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

TO: Interested Parties / Applicant

DATE: September 9, 2005

RE: Goshen Coach, Inc. / 039-21722-00442

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 1/10/05

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September 9, 2005

Mr. Dan Daniels
Goshen Coach, Inc.
1100 DI Drive
Elkhart, IN 46514

Re: Registered Construction and Operation Status,
039-21722-00442

Dear Mr. Daniels:

The application from Goshen Coach, Inc., received on August 19, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stationary motorized bus manufacturing plant, to be located at 25161 Leer Drive, Elkhart, IN 46514 is classified as registered:

(a) one (1) welding and metal fabrication operation, designated as WMFD, constructed in 2005, which fabricates metal frames for motorized buses at a maximum capacity of 325 pounds of steel per hour and 65 pounds of aluminum per hour, venting to the indoors, and consisting of the following emission units:

(1) thirteen (13) metal inert gas (MIG) welding stations, constructed in 2005, each with a maximum wire usage rate of 1.0 pounds of wire per hour (GMAW Wire Type E70S);

(2) one (1) stick welding station, constructed in 2005, with a maximum electrode usage rate of 0.125 pounds of electrode stick per hour (Electrode Type E5154);

(3) thirteen (13) tungsten inert gas (TIG) welding stations, constructed in 2005, each with a maximum wire usage rate of 1.0 pounds of wire per hour (GMAW Wire Type E70S);

(4) two (2) oxyacetylene/electric arc flame cutting stations, designated at C1 and C2, constructed in 2005, each with a maximum metal thickness cut of 0.25 inches and a maximum metal cutting rate of 1.25 inches per minute;

(5) degreasing operations utilizing manual hand application of a non-halogenated organic solvent;

(b) one (1) laminating machine, designated as LD1, constructed in 2005, for the lamination of door, roof, and sidewall frames using a urethane adhesive at material usage rate of 4.25 pounds of adhesive per hour, and with cleanup operations utilizing hand or soak application of a non-halogenated organic solvent, venting to the indoors;

(c) one (1) priming booth, designated as PB1, constructed in 2005, consisting of one (1) High Volume Low Pressure (HVLP) spray gun for application of a primer surface coating to metal floor frames at a maximum capacity of 0.15 bus frames per hour, controlled by dry filter, and with cleanup operations utilizing hand or soak application of a non-halogenated organic solvent, and exhausting through stack S1;

(d) one (1) bus assembly line, designated as AL1, constructed in 2005, with a maximum capacity of 0.15 buses per hour, consisting of the following:

(1) one (1) High Volume Low Pressure (HVLP) spray gun for application of adhesive surface coating to wood and rubber surfaces, and venting to the indoors;

(2) hand application of caulks, sealants, lacquer thinner, adhesives, and/or aerosol application of primer and silicone to plastic, metal, rubber, and/or wood surfaces, and venting to the indoors;

(e) one (1) undercoating and foam application operation, designated as UFBLD, constructed in 2005, with a maximum capacity of 0.15 buses per hour, consisting of the following:

(1) one (1) High Volume Low Pressure (HVLP) spray gun for application of undercoating surface coating to metal surfaces, and venting to the indoors;

(2) one (1) urethane foam flow applicator to inject foam into the underside of buses, and venting to the indoors;

(3) cleanup of the HVLP undercoating spray gun and foam flow applicator utilizing hand or soak application of a non-halogenated organic solvent, and venting to the indoors;

(f) one (1) final finish operation, designated as FF, constructed in 2005, with a maximum capacity of 0.15 buses per hour, utilizing hand or soak application of non-halogenated organic solvent cleaners and degreasers to plastic, vinyl, and/or glass surfaces, and venting to the indoors;

(g) one (1) table saw for cutting of wood, designated as WW1, constructed in 2005, with a maximum throughput capacity of 21.6 pounds of lauan wood per hour and 59.8 pounds plywood per hour, and with particulate emissions controlled by one (1) baghouse dust collector, designated as DC1, with a control efficiency of 98%, and a maximum design grain loading of less than or equal to 0.002 grain per actual cubic foot of outlet air, when operated at a maximum gas flow rate of one thousand five hundred (1,500) actual cubic feet per minute (acfm)

(h) nine (9) chop saws for cutting of metal, designated as CS1 through CS9, constructed in 2005, with no particulate control;

(i) one (1) miter saw for cutting of metal, designated as MS1, constructed in 2005, with no particulate control;

(j) two (2) drill presses for drilling of metal, designated as DP1 and DP2, constructed in 2005, with no particulate control;

(k) four (4) band saws for cutting of metal, designated as BS1 through BS4, constructed in 2005, with no particulate control;

(l) two (2) table saws for cutting of polystyrene foam insulation, designated as TS1 and TS2, constructed in 2005, with no particulate control;

(m) two (2) natural gas-fired furnaces, designated as H1 and H2, constructed in 2005, each rated at 0.05 MMBtu/hr, exhausting through stacks H1 and H2, respectively;

(n) one (2) natural gas-fired air makeup unit, designated as H3, constructed in 2005, rated at 2.9 MMBtu/hr, venting to the indoors;

(o) two (2) natural gas-fired furnaces, designated as H4 and H5, constructed in 2005, each rated at 0.105 MMBtu/hr, exhausting through stacks H4 and H5, respectively;

(p) two (2) natural gas-fired furnaces, designated as H6 and H7, constructed in 2005, each rated at 0.092 MMBtu/hr, exhausting through stacks H6 and H7, respectively;

(q) nineteen (19) natural gas-fired heaters, designated as H8 through H26, constructed in 2005, each rated at 0.105 MMBtu/hr, exhausting through stacks H8 through H26, respectively;

The following conditions shall be applicable:

(a) 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:

(1) 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.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

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

(c) Pursuant to 326 IAC 6-3-2, particulate emissions from the one (1) table saw (WW1) shall be limited to five hundred fifty-one thousandths (0.551) pound per hour, based on a maximum process rate of 81.4 pounds of wood per hour. In order to comply with the allowable rate of emission, the one (1) baghouse dust collector (DC1) shall be in operation at all times when the one (1) table saw (WW1) is in operation.

