (c) The flame cutting operations at this source cut less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the requirements of 326 IAC 6-3-2 are not applicable.

326 IAC 8-1-6 (New facilities; General reduction requirements)

The potential VOC emissions from this source are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-2-2 (Automobile and Light Duty Truck Coating)

The units coated at this source include towable trailers and fifth wheels, but do not include motorized vehicles. Therefore, the requirements of 326 IAC 8-2-2 are not applicable.

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

This source was constructed in 2002 and the unrestricted potential VOC emissions are greater than fifteen (15) pounds per day when coating metal parts. However, the source has actual VOC emissions are less than fifteen (15) pounds per day when coating metal parts. Therefore, the requirements of 326 IAC 8-2-9 are not applicable.

Conclusion

The operation of this travel trailer and fifth wheel trailer manufacturing source shall be subject to the conditions of the **Registration 039-17938-00585**.

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

Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South, Elkhart, IN 46517
Registration: 039-17938
Pit ID: 039-00585
Reviewer: CarrieAnn Paukowits
Application Date: September 3, 2003

Heaters

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

1.20

10.51

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	0.010	0.040	0.003	0.526	0.029	0.442

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

See page 2 for HAPs emissions calculations.

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

Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South, Elkhart, IN 46517
Registration: 039-17938
Pit ID: 039-00585
Reviewer: CarrieAnn Paukowits
Application Date: September 3, 2003

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 0.0021	Dichlorobenzene 0.0012	Formaldehyde 0.0750	Hexane 1.8000	Toluene 0.0034
Potential Emission in tons/yr	1.10E-05	6.31E-06	3.94E-04	9.46E-03	1.79E-05

HAPs - Metals						
Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.0011	Chromium 0.0014	Manganese 0.0004	Nickel 0.0021	Total
Potential Emission in tons/yr	2.63E-06	5.78E-06	7.36E-06	2.00E-06	1.10E-05	0.010

Methodology is the same as page 1.

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

**Appendix A: Emissions Calculations
Welding and Thermal Cutting**

**Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South, Elkhart, IN 46517
Registration: 039-17938
Pit ID: 039-00585
Reviewer: CarrieAnn Paukowits
Application Date: September 3, 2003**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Submerged Arc	0	0		0.036	0.011			0.000	0.000	0.000	0	0.000
Metal Inert Gas (MIG)(carbon steel)	0	0		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Stick (E7018 electrode)	1	0.008		0.0211	0.0009			1.69E-04	7.20E-06	0.00E+00	0.00E+00	7.20E-06
Tungsten Inert Gas (TIG)(carbon steel)	0	0		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Oxyacetylene(carbon steel)	0			0.0055	0.0005			0.000	0.000	0.000	0	0.000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	1	0.1875	0.005	0.1622	0.0005	0.0001	0.0003	9.12E-06	4.56E-09	2.43E-12	1.46E-13	4.56E-09
Oxymethane	0			0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma**	0	0	0	0.0039				0.000	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								1.78E-04	7.20E-06	2.43E-12	1.46E-13	7.20E-06
Potential Emissions lbs/day								4.27E-03	1.73E-04	5.84E-11	3.50E-12	1.73E-04
Potential Emissions tons/year								7.79E-04	3.16E-05	1.07E-11	6.39E-13	3.16E-05

METHODOLOGY

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

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

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

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

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

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lb.

