INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: January 16, 2009

RE: Keystone RV / 039 - 23645 - 00620

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07

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New Source Construction and Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

Keystone RV Company
2642 Hackberry Drive
Goshen, Indiana 46526

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F039-23645-00620	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: January 16, 2009 Expiration Date: January 16, 2014

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D.15.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]
D.15.4 Particulate [326 IAC 6-3-2]
D.15.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

D.15.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]
D.15.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]
D.15.8 Particulate Control

Compliance Monitoring Requirements [326 IAC 2 8 4][326 IAC 2 8 5(a)(1)]
D.15.9 Visible Emissions Notations
D.15.10 Parametric Monitoring
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Record Keeping and Reporting Requirements [326 IAC 2 8 4(3)]
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D.16.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]
D.16.10 Particulate Control

Compliance Monitoring Requirements [326 IAC 2 8 4][326 IAC 2 8 5(a)(1)]
D.16.10 Visible Emissions Notations
D.16.11 Parametric Monitoring
D.16.12 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2 8 4(3)]
D.16.13 Record Keeping Requirements
D.16.14 Reporting Requirements

Certification Form
Emergency Occurrence Form
Quarterly Report Forms
Quarterly Deviation and Compliance Monitoring Report Form

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary recreational vehicle (RV) manufacturing operation.

Source Address:	2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address:	2642 Hackberry Drive, Goshen, Indiana 46526
General Source Phone Number:	(574) 535-1974
SIC Code:	3792
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Source Definition [326 IAC 2-7-1(22)]

This stationary RV manufacturing company consists of seventeen (17) buildings with a total of nineteen (19) plant designations:

(a) Plant 1 is located at 2525 Linden Drive, Goshen, Indiana;

(b) Plant 2 is located at 2478 Davis Drive, Goshen, Indiana;

(c) Plant 3 is located at 2855 Hackberry Drive, Goshen, Indiana;

(d) Plant 4 is located at 2400 East Kercher Drive, Goshen, Indiana;

(e) Plant 6 is located at 2642 Hackberry Drive, Goshen Indiana;

(f) Plant 7 is located at 2530 Linden Drive, Goshen, Indiana;

(g) Plant 8 is located at 2425 Davis Drive, Goshen, Indiana;

(h) Plant 12 is located at 2833 Sourwood Drive, Goshen, Indiana;

(i) Plant 14 is located at 2442 Davis Drive, Goshen, Indiana;

(j) Plant 18 is located at 2719 Hackberry Drive, Goshen, Indiana;

(k) Plant 19 is located at 2431 E. Kercher Drive, Goshen, Indiana;

(l) Plant 20 is located at 2769 Elders Drive, Goshen, Indiana;

(m) Plant 23 is located at 2694 Hackberry Drive, Goshen, Indiana;

(n) Plant 27 is located at 2769 Elders Drive, Goshen, Indiana;

(o) Plant 29 is located at 2642 Hackberry Drive, Goshen, Indiana;

(p) Plant 31 is located at 2642 Hackberry Drive, Goshen, Indiana;

(q) Plant 50 is located at 2420 Davis Drive, Goshen, Indiana;

(r) Plant 304 is located at 2775 Hackberry Drive, Goshen, Indiana; and

(s) Plant 311 is located at 2860 Hackberry Drive, Goshen, Indiana.

Since these plants are located on contiguous or adjacent properties, have the same SIC codes and are under common control, therefore they are considered one (1) source, as defined by 326 IAC 2-7-1(22), effective from the date of issuance of this Federal Enforceable State Operating permit.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

Section D.1

Plant 1 - 2525 Linden Drive

(a) One (1) woodworking operation, identified as WW 1, constructed in 2002, with a maximum throughput of 3,128 pounds per hour, controlled by dust collectors DC1-1 through DC7-1.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 1, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics

(e) One (1) repair operation, identified as RO 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates, and uses use less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates, and uses less than five (5) gallons of coating per day .