This registration is the first registration 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 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204

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

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Nathan C. Bell, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46206, at 317-234-3350 or at 1-800-451-6027 (ext 43350).

Sincerely,

Original Signed By:
Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Paul Karkiewicz
Permit Tracking
Compliance Data Section
Administrative and Development

Registration
Annual Notification

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

Company Name:	Goshen Coach, Inc.
Address:	25161 Leer Drive, Elkhart, IN 46514
City:	Elkart
Authorized individual:	Dan Daniels
Phone #:	(574) 264-7511
Registration #:	039-21722-00442

I hereby certify that Goshen Coach, Inc. is still in operation and is in compliance with the requirements of Registration 039-21722-00442.

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:	**Goshen Coach, Inc.**
Source Location:	**25161 Leer Drive, Elkhart, IN 46514**
County:	**Elkhart**
SIC Code:	**3713 (Manufacturing of Truck and Bus Bodies)**
Application No.:	**039-21722-00442**
Reviewer:	**Nathan C. Bell**

On February 17, 2005, the Office of Air Quality (OAQ) received an application from Goshen Coach, Inc. relating to the construction and operation of a stationary motorized bus manufacturing plant.

New Emission Units and Pollution Control Equipment

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

(a) one (1) welding and metal fabrication operation, designated as WMFD, constructed in 2005, which fabricates metal frames for motorized buses at a maximum capacity of 325 pounds of steel per hour and 65 pounds of aluminum per hour, venting to the indoors, and consisting of the following emission units:

(1) thirteen (13) metal inert gas (MIG) welding stations, constructed in 2005, each with a maximum wire usage rate of 1.0 pounds of wire per hour (GMAW Wire Type E70S);

(2) one (1) stick welding station, constructed in 2005, with a maximum electrode usage rate of 0.125 pounds of electrode stick per hour (Electrode Type E5154);

(3) thirteen (13) tungsten inert gas (TIG) welding stations, constructed in 2005, each with a maximum wire usage rate of 1.0 pounds of wire per hour (GMAW Wire Type E70S);

(4) two (2) oxyacetylene/electric arc flame cutting stations, designated at C1 and C2, constructed in 2005, each with a maximum metal thickness cut of 0.25 inches and a maximum metal cutting rate of 1.25 inches per minute;

(5) degreasing operations utilizing hand application of a non-halogenated organic solvent;

(b) one (1) laminating machine, designated as LD1, constructed in 2005, for the lamination of door, roof, and sidewall frames using a urethane adhesive at material usage rate of 4.25 pounds of adhesive per hour, and with cleanup operations utilizing hand or soak application of a non-halogenated organic solvent, venting to the indoors;

(c) one (1) priming booth, designated as PB1, constructed in 2005, consisting of one (1) High Volume Low Pressure (HVLP) spray gun for application of a primer surface coating to metal floor frames at a maximum capacity of 0.15 bus frames per hour, controlled by dry filter, and with cleanup operations utilizing hand or soak application of a non-halogenated organic solvent, and exhausting through stack S1;

(d) one (1) bus assembly line, designated as AL1, constructed in 2005, with a maximum capacity of 0.15 buses per hour, consisting of the following:

(1) one (1) High Volume Low Pressure (HVLP) spray gun for application of adhesive surface coating to wood and rubber surfaces, and venting to the indoors;

(2) hand application of caulks, sealants, lacquer thinner, adhesives, and/or aerosol application of primer and silicone to plastic, metal, rubber, and/or wood surfaces, and venting to the indoors;

(e) one (1) undercoating and foam application operation, designated as UFBLD, constructed in 2005, with a maximum capacity of 0.15 buses per hour, consisting of the following:

(1) one (1) High Volume Low Pressure (HVLP) spray gun for application of undercoating surface coating to metal surfaces, and venting to the indoors;

(2) one (1) urethane foam flow applicator to inject foam into the underside of buses, and venting to the indoors;

(3) cleanup of the HVLP undercoating spray gun and foam flow applicator utilizing hand or soak application of a non-halogenated organic solvent, and venting to the indoors;

(f) one (1) final finish operation, designated as FF, constructed in 2005, with a maximum capacity of 0.15 buses per hour, utilizing hand or soak application of non-halogenated organic solvent cleaners and degreasers to plastic, vinyl, and/or glass surfaces, and venting to the indoors;

(g) one (1) table saw for cutting of wood, designated as WW1, constructed in 2005, with a maximum throughput capacity of 21.6 pounds of lauan wood per hour and 59.8 pounds plywood per hour, and with particulate emissions controlled by one (1) baghouse dust collector, designated as DC1, with a control efficiency of 98%, and a maximum design grain loading of less than or equal to 0.002 grain per actual cubic foot of outlet air, when operated at a maximum gas flow rate of one thousand five hundred (1,500) actual cubic feet per minute (acfm)

(h) nine (9) chop saws for cutting of metal, designated as CS1 through CS9, constructed in 2005, with no particulate control;

(i) one (1) miter saw for cutting of metal, designated as MS1, constructed in 2005, with no particulate control;

(j) two (2) drill presses for drilling of metal, designated as DP1 and DP2, constructed in 2005, with no particulate control;

