



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: April 14, 2005
RE: Dutchmen Manufacturing, Inc. / 039-20449-00618
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

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 from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER-AM.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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April 14, 2005

Mr. Jeffrey Chiddister
Dutchmen Manufacturing, Inc.
2164 Caragana Ct.
Goshen, Indiana 46526

Re: Exempt Operation Status,
039-20449-00618

Dear Mr. Chiddister:

The application from Dutchmen Manufacturing, Inc., received on January 19, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following mini travel trailer manufacturing source, located at 52400 State Road 15, Bristol Indiana, is classified as exempt from air pollution permit requirements:

- (a) One (1) T@B Trailer Line consisting of:
 - (1) One (1) laminating operation, identified as roof lamination, utilizing wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (2) One (1) chassis preparation, identified as chassis prep, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (3) One (1) mill and cabinet shop, identified as mill and cabinet shop, utilizing wiping applications, particulate controlled by two (2) baghouses (P1 and P2, P3 used as backup), capacity: 6.54 pounds per hour. This operation consists of:
 - (A) Two (2) table saws, identified as TS1 and TS2.
 - (B) One (1) sander, identified as SA1.
 - (C) Two (2) chop saws, identified as CS1 and CS2.
 - (D) One (1) band saw, identified as BS.
 - (4) One (1) assembly operation, identified as assembly, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (5) One (1) final finish operation, identified as final finish, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.

- (b) Thirteen (13) natural gas-fired radiant heaters, identified as H1 - H12 and H16, installed in 2004, capacity: 0.225 million British thermal units per hour, each.
- (c) Three (3) natural gas-fired radiant heaters, identified as H13 – H15, installed in 2004, capacity: 0.100 million British thermal units per hour, each.

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 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicators at the one (1) T@B Trailer Line shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried or forced warm air dried coatings.

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

- (3) This rule requires that the Permittee of a wood furniture or cabinet coating operation apply all coating material, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repairs, using one (1) or more of the following application systems:

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

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

This exemption is the first air approval issued to this source.

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
Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

BJP/MES

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance – Paul Karkiewicz
Northern Regional Office
Permit Tracking
Compliance Data Section

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

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Dutchmen Manufacturing, Inc.
Source Location:	52400 State Road 15, Bristol, Indiana 46526
County:	Elkhart
SIC Code:	3792
Operation Permit No.:	039-20449-00618
Permit Reviewer:	Brian J. Pedersen

The Office of Air Quality (OAQ) has reviewed an application from Dutchmen Manufacturing, Inc. relating to the operation of mini travel trailer manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source has no permitted emission units or pollution control devices.

Unpermitted Emission Units and Pollution Control Equipment

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

- (a) One (1) T@B Trailer Line consisting of:
 - (1) One (1) laminating operation, identified as roof lamination, utilizing wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (2) One (1) chassis preparation, identified as chassis prep, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (3) One (1) mill and cabinet shop, identified as mill and cabinet shop, utilizing wiping applications, particulate controlled by two (2) baghouses (P1 and P2, P3 used as backup), capacity: 6.54 pounds per hour. This operation consists of:
 - (A) Two (2) table saws, identified as TS1 and TS2.
 - (B) One (1) sander, identified as SA1.
 - (C) Two (2) chop saws, identified as CS1 and CS2.
 - (D) One (1) band saw, identified as BS.
 - (4) One (1) assembly operation, identified as assembly, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.
 - (5) One (1) final finish operation, identified as final finish, utilizing aerosol cans and wiping applications, installed in 2004, capacity: 0.75 units per hour.

- (b) Thirteen (13) natural gas-fired radiant heaters, identified as H1 - H12 and H16, installed in 2004, capacity: 0.225 million British thermal units per hour, each.
- (c) Three (3) natural gas-fired radiant heaters, identified as H13 – H15, installed in 2004, capacity: 0.100 million British thermal units per hour, each.

Existing Approvals

The source has not been operating under any previous approvals.

Enforcement Issue

There are no enforcement actions pending because the total emissions from all units listed under "Unpermitted Emission Units and Pollution Control Equipment" are within the exempt category pursuant to 326 IAC 2-1.1-3.

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.

A complete application for the purposes of this review was received on January 19, 2005.