(g) One (1) final finishing operation, identified as FF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.2

Plant 2 - 2478 Davis Drive

(a) One (1) woodworking operation, identified as WW 2, constructed in 2004, with a maximum throughput of 2,705 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 2, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day .

(c) One (1) surface coating operation, for subfloor installation, identified as SF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.3

Plant 3 - 2855 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 3, constructed in 2003, with a maximum throughput of 2,720 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 3, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day .

(c) One (1) surface coating operation, for subfloor installation, identified as SF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.4

Plant 4 - 2400 East Kercher Drive

(a) One (1) woodworking operation, identified as WW 4, constructed in 2002, with a maximum throughput of 3,415.5 pounds per hour, controlled by dust collectors DC1-4 through DC7-4.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 4, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.5

Plants 6 - 2642 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 6, constructed in 1998 and 1999, with a maximum throughput of 161.25 pounds per hour, controlled by dust collectors DC1-6 and DC2-6.

(b) One (1) surface coating operation, for adhesive application, identified as AA 6, constructed in 2004, with a maximum throughput of 344 wood pieces per hour, utilizing brush application to coat wood and fabric.

Section D.6

Plant 7 - 2530 Linden Drive

(a) One (1) woodworking operation, identified as WW 7, constructed in 2002, with a maximum throughput of 2,910.32 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 7, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates.

(g) One (1) final finishing operation, identified as FF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.7

Plant 8 - 2425 Davis Drive

(a) One (1) service repair operation, identified as SR 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates and uses less than five (5) gallons of coating per day.

(b) One (1) touch-up painting station, identified as TP 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal and plastic substrates and uses less than five (5) gallons of coating per day.

(c) One (1) parts washer, identified as PW-8, constructed in 2006, with an annual solvent throughput of 100 gallons.

Section D.8

Plant 12 - 2833 Sourwood Drive

(a) One (1) woodworking operation, identified as WW 12, constructed in 1997, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 12, constructed in 1997, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.9

Plant 14 - 2442 Davis Drive

(a) One (1) woodworking operation, identified as WW 14, constructed in 2005, with a maximum throughput of 2,975.2 pounds per hour, controlled by dust collectors DC1-14 through DC7-14.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 14, constructed in 2005, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.10

Plant 19 - 2431 E. Kercher Drive

(a) One (1) woodworking operation, identified as WW 19, constructed in 2006, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 19, constructed in 2006, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.11

Plant 20 - 2769 Elders Drive

Five (5) lamination lines (identified as L1 through L5), constructed in 2007, used to manufacture exterior walls. Each lamination line has a maximum throughput capacity of 343.8 pounds of finished product per hour; and utilizes rollcoating application.

No Section D

Plant 23 - 2694 Hackberry Drive

Four (4) laminating machines, identified as S1 through S4, constructed in 2005, utilizing roll coating for coating application, with a maximum throughput of 40 sidewalls per hour.

Section D.12

Plant 29 - 2642 Hackberry Drive

One (1) woodworking operation, identified as WW 29, constructed in 2004, with a maximum throughput of 6,464 pounds per hour, controlled by dust collectors DC1-29 and DC2-29.

Section D.13

Plant 31 - 2642 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 31, constructed in 1996, with a maximum throughput of 2,139.2 pounds per hour, controlled by dust collectors DC1-31 through DC7-31.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 31, constructed in 1996, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.14

Plant 50 - 2420 Davis Drive

(a) One (1) woodworking operation, identified as WW 50, constructed in 2004, with a maximum throughput of 3,278.5 pounds per hour, controlled by dust collectors DC1-50 through DC7-50.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 50, constructed in 2004, with a maximum throughput of four (4) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.15

Plant 304 - 2775 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 304, constructed in 2003, with a maximum throughput of 2,114.6 pounds per hour, controlled by dust collectors DC1-304 through DC7-304.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 304, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Section D.16