(k) four (4) band saws for cutting of metal, designated as BS1 through BS4, constructed in 2005, with no particulate control;

(l) two (2) table saws for cutting of polystyrene foam insulation, designated as TS1 and TS2, constructed in 2005, with no particulate control;

(m) two (2) natural gas-fired furnaces, designated as H1 and H2, constructed in 2005, each rated at 0.05 MMBtu/hr, exhausting through stacks H1 and H2, respectively;

(n) one (2) natural gas-fired air makeup unit, designated as H3, constructed in 2005, rated at 2.9 MMBtu/hr, venting to the indoors;

(o) two (2) natural gas-fired furnaces, designated as H4 and H5, constructed in 2005, each rated at 0.105 MMBtu/hr, exhausting through stacks H4 and H5, respectively;

(p) two (2) natural gas-fired furnaces, designated as H6 and H7, constructed in 2005, each rated at 0.092 MMBtu/hr, exhausting through stacks H6 and H7, respectively;

(q) nineteen (19) natural gas-fired heaters, designated as H8 through H26, constructed in 2005, each rated at 0.105 MMBtu/hr, exhausting through stacks H8 through H26, respectively;

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

No previous air approvals have been 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 (^{o}F)
H1 – H2	Natural Gas-Fired Furnaces	20.0	0.5	1,500	500
H4 – H7	Natural Gas-Fired Furnaces	20.0	0.5	1,500	500
H8 – H26	Natural Gas-Fired Heaters	20.0	0.33	1,500	500
S1	Priming Booth PB1	23.0	2.5	15,000	77

Recommendation

The staff recommends to the Commissioner that the application be approved as a registration. 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 August 19, 2005. Additional information was submitted by the source by email on September 6, 2005.

Emission Calculations

(a) See Appendix A of this TSD for detailed emissions calculations (Appendix A, pages 1 through 7).

(b) Based on information provided by the source, there are negligible emissions of particulate matter (PM/PM10) from the metal cutting equipment at this source (i.e., the nine (9) chop saws (CS1 through CS9), the one (1) miter saw (MS1), the two (2) drill presses (DP1 and DP2), and the four (4) band saws (BS1 through BS4)) and from the foam cutting equipment (i.e., the two (2) table saws (TS1 and TS2)).

Potential To Emit

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

Pollutant	Potential To Emit (tons/year)
PM	8.23
PM-10	8.37
SO_2	0.01
NO_x	2.36
VOC	9.94
CO	1.98

HAPs	Potential To Emit (tons/year)
Glycol Ethers	0.52
Methanol	0.25
Methyl Ethyl Ketone	0.09
Methyl Isobutyl Ketone	0.09
Ethylbenzene	0.07
Ethylene Glycol	0.08
Naphthalene	0.08
Xylene	0.36
Methylene diphenyl diisocyanate	negligible
Benzene	negligible
Dichlorobenzene	negligible
Formaldehyde	negligible
n-Hexane	0.04
Toluene	0.53
Lead	negligible
Cadmium	negligible
Chromium	0.04
Cobalt	negligible
Manganese	0.04
Nickel	negligible
TOTAL HAPs	**2.15**

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

(b) The PTE (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM10	Attainment or Unclassifiable
PM2.5	Attainment or Unclassifiable
SO_2	Attainment
NO_2	Attainment or Unclassifiable
1-Hour Ozone	Maintenance Attainment
8-Hour Ozone	Basic Nonattainment
CO	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standard. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.

(b) Elkhart County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability – Entire Source section.

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

(d) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD and Emission Offset 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	2.71
PM-10	2.85
SO_2	0.01
NO_x	2.36
VOC	9.94
CO	1.98
Worst Single HAP	0.53
Combination HAPs	2.15

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

(b) This new source is not a Emission Offset major stationary source because no regulated nonattainment pollutant is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

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

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

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

Federal Rule Applicability

(a) This source is not subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subpart MM, Automobile and Light Duty Truck Surface Coating Operations (40 CFR Parts 60.390 - 60.398) (326 IAC 12), because this source is not a major source for HAPs as defined in 40 CFR 63.2 and is not involved in the surface coating of automobiles or light duty trucks. This source assembles motorized buses.

(b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(c) This source is not subject to the requirements of the 40 CFR Subpart T (63.460 through 63.470), NESHAP for for Halogenated Solvent Cleaning, because this operation does not use a degreasing solvent that contains any of the halogenated compounds listed in 40 CFR 63.460(a).

(d) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart JJ, Wood Furniture Manufacturing (40 CFR Part 63.800 - 63.808) (326 IAC 20-14-1), because this source is not a major source of HAPs as defined in 40 CFR 63.2 and does not manufacture wood furniture or wood furniture components.

(e) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart IIII, Surface Coating of Automobiles and Light-Duty Trucks (40 CFR Part 63.3080 - 63.3176), because this source is not a major source of HAPs as defined in 40 CFR 63.2 and does not surface coat automobiles or light duty trucks as defined by 63.3176. This source assembles motorized buses.

(f) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart MMMM, Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63.3880 - 63.3981), because this source is not a major source of HAPs as defined in 40 CFR 63.2.

(g) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart PPPP, Surface Coating of Plastic Parts and Products (40 CFR Part 63.4480 - 63.4581), because the source is not a major source of HAPs as defined in 40 CFR 63.2.

(h) This source is not subject to the requirements of 40 CFR 63, Subpart DDDDD, (63.7480 through 63.7575), NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the source is not a major source of HAPs.