Emission Calculations

See pages 1 through 5 of Appendix A of this document for detailed emission calculations. The PM/PM₁₀ emissions before controls from the woodworking operation are calculated by the following equation:

(Board feet used per unit) * (Maximum units per hour) * (2.5 pounds of wood per board foot) * (8760 hours per year) * (1 ton per 2000 pounds) * (5% of wood processed is emitted as PM)= (Potential to emit before controls of PM/PM₁₀)

(2.9 board feet / unit) * (0.75 units / hour) * (2.5 pounds / board feet) * (8760 hours / year) * (1 ton per 2000 pounds) (5%) = 1.19 tons per year of PM/PM₁₀.

After controls:

(Before controls potential to emit of PM/PM₁₀) * (1 – control efficiency) = (Potential to emit after controls of PM/PM₁₀).

(1.19 tons per year) * (1 – 0.99) = 0.012 tons per year of PM/PM₁₀.

Potential to Emit 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	1.35
PM ₁₀	1.43
SO ₂	0.008
VOC	4.13
CO	1.19
NO _x	1.41

HAPs	Potential to Emit (tons/yr)
Toluene	0.135
Hexane	0.267
Total	0.485

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of the combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (c) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment

Pollutant	Status
NO ₂	Attainment
1-Hour Ozone	Attainment
8-Hour Ozone	Basic 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 Emission Offset.
- (b) Elkhart County has been classified as attainment or unclassifiable in Indiana for all remaining 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.

Source Status

Existing Source PSD, Part 70, or FESOP 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	0.173
PM ₁₀	0.253
SO ₂	0.008
VOC	4.13
CO	1.19
NO _x	1.41
Single HAP (Hexane)	0.267
Combination HAPs	0.485

This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of two hundred-fifty (250) tons per year or greater, no non-attainment regulated pollutant is emitted at a rate of one hundred (100) tons per year and it is not in one of the twenty-eight (28) listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 039-20449-00618, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This status is based on the application submitted by the company.

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) This mini travel trailer manufacturing source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart (MMMM) Miscellaneous Metal Parts and Products Surface Coating because this source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (c) This mini travel trailer manufacturing source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart (QQQQ) Wood Building Products Surface Coating because this source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (d) This mini travel trailer manufacturing source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart (JJ) Wood Furniture Manufacturing Operations, because this source is not major a source as defined in 40 CFR part 63.2.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County with the potential to emit greater than twenty-five (25) tons per year 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 2-3 (Emission Offset)

The unrestricted potential VOC emissions and the unrestricted potential NO_x emissions are each less than one hundred (100) tons per year. Therefore, this source is a minor source pursuant to 326 IAC 2-3 (Emission Offset).

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

The unrestricted potential emissions of each attainment criteria pollutant are less than two hundred-fifty (250) tons per year. Therefore, this source, which is not one of the twenty-eight (28) listed source categories, is a minor source pursuant to 326 IAC 2-2, PSD.

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

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

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

Pursuant to 326 IAC 6-3-1(b)(8)(12), surface coating that uses brush coating and/or the use of aerosol coating products to repair minor surface damage and imperfections are deemed as exempt. Therefore the requirements of 326 IAC 6-3 do not apply.

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

Manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are exempt from 326 IAC 6-3-2. Since the woodworking operation (mill and cabinet shop) meets this criteria, the requirements of 326 IAC 6-3-2 do not apply.

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

Pursuant to 326 IAC 8-2-1(a)(4), the one (1) T@B Trailer Line, was constructed after 1990 and the actual VOC emissions from this line is greater than 15 pounds per day it is therefore subject to the requirements of 326 IAC 8-2-9. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicators at the one (1) T@B Trailer Line shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried or forced warm air dried coatings.

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

Based on the MSDS submitted by the source and calculations made, the one (1) T@B Trailer Line is in compliance with this requirement.

326 IAC 8-2-12 (Volatile Organic Compounds (VOC))

Pursuant to 326 IAC 8-2-1(a)(4), the one (1) T@B Trailer Line, was constructed after 1990 and the actual VOC emissions from this line is greater than 15 pounds per day it is therefore subject to the requirements of 326 IAC 8-2-12. This rule requires that the Permittee of a wood furniture or cabinet coating operation apply all coating material, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repairs, using one (1) or more of the following application systems:

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

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

Since the one (1) T@B Trailer Line, uses wipe application methods, the one (1) T@B Trailer Line shall comply with this rule.

Conclusion

The operation of this mini travel trailer manufacturing source shall be subject to the conditions of the Exemption 039-20449-00618.