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

**Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South, Elkhart, IN 46517
Registration: 039-17938
Plt ID: 039-00585
Reviewer: CarrieAnn Paukowitz
Application Date: September 3, 2003**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	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)	Transfer Efficiency	Substrate
Mineral Spirits	6.47	100.000%	0.0%	100.0%	0.0%	0.02339	0.171	6.47	6.47	0.03	0.62	0.113	0.000	50%	reinforced platics
Denatured Alcohol	6.79	100.000%	4.0%	96.0%	5.0%	0.17544	0.171	6.86	6.52	0.20	4.69	0.857	0.000	100%	all
Oatey ABS Black Cement	7.26	75.000%	0.0%	75.0%	0.0%	0.05848	0.171	5.45	5.45	0.05	1.31	0.238	0.000	100%	PVC pipe
Supertak K632821	0.51	100.000%	10.0%	90.0%	0.0%	0.98246	0.171	0.46	0.46	0.08	1.85	0.338	0.000	50%	Wood
Polyester glaz putty A400	15.00	20.000%	0.0%	20.0%	0.0%	0.00181	0.171	3.00	3.00	0.00	0.02	0.004	0.000	100%	Wood
Oatey Great White 31229	12.51	40.000%	0.0%	40.0%	0.0%	0.03216	0.171	5.00	5.00	0.03	0.66	0.121	0.000	100%	black pipe - tread compound
Vetak LAW 8403	8.38	0.540%	0.0%	0.5%	0.0%	3.04094	0.171	0.05	0.05	0.02	0.56	0.103	0.000	100%	wood
5021 LSW HAPS Free Sealant	9.92	32.500%	0.0%	32.5%	0.0%	0.47427	0.171	3.22	3.22	0.26	6.28	1.145	0.595	75%	reinforced platics
Speed Grip	11.70	34.000%	0.0%	34.0%	0.0%	0.01146	0.171	3.98	3.98	0.01	0.19	0.034	0.017	75%	wood
Enerfoam (Ener 43)	10.00	60.000%	0.0%	60.0%	0.0%	0.75000	0.171	6.00	6.00	0.77	18.47	3.370	0.562	75%	metal and PVC
Primer 94	6.83	76.000%	0.0%	76.0%	0.0%	0.00439	0.171	5.19	5.19	0.00	0.09	0.017	0.000	100%	reinforced platics
Stabond XW-6425	9.17	0.000%	0.0%	0.0%	0.0%	0.23392	0.171	0.00	0.00	0.00	0.00	0.000	0.000	100%	wood and aluminum
Staseal 5000	10.00	68.820%	0.0%	68.8%	0.0%	0.45220	0.171	6.88	6.88	0.53	12.77	2.331	0.000	100%	wood and aluminum
Acrylic Lacquer, Non-lead colors	8.20	87.000%	0.0%	87.0%	0.0%	0.08772	0.171	7.13	7.13	0.11	2.57	0.469	0.018	75%	reinforced platics
Acrylic Lac./Clear T1C285	7.52	95.000%	0.0%	95.0%	0.0%	0.01234	0.171	7.14	7.14	0.02	0.36	0.066	0.001	75%	reinforced platics
Geocel 2300 Sealant	7.76	35.000%	0.0%	35.0%	0.0%	0.37077	0.171	2.72	2.72	0.17	4.13	0.754	0.350	75%	reinforced platics

PM Control Efficiency: 99.00%

State Potential Emissions

Add worst case coating to all solvents

Uncontrolled	2.27	54.6	9.96	1.54
Controlled	2.27	54.6	9.96	0.015

METHODOLOGY

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

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South, Elkhart, IN 46517
Registration: 039-17938
PI# ID: 039-00585
Reviewer: CarrieAnn Paukowits
Application Date: September 3, 2003