(i) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

State Rule Applicability - Entire Source

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

This source was constructed after the applicability date of August 7, 1977, however, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1), no major modifications were done to this source, and the uncontrolled potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-3 (Emission Offset)

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. The uncontrolled potential to emit of VOC and NOx are each less than 100 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

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

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

326 IAC 2-6 (Emission Reporting)

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

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

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

State Rule Applicability - Individual Facilities

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

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

State Rule Applicability - Welding Equipment

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

(a) Pursuant to 326 IAC 6-3-1(b)(9), the thirteen (13) metal inert gas (MIG) welding stations, the one (1) stick welding station, and the thirteen (13) tungsten inert gas (TIG) welding stations are each exempt from the requirements of 326 IAC 6-3, because the potential to consume welding wire is less than six hundred twenty-five (625) pounds per day.

(b) Pursuant to 326 IAC 6-3-1(b)(9), the two (2) oxyacetylene/electric arc flame cutting stations are each exempt from the requirements of 326 IAC 6-3, because the maximum capacity of the torch cutting operation is less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less is cut.

State Rule Applicability - Surface Coating Operations

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

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

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

The requirements of 326 IAC 8-2-2 are not applicable to this source, since this source does not perform surface coating of automobiles or light duty trucks as defined in 326 IAC 8-2-2(a). This source assembles motorized buses.

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

Pursuant to 326 IAC 8-2-1 (Applicability), this rule applies to facilities constructed after July 1, 1990 located in any county, and with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. The requirements of 326 IAC 8-2-9 are not applicable to each of the facilities performing surface coating of metal at this source, since they each have actual VOC emissions less than fifteen (15) pounds per day before add-on controls. The table below summaries each the facilities at this source performing surface coating of metal (excluding application of adhesives, pursuant to 326 IAC 8-2-9(b)(7)).

Facility	Metal Surface Coating Material (excluding adhesives)	PTE VOCs (pounds/day)	Total PTE VOCs for Facility (pounds/day)
Welding & Metal Fabrication Dept. (WMFD)	Benders 20 Degreaser	0.56	0.56
Priming Booth (PB1)	90-208 Gray Primer	10.73	12.40
	Pure Lacquer Thinner	1.67	
Assembly Line Operations (AL1)	Pro Series Caulk	4.68	11.87
	Dow Silicone Sealer	0.91	
	Rust Oleum Aerosol Overall Primer	2.07	
	Sika Flex Sealant	0.75	
	Pure Lacquer Thinner	3.16	
	Cyclo C-33 Silicone	0.30	
Undercoating & Foam Deadening Building (UFBLD)	Jamecel Urethane Foam	negligible	6.42
	Undercoating ZPG	6.42	
Final Finishing Operations (FF)	Crazy Clean 31 All Purpose Cleaner	0.19	1.11
	Spartan Shine Conditioner/Protectant	0.14	
	DX-440 Wax and Grease Remover	0.78	

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

The requirements of 326 IAC 8-2-10 are not applicable to this source, since this source does not perform manufacturing of flat wood panels.

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

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

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

The requirements of 326 IAC 8-2-12 are not applicable to this source, since this source does not perform surface coating of wood furniture or cabinets. This source performs surface coating of structural wood frames, sidewalls, and floors with adhesives, caulks, and primer with actual VOC emissions of less than fifteen (15) pounds per day before add-on controls.

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

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

State Rule Applicability - Woodworking Equipment

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

The requirements of 326 IAC 6-3 are applicable to the one (1) table saw (WW1). Pursuant to 326 IAC 6-3-2, when the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour. Therefore, particulate emissions from the one (1) table saw (WW1) shall be limited to five hundred fifty-one thousandths (0.551) pound per hour, based on a maximum process rate of 81.4 pounds of wood per hour.

In order to comply with the allowable rate of emission, the one (1) baghouse dust collector (DC1) shall be in operation at all times when the woodworking equipment is in operation.

State Rule Applicability – Natural Gas Combustion Sources

326 IAC 4-2-2 (Incinerators)

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

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

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

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

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

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

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

State Rule Applicability – Degreasing Operations

326 IAC 8-3-1 (Organic Solvent Degreasing Operations)

The requirements of 326 IAC 8-3-1 are not applicable to degreasing operations at this source, since degreasing is performed using hand application of solvents.

326 IAC 20-6-1 (Halogenated Solvent Cleaning)

This source is not subject to the requirements of the 326 IAC 20-6-1, since the degreasing operations do not use a solvent that contains any of the halogenated compounds listed in 326 IAC 20-6-1(a).

State Rule Applicability - Metal Cutting Equipment

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

Pursuant to 326 IAC 6-3-1(b)(14), the metal cutting equipment at this source (i.e., the nine (9) chop saws (CS1 through CS9), the one (1) miter saw (MS1), the two (2) drill presses (DP1 and DP2), and the four (4) band saws (BS1 through BS4)) are each exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

State Rule Applicability - Foam Cutting Equipment

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

Pursuant to 326 IAC 6-3-1(b)(14), the foam cutting equipment at this source (i.e., the two (2) table saws (TS1 and TS2)) are each exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Conclusion

The operation of this source shall be subject to the conditions of the attached registration, No 039-21722-00442.