Plant 311 - 2860 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 311, constructed in 2004, with a maximum throughput of 3,344.7 pounds per hour, controlled by dust collectors DC1-311 through DC7-311.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 311, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

Section D.1

Plant 1 - 2525 Linden Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-1 through TC3-1, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-1, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 1, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting operation, identified as MPE 1, constructed in 2002, with a maximum throughput of 269.1 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.2

Plant 2 - 2478 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-2 through TC3-2, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-2, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 2, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 2, constructed in 2004, with a maximum throughput of 330 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.3

Plant 3 - 2855 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-3 through TC3-3, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-3, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 3, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 3, constructed in 2003, with a maximum throughput of 234 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.4

Plant 4 - 2400 East Kercher Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-4 through TC3-4, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-4, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 4, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 4, constructed in 2002, with a maximum throughput of 417 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.5

Plant 6 - 2642 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-6 through TC3-6, constructed in 1998, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-6, constructed in 1998, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) miscellaneous woodworking operation, identified as MPE 6, constructed in 1998, with a maximum throughput of 156.32 lbs of wood pieces per hour.

Section D.6

Plant 7 - 2530 Linden Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-7 through TC3-7, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-7, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 7, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 7, constructed in 2002, with a maximum throughput of 250.4 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.7

Plant 8 - 2425 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-8 through TC3-8, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-8, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 8, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 0.10 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.05 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

Section D.8

Plant 12- 2833 Sourwood Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-12 through TC3-12, constructed in 1997, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-12, constructed in 1997, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 12, constructed in 1997, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 12, constructed in 1997, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.9

Plant 14- 2442 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-14 through TC3-14, constructed in 2005, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-14, constructed in 2005, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 14, constructed in 2005, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 14, constructed in 2005, with a maximum throughput of 363.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

No Section D

Plant 18 - 2719 Hackberry Drive

(a) One (1) natural gas-fired space heater, identified as TC1-18, constructed in 2004, with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-18, constructed in 2004, with a maximum heat input of 0.15 million British thermal units per hour.

Section D.10

Plant 19 - 2431 E. Kercher Drive

(a) Seven (7) natural gas-fired space heaters, identified as R1-19 through R7-19, constructed in 1998, each with a maximum heat input of 0.15 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-19 and SH2-19, constructed in 1998, each with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 19, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 19, constructed in 2006, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.11

Plant 20 - 2769 Elders Drive

(a) Twenty-eight (28) metal inert gas (MIG) welding stations, each with a maximum wire consumption rate of 1.71 pounds per hour.

(b) Two (2) table saws used to cut styrofoam, identified as MPE 20.

(c) Twenty-six (26) natural gas-fired space heaters, identified as R1-20 through R26-20, constructed in 2004, each with a maximum heat input of 0.15 million British thermal units per hour.

(d) Two (2) natural gas-fired space heaters, identified as SH1-20 and SH2-20, constructed in 2004, each with a maximum heat input of 0.25 million British thermal units per hour.

No Section D

Plant 23 - 2694 Hackberry Drive

(a) One (1) natural gas-fired space heater, identified as R1, constructed in 2005, with a maximum heat input of 1.5 million British thermal units per hour.

(b) One (1) welding and cutting operation, identified as WC 1, constructed in 2005, including seventy (70) metal inert gas (MIG) welders, with a maximum throughput of 1.2 lb electrode per hour.

Section D.12

Plant 29 - 2642 Hackberry Drive

One (1) miscellaneous woodworking operation, identified as MPE 29, constructed in 2004, with a maximum throughput of 6,450 lbs of wood parts per hour.