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Methanol	Weight % MIBK	Weight % MEK	Weight % Hexane	Weight % Styrene	Weight % Vinyl Acetate	Weight % Ethyl benzene	Weight % MDI	Weight % Toluene	Weight % Xylenes	Weight % Glycol Ethers	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	MEK Emissions (ton/yr)	Hexane Emissions (ton/yr)	Styrene Emissions (ton/yr)	Vinyl Acetate Emissions (ton/yr)	Ethyl benzene Emissions (ton/yr)	MDI Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylenes Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)
Mineral Spirits	6.47	0.02339	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Denatured Alcohol	6.79	0.17544	0.171	5.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oatey ABS Black Cement	7.26	0.05848	0.171	0.00%	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Supertak K632821	0.51	0.98246	0.171	0.00%	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyester glaz putty A400	15.00	0.00181	0.171	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oatey Great White 31229	12.51	0.03216	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vetac LAW 8403	8.38	3.04094	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	23.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	4.41	0.00	0.00	0.00	0.00	0.00
021 LSW HAPS Free Sealant	9.92	0.47427	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed Grip	11.70	0.01146	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enerfoam (Ener 43)	10.00	0.75000	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	0.00	0.00	0.00
Primer 94	6.83	0.00439	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00%	35.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Stabond XW-6425	9.17	0.23392	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Staseal 5000	10.00	0.45220	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
rylic Lacquer, Non-lead cold	8.20	0.08772	0.171	0.00%	10.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00	0.05	0.13	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
Acrylic Lac./Clear T1C285	7.52	0.01234	0.171	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.00%	1.00%	2.00%	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Geocel 2300 Sealant	7.76	0.37077	0.171	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

0.045 0.063 0.380 0.113 0.004 4.41 0.002 3.438 0.244 0.009 0.001

METHODOLOGY

Total HAPs: 8.71

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
Form DD: Reinforced Plastics and Composites
Open Molding Operations*
Resin and Gel Usage**

**Company Name: Potomac RV, LLC
Address City IN Zip: 57974 CR 3 South
Registration: 039-7938
Pit ID: 039-00585
Reviewer: CarrieAnn Paukowitz
Application Date: September 3, 2003**

Emission Unit ID	Material (Resin or Gel Name)	Density (Lb/Gal)	Weight % Monomer	Gal of Mat. (gal/unit)	Maximum usage (unit/hour)	UEF (lbs monomer/ton resin or gel)	Potential VOC/HAP (pounds per day)	Potential VOC/HAP (tons per year)	Transfer Efficiency	Potential PM (tons/ year)
Repair	Gelcoat: Altec White	10.8	34.52%	0.19	0.171	325.92	1.35	0.25	0%	0.99
Total VOC/HAP and PM from Resin and Gel Use								0.25		0.99

* Open Molding Operations include the following: manual application, mechanical application, gel coat application, and filament application.

METHODOLOGY

Assume all of the monomer is styrene.

resin and gelcoat emissions.

UEF: The United Emission Factor is the emission factor for the resin or gel styrene content that can be determined using the UEF Table. An interpolation calculator is provided on the next page for those styrene contents between the values given in the table that are not integers. Use the extrapolation equations given in the table for styrene contents that are less than or greater than the range of factors given in the table.

Potential VOC (lb/day) for resins or gels = Density (lb material /gal material) * Gal. of material (gal material/unit) * Maximum usage (unit/hr) * UEF (lb styrene/ton material) * 24 hrs/day * 1 ton material/2000 lbs material

Potential VOC (ton/year) = Potential VOC (lb/day) * 365 days/year * (1 ton/2000 lb)

Potential PM (ton/year) = Density * (1 - Weight % monomer or VOC) * Gal. of Material * Maximum Usage * (1 - transfer efficiency) * 24 hrs/day * 365 days/year * (1 ton/2000 lb)

Interpolation Calculator:

Use this calculator to determine the UEF factor for those resins and gelcoats that have styrene contents between the integers listed in the UEF table (i.e., non-integers between 33 and 50 % styrene).

Enter actual styrene content of resin or gelcoat (expressed as a percent) (e.g., 36.4%)=

Enter closest styrene content expressed as an integer higher than actual styrene content (e.g., 37%) =

Enter UEF for closest styrene content higher than actual =

Enter closest styrene content expressed as an integer lower than actual styrene content (e.g., 36%)=

Enter UEF for closest styrene content lower than actual =

34.52
35
336
34
315

Interpolated UEF for actual styrene content of resin =

325.92