Appendix A: Emissions Calculations
Emission Summary

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

	Uncontrolled Potential Emissions (tons/year)						
		Emissions Generating Activity					
Category	Pollutant	Welding & Flame Cutting	Surface Coatings	Panel Laminating Foam Undercoating	Woodworking	Natural Gas Combustion	**TOTAL**
Criteria Pollutants	PM	0.65	1.90		5.63	0.04	8.23
	PM10	0.65	1.90		5.63	0.18	8.37
	SO2					0.01	0.01
	NOx					2.36	2.36
	VOC		9.81	3.6E-08		0.13	9.94
	CO					1.98	1.98
Hazardous Air Pollutants	Glycol Ethers		0.52				0.52
	Methanol		0.25				0.25
	Methyl Ethyl Ketone		0.09				0.09
	Methyl Isobutyl Ketone		0.09				0.09
	Ethylbenzene		0.07				0.07
	Ethylene Glycol		0.08				0.08
	Naphthalene		0.08				0.08
	Xylene		0.36				0.36
	methylene diphenyl diisocyanate			3.6E-08			3.6E-08
	Benzene					5.0E-05	5.0E-05
	Dichlorobenzene					2.8E-05	2.8E-05
	Formaldehyde					1.8E-03	1.8E-03
	n-Hexane					0.04	0.04
	Toluene		0.53			8.0E-05	0.53
	Lead					1.2E-05	1.2E-05
	Cadmium					2.6E-05	2.6E-05
	Chromium	1.7E-04	0.04			3.3E-05	0.04
	Cobalt	1.1E-04	1.6E-03				1.8E-03
	Manganese	0.04	2.6E-03			9.0E-06	0.04
	Nickel	1.3E-04				5.0E-05	1.8E-04
	Totals	**0.04**	**2.11**	**3.6E-08**	**0**	**0.04**	**2.15**
						Worse Case HAP	**0.53**

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

	Controlled Potential Emissions (tons/year)						
		Emissions Generating Activity					
Category	Pollutant	Welding & Flame Cutting	Surface Coatings	Panel Laminating Foam Undercoating	Woodworking	Natural Gas Combustion	**TOTAL**
Criteria Pollutants	PM	0.65	1.90		0.11	0.04	2.71
	PM10	0.65	1.90		0.11	0.18	2.85
	SO2					0.01	0.01
	NOx					2.36	2.36
	VOC		9.81	3.6E-08		0.13	9.94
	CO					1.98	1.98
Hazardous Air Pollutants	Glycol Ethers		0.52				0.52
	Methanol		0.25				0.25
	Methyl Ethyl Ketone		0.09				0.09
	Methyl Isobutyl Ketone		0.09				0.09
	Ethylbenzene		0.07				0.07
	Ethylene Glyco		0.08				0.08
	Napthalene		0.08				0.08
	Xylene		0.36				0.36
	methylene diphenyl diisocyanate			3.6E-08			3.6E-08
	Benzene					5.0E-05	5.0E-05
	Dichlorobenzene					2.8E-05	2.8E-05
	Formaldehyde					1.8E-03	1.8E-03
	n-Hexane					0.04	0.04
	Toluene		0.53			8.0E-05	0.53
	Lead					1.2E-05	1.2E-05
	Cadmium					2.6E-05	2.6E-05
	Chromium	1.7E-04	0.04			3.3E-05	0.04
	Cobalt	1.1E-04	1.6E-03				1.8E-03
	Manganese	0.04	2.6E-03			9.0E-06	0.04
	Nickel	1.3E-04				5.0E-05	1.8E-04
	Totals	**0.04**	**2.11**	**3.6E-08**	**0**	**0.04**	**2.15**
						Worse Case HAP	**0.53**

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

Appendix A: Emissions Calculations
Welding and Flame Cutting Operation

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

Particulate Matter (PM) and Hazardous Air Pollutants (HAPs)

PROCESS	Number of	Max. electrode consumption per	Max. electrode consumption per	Max. electrode consumption	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING	Stations	station (lbs/hr)	station (lbs/day)	(lbs/year)	PM = PM10	Cr	Co	Mn	Ni	PM = PM10	Cr	Co	Mn	Ni	
Gas Metal Arc Welding (ER70S)	13	1.0	24.0	113,880	5.4E-03	1.0E-06	1.0E-06	3.2E-04	1.0E-06	7.0E-02	1.3E-05	1.3E-05	4.1E-03	1.3E-05	4.2E-03
Gas Metal Arc Welding (ER5154)	1	0.125	3.0	1,095	2.4E-02	1.0E-05		3.4E-05		3.0E-03	1.3E-06		4.3E-06		8.8E-05
Tungsten Inert Gas (TIG) (ER70S)	13	1.0	24.0	113,880	5.4E-03	1.0E-06	1.0E-06	3.2E-04	1.0E-06	7.0E-02	1.3E-05	1.3E-05	4.1E-03	1.3E-05	4.2E-03

PROCESS	Number of	Max. Metal Thickness	Max. Metal Cutting Rate		EMISSION FACTORS* (lb pollutant/1,000 inches cut, 1" thick)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
FLAME CUTTING	Stations	Cut (in)	(in/minute)		PM = PM10	Cr	Co	Mn	Ni	PM = PM10	Cr	Co	Mn	Ni	
Oxyacetylene/Electric Arc	2	0.3	1.3		1.6E-01	3.0E-04		5.0E-04	1.0E-04	6.1E-03	1.1E-05		1.9E-05	3.8E-06	3.4E-05

Abbreviations

Cr = Chromium
Co = Cobalt
Mn = Manganese
Ni = Nickel

Total Potential Emissions lbs/hr	1.5E-01	3.9E-05	2.6E-05	8.3E-03	3.0E-05	8.5E-03
Total Potential Emissions lbs/day	3.59	9.2E-04	6.2E-04	2.0E-01	7.1E-04	2.0E-01
Total Potential Emissions tons/year	0.65	1.7E-04	1.1E-04	3.6E-02	1.3E-04	3.7E-02

METHODOLOGY

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

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)

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: Emissions Calculations
Surface Coatings: VOC and PM

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

Volatile Organic Comounds (VOC) and Particulate Matter (PM)