VOC and Particulate
From Surface Coating Operations

Company Name: Dutchmen Manufacturing, Inc.
Address City IN Zip: 52400 State Road 15, Bristol, Indiana 46526
Permit Number: 039-20449
Plt ID: 039-00618
Reviewer: Brian J. Pedersen
Application Date: January 19, 2005

Process	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	Material Substrate
Roof Lamination	SIA Adhesive	7.60	0.000%	0.00%	0.0%	0.00%	100%	0.82240	0.750	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	wood
	Isopropyl Alcohol	6.55	100%	0.00%	100%	0.00%	0.00%	0.05000	0.750	6.55	6.55	0.246	5.90	1.08	0.00	NA	100%	wood
Chassis Preparation	Cyclo Brake and Parts Cleaner	6.34	100%	26.0%	74.0%	19.8%	0.00%	0.01970	0.750	5.85	4.69	0.069	1.66	0.304	0.00	NA	50%	metal
	Westech Multi-Purp Adhesive	6.67	11.2%	0.00%	11.2%	0.00%	89.0%	0.02440	0.750	0.75	0.75	0.014	0.328	0.060	0.00	0.839	100%	metal
	Westech Adhesive Remover	5.84	35.0%	0.00%	35.0%	0.00%	100%	0.00600	0.750	2.04	2.04	0.009	0.221	0.040	0.037	2.04	50%	metal
Mill and Cabinet Shop	Oatey PVC Cement	7.51	88.0%	0.00%	88.0%	0.00%	12.0%	0.00330	0.750	6.61	6.61	0.016	0.393	0.072	0.00	55.1	100%	wood
	Oatey Cleaner	6.61	100%	20.0%	80.0%	15.8%	0.00%	0.00030	0.750	6.28	5.29	0.001	0.029	0.005	0.00	NA	100%	wood
Assembly	Geocel 2300 Sealant	7.92	35.0%	0.00%	35.0%	0.00%	61.0%	0.09470	0.750	2.77	2.77	0.197	4.73	0.862	0.00	4.54	100%	wood
	Cyclo Spray Adhesive	5.60	83.0%	11.0%	72.0%	7.39%	17.7%	0.03340	0.750	4.35	4.03	0.101	2.42	0.442	0.00	22.8	100%	wood/fiberglass
	Sikaflex Sealant	9.70	4.60%	0.00%	4.60%	0.00%	94.9%	0.00810	0.750	0.446	0.446	0.003	0.065	0.012	0.00	0.470	100%	wood/fiberglass
Final Finish	WD 40	6.80	70.0%	0.00%	70.0%	0.00%	30.0%	0.00020	0.750	4.76	4.76	0.001	0.017	0.003	0.001	15.9	50%	wood/fiberglass
	Geocel Stainmatch Sealant	13.4	3.70%	2.00%	1.70%	3.20%	94.1%	0.00130	0.750	0.234	0.227	0.0002	0.005	0.001	0.00	0.241	100%	wood/fiberglass
	Spray N Go Paint (touch-up)	6.09	90.0%	20.0%	70.0%	14.6%	10.0%	0.00280	0.750	4.99	4.26	0.009	0.215	0.039	0.00	42.6	50%	wood/fiberglass
	Glass Cleaner	7.99	15.0%	5.00%	10.0%	4.79%	0.00%	0.00220	0.750	0.839	0.799	0.001	0.032	0.006	0.025	NA	50%	wood/fiberglass
	Crazy Cleaner 030	8.16	93.1%	85.3%	7.80%	83.5%	8.90%	0.02870	0.750	3.85	0.636	0.014	0.329	0.060	0.027	7.15	50%	wood/fiberglass
	Isopropyl Alcohol	6.55	100%	0.00%	100%	0.00%	0.00%	0.03820	0.750	6.55	6.55	0.188	4.50	0.822	0.00	NA	100%	wood/fiberglass
	Stainless Steel and Metal Polish	8.21	100%	0.00%	100%	0.00%	100%	0.00240	0.750	8.21	8.21	0.015	0.355	0.065	0.00	8.21	50%	wood/fiberglass
Non-Chlorinated Brake Cleaner	Scotch Grip Industrial Adhesive	6.83	65.0%	0.00%	65.0%	0.00%	35.0%	0.00590	0.750	4.44	4.44	0.020	0.471	0.086	0.00	12.7	100%	wood/fiberglass
	A-1 Glaze Cleaner and Polish	8.34	25.0%	0.00%	25.0%	0.00%	0.00%	0.00390	0.750	2.09	2.09	0.006	0.146	0.027	0.040	NA	50%	wood/fiberglass
	Non-Chlorinated Brake Cleaner	5.84	96.0%	6.00%	90.0%	4.20%	0.00%	0.00390	0.750	5.49	5.26	0.015	0.369	0.067	0.001	NA	50%	wood/fiberglass