Section D.13

Plant 31 - 2642 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-31 through TC3-31, constructed in 1996, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-31 and SH2-31, constructed in 1996, each with a maximum heat input of 0.50 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 31, constructed in 1996, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 31, constructed in 1996, with a maximum throughput of 261.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.14

Plant 50- 2420 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-50 through TC3-50, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-50, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 50, constructed in 2004, including two (2) metal inert gas (MIG) welders, with a maximum throughput of 1.0 lb electrode per hour each, and two (2) stick welders, with a maximum throughput of 0.50 lbs electrode per hour each, and two (2) oxyacetylene cutting torches.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 50, constructed in 2004, with a maximum throughput of 400 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.15

Plant 304 - 2775 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-304 through TC3-304, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-304, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 304, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 304, constructed in 2003, with a maximum throughput of 258.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Section D.16

Plant 311 - 2860 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-311 through TC3-311, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-311, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 311, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting/machining operation, identified as MPE 311, constructed in 2004, with a maximum throughput of 408.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

All Facilities

(a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs less than twelve thousand (12,000) gallons, including:

(1) Tank T1, with a maximum capacity of 1,000 gallons, for the storage of gasoline.

(2) Tank T2, with a maximum capacity of 500 gallons, for the storage of diesel fuel.

A.5 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and 326 IAC 2-8 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F039-23645-00620, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.5 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.6 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.7 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.8 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.9 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.12 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.14 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;
(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F039-23645-00620 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.16 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.17 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.18 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.19 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.20 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.21 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

(b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.22 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.24 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.25 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.26 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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, 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.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on. The plan is included as Attachment A.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 1 - 2525 Linden Drive

(a) One (1) woodworking operation, identified as WW 1, constructed in 2002, with a maximum throughput of 3,128 pounds per hour, controlled by dust collectors DC1-1 through DC7-1.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 1, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics

(e) One (1) repair operation, identified as RO 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day .

(f) One (1) touch-up painting station, identified as TP 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates and uses less than five (5) gallons of coating per day .

(g) One (1) final finishing operation, identified as FF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 1 - 2525 Linden Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-1 through TC3-1, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-1, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 1, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting operation, identified as MPE 1, constructed in 2002, with a maximum throughput of 269.1 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 1) shall utilize one of the following application methods:

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.

D.1.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 1), the subfloor installation operations (SF 1), the assembly operations (ALO 1), the repair operations (RO 1), the touch-up stations (TP 1), and the final finish operations (FF 1), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.2 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 1), the subfloor installation operations (SF 1), the assembly operations (ALO 1), the repair operations (RO 1), the touch-up stations (TP 1), and the final finish operations (FF 1), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.2 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than twenty-three and four tenths (23.4) tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.1.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.53 pounds per hour when operating at a process weight rate of 3,128 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.1.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.1.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.1.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report:
The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content:
The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.1.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.1.8 Particulate Control

(a) In order to comply with Condition D.1.4, the baghouses DC1-1 through DC7-1 for particulate control shall be in operation and control emissions from the woodworking operation (WW1) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 1), at least once per week when the woodworking process (WW 1) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.12 Record Keeping Requirements

(a) To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits established in Conditions D.1.2 and D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in paragraph (b) of Conditions D.1.6 and D.1.7, then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.1.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall

include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.1.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that week).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 2 - 2478 Davis Drive

(a) One (1) woodworking operation, identified as WW 2, constructed in 2004, with a maximum throughput of 2,705 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 2, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day .

(f) One (1) touch-up painting station, identified as TP 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 2 - 2478 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-2 through TC3-2, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-2, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 2, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 2, constructed in 2004, with a maximum throughput of 330 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 2) shall utilize one of the following application methods:

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.