Material	Primary Type of Surface Coated	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water + Non-VOCs	Weight % Solids	Weight % VOCs	Volume % Water + Non-VOCs	Volume % Solids	Usage (gal/unit)	Maximum Capacity (unit/hour)	Maximum Usage (gal/day)	Maximum Usage (lbs/hour)	per gallon of coating less water and non-VOCs	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM (lb/hr)	PTE PM (tons/yr)	lb VOC per gal solids	Transfer Efficiency
Welding Department Degreaser (WMFD)																					
Benders 20 Degreaser	Metal	8.57	87.00%	67.0%	13.0%	20.0%	68.9%	10.0%	0.0913	0.15	0.33	0.12	5.50	1.71	0.02	0.56	0.10	0	0	17.14	100%
Panel Laminating Cleanup Solvent (LD1)																					
N-Methyl Pyrrolidone	Plastic	8.59	100.00%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0457	0.15	0.16	0.06	8.59	8.59	0.06	1.41	0.26	0	0	#DIV/0!	100%
Priming Booth 1 (PB1)																					
90-208 Gray Primer	Metal	10.01	29.77%	0.0%	70.2%	29.8%	0.0%	60.3%	1.0000	0.15	3.60	1.50	2.98	2.98	0.45	10.73	1.96	0.26	1.15	4.94	75%
Pure Lacquer Thinner	Metal	7.02	100.00%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0660	0.15	0.24	0.07	7.02	7.02	0.07	1.67	0.30	0	0	#DIV/0!	100%
Bus Assembly Line (AL1)																					
Pro Series Caulk	Metal, Plastic	11.20	29.00%	0.0%	71.0%	29.0%	0.0%	50.0%	0.4	0.15	1.44	0.67	3.25	3.25	0.19	4.68	0.85	0	0	6.50	100%
Chem Tech 7113 Contact Adhesive	Wood, Rubber	6.84	71.30%	35.0%	28.7%	36.3%	35.9%	26.2%	2.11	0.15	7.60	2.16	3.87	2.48	0.79	18.86	3.44	0.16	0.68	9.47	75%
Dow Silicone Sealer	Metal, Rubber	12.26	5.00%	0.0%	95.0%	5.0%	0.0%	90.7%	0.412	0.15	1.48	0.76	0.61	0.61	0.04	0.91	0.17	0	0	0.68	100%
Rust Oleum Aerosol Overall Primer	Metal, Wood	6.14	90.00%	15.0%	10.0%	75.0%	13.8%	7.9%	0.125	0.15	0.45	0.12	5.34	4.61	0.09	2.07	0.38	0.01	0.03	58.29	50%
Sika Flex Sealant	Metal	10.00	6.00%	0.0%	94.0%	6.0%	0.0%	91.7%	0.346	0.15	1.25	0.52	0.60	0.60	0.03	0.75	0.14	0	0	0.65	100%
Pure Lacquer Thinner	Not Applicable	7.02	100.00%	0.0%	0.0%	100.0%	0.0%	0.0%	0.125	0.15	0.45	0.13	7.02	7.02	0.13	3.16	0.58	0	0	#DIV/0!	100%
Cyclo C-33 Silicone	Metal, Wood	5.59	60.00%	0.0%	40.0%	60.0%	0.0%	40.9%	0.025	0.15	0.09	0.02	3.35	3.35	0.01	0.30	0.06	0.004	0.02	8.21	50%
SF-550 Subfloor Adhesive	Metal, Wood, Rubber	11.48	30.00%	29.9%	70.0%	0.2%	41.1%	55.0%	0.5	0.15	1.80	0.86	0.03	0.02	0.001	0.03	0.01	0	0	0.03	100%
Undercoating & Foam Deadening Building (UFBLD)																					
Undercoating ZPG	Metal	10.84	20.50%	9.0%	79.5%	11.5%	14.8%	62.0%	1.43	0.15	5.15	2.33	1.46	1.25	0.27	6.42	1.17	0	0	2.01	100%
DOW DPM Solvent (Gun Cleaner)	Not Applicable	8.18	100.00%	3.3%	0.0%	96.7%	3.2%	0.0%	0.036	0.15	0.13	0.04	8.17	7.91	0.04	1.03	0.19	0	0	#DIV/0!	100%
Final Finish Operations (FF)																					
Crazy Clean 31 All Purpose Cleaner	Metal, Plastic, Vinyl, Glass	8.17	99.80%	79.5%	0.2%	20.4%	77.8%	2.2%	0.03125	0.15	0.11	0.04	7.50	1.66	0.01	0.19	0.03	3.8E-05	1.7E-04	74.41	50%
Spartan Shine Conditioner/Protectant	Metal, Plastic, Vinyl	8.27	75.00%	60.0%	25.0%	15.0%	59.5%	24.8%	0.03125	0.15	0.11	0.04	3.06	1.24	0.01	0.14	0.03	0.005	0.02	5.00	50%
DX-440 Wax and Grease Remover	Metal, Plastic, Vinyl	6.94	100.00%	0.0%	0.0%	100.0%	0.0%	0.0%	0.03125	0.15	0.11	0.03	6.94	6.94	0.03	0.78	0.14	0	0	#DIV/0!	100%
Glass Cleaner	Glass	8.26	99.00%	94.0%	1.0%	5.0%	93.1%	50.0%	0.03125	0.15	0.11	0.04	5.98	0.41	0.00	0.05	0.01	0	0	0.83	100%