PM Control Efficiency: 0.00%

State Potential Emissions

Add worst case coating to all solvents

Uncontrolled

0.924

22.2

4.05

0.134

Controlled

0.924

22.2

4.05

0.134

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: Dutchmen Manufacturing, Inc.
Address City IN Zip: 52400 State Road 15, Bristol, Indiana 46526
Permit Number: 039-20449
PI# ID: 039-00618
Permit Reviewer: Brian J. Pedersen
Application Date: January 19, 2005

Process	Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % MEK	Weight % EthylBenzene	Weight % Hexane	Weight % Glycol Ethers	Weight % MDI	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MEK Emissions (ton/yr)	EthylBenzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	MDI Emissions (ton/yr)	Total Emissions (ton/yr)
Roof Lamination	SIA Adhesive	7.60	0.82240	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Isopropyl Alcohol	6.55	0.05000	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chassis Preparation	Cyclo Brake and Parts Cleaner	6.34	0.01970	0.750	0.00%	30.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.123	0.00	0.00	0.00	0.00	0.00	0.00
	Westech Multi-Purp Adhesive	6.67	0.02440	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Westech Adhesive Remover	5.84	0.00600	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mill and Cabinet Shop	Oatey PVC Cement	7.51	0.00330	0.750	0.00%	0.00%	55.0%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.045	0.00	0.00	0.00	0.00	0.045
	Oatey Cleaner	6.61	0.00030	0.750	0.00%	0.00%	80.0%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.005	0.00	0.00	0.00	0.00	0.005
Assembly	Geocel 2300 Sealant	7.92	0.09470	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cyclo Spray Adhesive	5.60	0.03340	0.750	0.00%	0.00%	0.00%	0.00%	35.0%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.215	0.00	0.00	0.215
	Sikaflex Sealant	9.70	0.00810	0.750	5.00%	0.00%	0.00%	0.00%	0.00%	0.700%	0.013	0.00	0.00	0.00	0.00	0.00	0.00	0.002	0.015
	WD 40	6.80	0.00020	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Finish	Geocel Stainmatch Sealant	13.4	0.00130	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Spray N Go Paint (touch-up)	6.09	0.00280	0.750	10.0%	5.00%	10.0%	3.00%	0.00%	0.00%	0.00%	0.006	0.00	0.006	0.00	0.00	0.00	0.00	0.016
	Glass Cleaner	7.99	0.00220	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.003
	Crazy Cleaner 030	8.16	0.02870	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Isopropyl Alcohol	6.55	0.03820	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Stainless Steel and Metal Polish	8.21	0.00240	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Scotch Grip Industrial Adhesive	6.83	0.00590	0.750	0.00%	7.00%	0.00%	0.00%	20.0%	0.00%	0.00%	0.00	0.009	0.00	0.00	0.026	0.00	0.00	0.036
	A-1 Glaze Cleaner and Polish	8.34	0.00390	0.750	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Non-Chlorinated Brake Cleaner	5.84	0.00390	0.750	0.00%	0.00%	0.00%	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

0.019 0.135 0.056 0.0017 0.242 0.003 0.002 0.457

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Company Name: Dutchmen Manufacturing, Inc.
Address City IN Zip: 52400 State Road 15, Bristol, Indiana 46526
Permit Number: 039-20449
Plt ID: 039-00618
Reviewer: Brian J. Pedersen
Application Date: January 19, 2005

Unit ID	# of Units	Individual heat input rating (MMBtu/hr)	Total heat input rating (MMBtu/hour)
H1-H12, H16	13	0.225	2.93
H13-H15	3	0.100	0.300
Total			3.23

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

3.23

28

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	0.027	0.107	0.008	1.413	0.078	1.187

*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 4 for HAPs emissions calculations.

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

Company Name: Dutchmen Manufacturing, Inc.
Address City IN Zip: 52400 State Road 15, Bristol, Indiana 46526
Permit Number: 039-20449
Plt ID: 039-00618
Reviewer: Brian J. Pedersen
Application Date: January 19, 2005

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 0.00210	Dichlorobenzene 0.00120	Formaldehyde 0.07500	Hexane 1.80000	Toluene 0.00340
Potential Emission in tons/yr	0.000030	0.000017	0.001059	0.025426	0.000048

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	0.00001	0.00002	0.00002	0.00001	0.00003	0.027

Methodology is the same as page 3.

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