D.2.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 2), the subfloor installation operations (SF 2), the assembly operations (ALO 2), the repair operations (RO 2), the touch-up stations (TP 2), and the final finish operations (FF 2), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1, and D.3 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.2.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 2), the subfloor installation operations (SF 2), the assembly operations (ALO 2), the repair operations (RO 2), the touch-up stations (TP 2), and the final finish operations (FF 2), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 and D.3 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.2.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.02 pounds per hour when operating at a process weight rate of 2,705 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.2.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.2.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.2.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Conditions D.2.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.2.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.2.8 Particulate Control

(a) In order to comply with Condition D.2.4, the baghouses DC1-2 through DC7-2 for particulate control shall be in operation and control emissions from the woodworking operation (WW2) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.2.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 2), at least once per week when the woodworking process (WW 2) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the

processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.12 Record Keeping Requirements

(a) To document compliance with Conditions D.2.2 and D.2.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Condition D.2.2 and D.2.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in paragraph (b) of Conditions D.2.6 and D.2.7, then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.2.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.2.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.2 and D.2.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 3 - 2855 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 3, constructed in 2003, with a maximum throughput of 2,720 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 3, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 3 - 2855 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-3 through TC3-3, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-3, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 3, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 3, constructed in 2003, with a maximum throughput of 234 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 3) shall utilize one of the following application methods:

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.

D.3.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 3), the subfloor installation operations (SF 3), the assembly operations (ALO 3), the repair operations (RO 3), the touch-up stations (TP 3), and the final finish operations (FF 3), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1, D.2, and D.4 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.3.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 3), the subfloor installation operations (SF 3), the assembly operations (ALO 3), the repair operations (RO 3), the touch-up stations (TP 3), and the final finish operations (FF 3), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1, D.2, and D.4 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.3.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.04 pounds per hour when operating at a process weight rate of 2,720 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.3.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(d) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(e) Compliance with the VOC usage limitations contained in Condition D.3.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(f) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.3.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.3.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.3.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.3.8 Particulate Control

(a) In order to comply with Condition D.3.4, the baghouses DC1-3 through DC7-3 for particulate control shall be in operation and control emissions from the woodworking operation (WW3) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.3.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.3.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 3), at least once per week when the woodworking process (WW 3) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the

event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.12 Record Keeping Requirements

(a) To document compliance with Conditions D.3.2 and D.3.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Condition D.3.2 and D.3.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC input as allowed in paragraph (b) of Conditions D.3.6 and D.3.7, then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.3.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.3.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.2 and D.3.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 4 - 2400 East Kercher Drive

(a) One (1) woodworking operation, identified as WW 4, constructed in 2002, with a maximum throughput of 3,415.5 pounds per hour, controlled by dust collectors DC1-4 through DC7-4.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 4, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 4 - 2400 East Kercher Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-4 through TC3-4, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-4, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 4, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 4, constructed in 2002, with a maximum throughput of 417 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 4) shall utilize one of the following application methods:

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.

D.4.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 4), the subfloor installation operations (SF 4), the assembly operations (ALO 4), the repair operations (RO 4), the touch-up stations (TP 4), and the final finish operations (FF 4), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1, D.2, D.3, and D.5 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.4.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 4), the subfloor installation operations (SF 4), the assembly operations (ALO 4), the repair operations (RO 4), the touch-up stations (TP 4), and the final finish operations (FF 4), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1, D.2, D.3, and D.5 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.4.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or

products (subfloor installation operation SF 4) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.4.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the final finish operation (FF 4), when coating plastics, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.4.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.87 pounds per hour when operating at a process weight rate of 3,415.5 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.4.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.4.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Conditions D.4.2, D.4.4, and D.4.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.4.2, D.4.4, and D.4.5 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.4.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.4.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.4.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the

waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.4.10 Particulate Control

(a) In order to comply with Condition D.4.6, the baghouses DC1-4 through DC7-4 for particulate control shall be in operation and control emissions from the woodworking operation (WW4) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.4.11 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.4.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 4), at least once per week when the woodworking process (WW 4) is

in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.13 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.4.14 Record Keeping Requirements

(a) To document compliance with Conditions D.4.2, D.4.3, D.4.4, and D.4.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and/or the VOC/HAP emission limits established in Conditions D.4.2, D.4.3, D.4.4, and D.4.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed Conditions D.4.8(b) and D.4.9(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.4.11, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.4.12, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.15 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.2, D.4.3, D.4.4 and D.4.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plants 6 - 2642 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 6, constructed in 1998 and 1999, with a maximum throughput of 161.25 pounds per hour, controlled by dust collectors DC1-6 and DC2-6.