Totals	**2.24**	**53.73**	**9.81**	**0.434**	**1.90**

METHODOLOGY

Maximum Usage (lbs/hr) = Maximum Usage (gal/day) * Density (lb/gal) / (24 hour/day)
Maximum Usage (gal/day) = Usage (gallons/unit) * Maximum Capacity (units/hour) * 24 hours/day
Pounds of VOC per Gallon Coating less Water and non-VOCs = (Density (lb/gal) * Weight % VOCs) / (1-Volume % water and non-VOCs)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % VOCs)
Potential VOC Pounds per Hour = Maximum Usage (lbs/hr) * Weight % VOCs
Potential VOC Pounds per Day = Potential VOC (lbs/hr) * (24 hours/day)
Potential VOC Tons per Year = Potential VOC (lbs/day) * (365 days/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = Density (lbs/gal) * Maximum Usage (gal/day) * (Weight % Solids) * (1-Transfer efficiency) *(365 days/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % VOCs) / (Volume % solids)

Appendix A: Emissions Calculations
Surface Coatings: Hazardous Air Pollutants (HAPs)

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

Organic HAPs

	Density (lb/gal)	Maximum Usage (gal/day)	Weight % GE	GE Emissions (tons/yr)	Weight % MOH	MOH Emissions (tons/yr)	Weight % MEK	MEK Emissions (tons/yr)	Weight % MIBK	MIBK Emissions (tons/yr)	Weight % Toluene	Toluene Emissions (tons/yr)	Weight % EB	EB Emissions (tons/yr)	Weight % EG	EG Emissions (tons/yr)	Weight % Naphthalene	Napthalene Emissions (tons/yr)	Weight % Xylene	Xylene Emissions (tons/yr)	Total (tons/yr)
Priming Booth 1 (PB1)																					
90-208 Gray Primer	10.01	3.60	5.0%	0.33	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0.33
Pure Lacquer Thinner	7.02	0.24	0%	0	10%	0.03	10%	0.03	10%	0.03	60%	0.18	0%	0	0%	0	0%	0	0%	0	0.27
Bus Assembly Line (AL1)																					
Dow Silicone Sealer	12.26	1.48	0%	0	5%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0.17
Rust Oleum Aerosol Overall Primer	6.14	0.45	0%	0	0%	0	0%	0	0%	0	0%	0	10%	0	0%	0	5%	0	25%	0	0.20
Sika Flex Sealant	10.00	1.25	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	6%	0	0.14
Pure Lacquer Thinner	7.02	0.45	0%	0	10%	0	10%	0	10%	0	60%	0	0%	0	0%	0	0%	0	0%	0	0.52
SF-550 Subfloor Adhesive	11.48	1.80	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	2%	0	0%	0	0%	0	0.08
Undercoating & Foam Deadening Building (UFBLD)																					
DOW DPM Solvent	8.18	0.13	97%	0.19	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0.19
Final Finish Operations (FF)																					
DX-440	6.94	0.11	0%	0	0%	0	0%	0	0%	0	0%	0	13%	0	0%	0	40%	0	70%	0	0.18
			Totals	**0.52**		**0.254**		**0.088**		**0.088**		**0.529**		**0.069**		**0.075**		**0.082**		**0.362**	**2.06**

Metal HAPs

	Density (lb/gal)	Maximum Usage (gal/day)	Weight % Mn	Mn Emissions (tons/yr)	Weight % Co	Co Emissions (tons/yr)	Weight % Cr	Cr Emissions (tons/yr)	Total (tons/yr)
Priming Booth 1 (PB1)									
90-208 Gray Primer	10.01	3.60	0.04%	2.6E-03	0.03%	1.6E-03	0.64%	0.042	0.05
			Totals	**2.6E-03**		**1.6E-03**		**0.042**	**0.046**

Total PTE Organic and Metal HAPs 2.11 tons/year

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Maximum Usage (gal/day) * Weight % HAP * 365 days/yr * 1 ton/2000 lbs

ACRONYMS

GE = glycol ethers
MOH = methanol
MEK = methyl ethyl ketone
MIBK = methyl isobutyl ketone
EB = ethylbenzene
EG = ethylene glycol
Mn = Manganese
Co = Cobalt
Cr = Chromium

Appendix A: Emissions Calculations
Surface Coating
Panel Laminating Machine (LD1)
Undercoating & Foam Deadening Building (UFBLD)

Company Name: **Goshen Coach**
Address City IN Zip: **25161 Leer Drive, Elkhart, IN 46514**
Permit Number: **039-21722**
Plt ID: **039-00442**
Reviewer: **Nathan C. Bell**
Date: **September 6, 2005**

Potential Emissions of MDI (VOCs and HAPs)

Guidance Document: MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry, The Alliance for the Polyurethanes Industry (API), 2004

Formula: W = 25.4 * VPmdi * (MW / Tproc) * u^0.78 * SA * tTF * Kmdi

where:
W = Evaporative Losses (grams/day)
Vpmdi = Vapor Pressure (atm) of MDI at process temp.
MW = Molecular Weight (g/mol) of MDI (250.26 g/mol)
Tproc = Process Temperature (Kelvin)
u = Air Flow Rate (m/s)
SA = Exposed Surface Area (m2/day)
tTF = Tack Free Time in Seconds (Default = 5 Seconds)
Kmdi = Vapor Pressure Adjustment Factor for MDI Concentration

Exposed Surface Area

Process	Adhesive	Maximum Capacity of Plant 3/4 (buses/yr)	Max. SA per bus (ft2/bus)	Max. SA Coated (ft/yr)	Max. SA Coated (ft/day)	Max. SA Coated (m2/day)
LD1	Stabond	1314	750	985500	2700	250.8
UFBLD	Jamecel Parts A & B	1314	56.5	74241	203.4	18.9