(b) One (1) surface coating operation, for adhesive application, identified as AA 6, constructed in 2004, with a maximum throughput of 344 wood pieces per hour, utilizing brush application to coat wood and fabric.

Insignificant Activities Plant 6 - 2642 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-6 through TC3-6, constructed in 1998, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-6, constructed in 1998, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) miscellaneous woodworking operation, identified as MPE 6, constructed in 1998, with a maximum throughput of 156.32 lbs of wood pieces per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the adhesive application operations (AA 6), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1, D.2, D.3, D.4, and D.6 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.5.2 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the adhesive application operations (AA 6), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1, D.2, D.3, D.4, and D.6 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.5.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 0.76 pounds per hour when operating at a process weight rate of 161.3 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.5.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.5.1 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.5.6 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.5.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.5.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.5.7 Particulate Control

(a) In order to comply with Condition D.5.3, the baghouses DC1-6 and DC2-6 for particulate control shall be in operation and control emissions from the woodworking operation (WW6) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.5.8 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.9 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 6), at least once per week when the woodworking process (WW 6) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.5.10 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.5.11 Record Keeping Requirements

(a) To document compliance with Conditions D.5.1 and D.5.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Conditions D.5.1 and D.5.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in of Conditions D.5.5 (b) and D.5.6(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.5.8, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.5.9, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1 and D.5.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 7 - 2530 Linden Drive

(a) One (1) woodworking operation, identified as WW 7, constructed in 2002, with a maximum throughput of 2,910.32 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 7, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates.

(g) One (1) final finishing operation, identified as FF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 7 - 2530 Linden Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-7 through TC3-7, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-7, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 7, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 7, constructed in 2002, with a maximum throughput of 250.4 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 7) shall utilize one of the following application methods:

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.

D.6.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 7), the subfloor installation operations (SF 7), the assembly operations (ALO 7), the repair operations (RO 7), the touch-up stations (TP 7), and the final finish operations (FF 7), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.5 and D.7 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.6.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 7), the subfloor installation operations (SF 7), the assembly operations (ALO 7), the repair operations (RO 7), the touch-up stations (TP 7), and the final finish operations (FF 7), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.5 and D.7 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.6.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.27 pounds per hour when operating at a process weight rate of 2,910.3 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.6.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.6.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.6.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.6.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.6.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.6.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.6.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.6.8 Particulate Control

(a) In order to comply with Condition D.6.4, the baghouses DC1-7 through DC7-7 for particulate control shall be in operation and control emissions from the woodworking operation (WW7) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.6.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.6.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 7), at least once per week when the woodworking process (WW 7) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.6.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the

event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.6.12 Record Keeping Requirements

(a) To document compliance with Conditions D.6.2 and D.6.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Condition D.6.2 and D.6.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.6.6(b) and D.6.7(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.6.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.6.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.2 and D.6.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 8 - 2425 Davis Drive

(a) One (1) service repair operation, identified as SR 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates and uses less than five (5) gallons of coating per day.

(b) One (1) touch-up painting station, identified as TP 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal and plastic substrates and uses less than five (5) gallons of coating per day.

(c) One (1) parts washer, identified as PW-8, constructed in 2006, with an annual solvent throughput of 100 gallons.