Potential Emissions

Process	Adhesive	Use	Vpmdi (atm)	MW (g/mol)	Tproc (Kelvin)	u (m/s)	SA (m2/day)	tTF (sec)	Kmdi*	W (grams/day)	W (lb/hr)	W (tons/yr)
LD1	Stabond	Sidewalls/Doors	1.3E-08	250.26	298.15	0.508	250.8	5.0	0.38	8.1E-05	7.4E-09	3.2E-08
UFBLD	Jamecel Parts A & B	Foam Deadening	1.3E-08	250.26	298.15	0.508	18.9	5.0	0.55	8.8E-06	8.1E-10	3.5E-09
									Potential to Emit VOC and HAPs =	**8.9E-05**	**8.2E-09**	**3.6E-08**

* Kmdi values for 80 degrees Farenheit: Stabond (30% MDI) and Jamecel (50% MDI) (Source: Appendix B, Table II, "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", Published by The Alliance for the Polyurethanes Industry (API) in 2004
MDI = methylene diphenyl diisocyanate (HAP and VOC)

METHODOLOGY

Potential Emissions of MDI (lbs/day) = Potential Emissions (lbs/hr) * (24 hours/day)
Potential Emissions of MDI (tons/yr) = Potential Emissions (lbs/day) * (365 days/yr) * (1 ton/2000 lbs)

Appendix A: Emissions Calculations
Woodworking Operations

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

Source ID	Particulate Matter Control Equipment Description	PM/PM10 Collection Efficiency (%)	Exhaust Flow Rate (acfm)	Outlet Grain Loading (grains/cf)	Controlled PTE of PM/PM10 (lbs/hr)	Controlled PTE of PM/PM10 (tons/yr)	Uncontrolled PTE of PM/PM10 (lbs/hr)	Uncontrolled PTE of PM/PM10 (tons/yr)
Table Saw	Baghouse Dust Collector DC1	98.0%	1500	0.002	0.026	0.11	1.29	5.63

Methodology

Potential Controlled Emissions (lbs/hr) = Outlet Loading (grains/cf) * Exhaust Flow Rate (acfm) * 1 lb/7,000 grains * 60 min/hr
Potential Uncontrolled Emissions (lbs/hr) = Potential Controlled Emissions (lbs/hr) / (1 - Control Efficiency)
Emissions (tons/yr) = Emissions (lbs/hr) * 8760 hr/yr * 1 ton/2,000 lbs

Compliance with 326 IAC 6-3-2:

Allowable Emissions, E = 4.10 * P^0.67 (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr
P = process weight in tons/hr

P =	81.4	lbs/hr
=	0.04	tons/hr
Allowable PM Emissions, E =	0.48	lbs/hr
=	11.5	lbs/day
=	2.1	tons/yr

The use of baghouse ensures compliance with the limits above.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Goshen Coach
Address City IN Zip: 25161 Leer Drive, Elkhart, IN 46514
Permit Number: 039-21722
Plt ID: 039-00442
Reviewer: Nathan C. Bell
Date: September 6, 2005

			Pollutant	PM*	PM10*	SO2	NOx**	VOC	CO
			Emission Factor (lb/MMCF)	1.9	7.6	0.6	100	5.5	84.0
Emission Unit	Number of Units	Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr					
					PM*	PM10*	SO2	NOx**	VOC	CO
Furnaces H1-H2	2	0.050	0.1	0.88	0.001	0.003	0.000	0.044	0.002	0.037
Air Makeup Unit H3	1	2.900	2.9	25.40	0.024	0.097	0.008	1.270	0.070	1.067
Furnaces H4-H5	2	0.105	0.2	1.84	0.002	0.007	0.001	0.092	0.005	0.077
Furnaces H6-H7	2	0.092	0.2	1.61	0.002	0.006	0.000	0.081	0.004	0.068
Radiant Heaters H8-H26	19	0.105	2.00	17.48	1.7E-02	0.066	0.005	0.874	0.048	0.734
Totals	**26**		**5.4**		**0.045**	**0.179**	**0.014**	**2.360**	**0.130**	**1.983**

Pollutant	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Emission Unit	Potential Emission tons/yr									
	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Furnaces H1-H2	9.2E-07	5.3E-07	3.3E-05	0.001	1.5E-06	2.2E-07	4.8E-07	6.1E-07	1.7E-07	9.2E-07
Air Makeup Unit H3	2.7E-05	1.5E-05	9.5E-04	0.023	4.3E-05	6.4E-06	1.4E-05	1.8E-05	4.8E-06	2.7E-05
Furnaces H4-H5	1.9E-06	1.1E-06	6.9E-05	0.002	3.1E-06	4.6E-07	1.0E-06	1.3E-06	3.5E-07	1.9E-06
Furnaces H6-H7	1.7E-06	9.7E-07	6.0E-05	0.001	2.7E-06	4.0E-07	8.9E-07	1.1E-06	3.1E-07	1.7E-06
Radiant Heaters H8-H26	1.8E-05	1.0E-05	6.6E-04	0.016	3.0E-05	4.4E-06	9.6E-06	1.2E-05	3.3E-06	1.8E-05
Totals	**5.0E-05**	**2.8E-05**	**1.8E-03**	**0.042**	**8.0E-05**	**1.2E-05**	**2.6E-05**	**3.3E-05**	**9.0E-06**	**5.0E-05**

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

Methodology
Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
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)
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter	NOx = Nitrous Oxides	DCB = Dichlorobenzene	Cr = Chromium
PM10 = Particulate Matter (<10 um)	VOC - Volatile Organic Compounds	Pb = Lead	Mn = Manganese
SO2 = Sulfur Dioxide	CO = Carbon Monoxide	Cd = Cadmium	Ni = Nickel