Insignificant Activities Plant 8 - 2425 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-8 through TC3-8, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-8, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 8, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 0.10 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.05 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.7.1 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the service repair operation, identified as SR 8, and the touch-up painting stations (TP 8), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.6 and D.8 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.7.2 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the service repair operation, identified as SR 8, and the touch-up painting stations (TP 8), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.6 and D.8 through D.16, shall

not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.7.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations (PW 8) constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.7.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.7.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.7.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.7.1 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.7.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.7.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.7.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total

hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.7.8 Record Keeping Requirements

(a) To document compliance with Conditions D.7.1 and D.7.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Condition D.7.1 and D.7.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.7.6(b) and D.7.7(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1 and D.7.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 12 - 2833 Sourwood Drive

(a) One (1) woodworking operation, identified as WW 12, constructed in 1997, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 12, constructed in 1997, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 12- 2833 Sourwood Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-12 through TC3-12, constructed in 1997, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-12, constructed in 1997, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 12, constructed in 1997, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 12, constructed in 1997, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.8.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 12) and the final finish operation (FF 12) shall utilize one of the following application methods:

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.

D.8.2 Volatile Organic Compounds [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor assembly operations SF 12) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.8.3 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 12), the subfloor installation operations (SF 12), the assembly operations (ALO 12), the repair operations (RO 12), the touch-up stations (TP 12), and the final finish operations (FF 12), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.7 and D.9 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.8.4 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 12), the subfloor installation operations (SF 12), the assembly operations (ALO 12), the repair operations (RO 12), the touch-

up stations (TP 12), and the final finish operations (FF 12), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.7 and D.9 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.8.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents to final finish operation (FF 12) to less than 25 tons per twelve (12) consecutive month period, when coating plastic, with compliance determined at the end of each month.

D.8.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.27 pounds per hour when operating at a process weight rate of 2,908 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.8.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.8.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC content and usage limitations contained in Conditions D.8.2, D.8.3 and D.8.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.8.2, D.8.3 and D.8.5 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.8.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.8.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.8.4 shall be demonstrated within 30 days of the end of each month. This shall be based on the total

hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.8.10 Particulate Control

(a) In order to comply with Condition D.8.6, the baghouses DC1-12 through DC7-12 for particulate control shall be in operation and control emissions from the woodworking operation (WW12) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.8.11 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.8.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 12), at least once per week when the woodworking process (WW 12) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.8.13 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.8.14 Record Keeping Requirements

(a) To document compliance with Conditions D.8.2, D.8.3, D.8.4, and D.8.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and VOC/HAP content limits established in Conditions D.8.2 through D.8.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Condition D.8.8(b) and D.8.9(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VO/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.8.11, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.8.12, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.8.15 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.8.2 through D.8.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 14 - 2442 Davis Drive

(a) One (1) woodworking operation, identified as WW 14, constructed in 2005, with a maximum throughput of 2,975.2 pounds per hour, controlled by dust collectors DC1-14 through DC7-14.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 14, constructed in 2005, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 14- 2442 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-14 through TC3-14, constructed in 2005, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-14, constructed in 2005, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 14, constructed in 2005, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 14, constructed in 2005, with a maximum throughput of 363.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.9.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 14) and the final finish operation (FF 14) shall utilize one of the following application methods:

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.

D.9.2 Volatile Organic Compounds [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor assembly operations SF 14) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.9.3 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 14), the subfloor installation operations (SF 14), the assembly operations (ALO 14), the repair operations (RO 14), the touch-up stations (TP 14), and the final finish operations (FF 14), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.8 and D.10 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.9.4 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations including the chassis prep operations (CP 14), the subfloor installation operations (SF 14), the assembly operations (ALO 14), the repair operations (RO 14), the touch-up stations (TP 14), and the final finish operations (FF 14), and their associated clean-up

activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.8 and D.10 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.9.5 Volatile Organic Compounds [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor assembly operations SF 14) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.9.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to final finish operation (FF 14), when painting plastic, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.9.7 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.35 pounds per hour when operating at a process weight rate of 2,975.2 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.9.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.9.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Conditions D.9.2, D.9.3, D.9.5 and D.9.6 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.9.2, D.9.3, D.9.5 and D.9.6 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.9.10 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.9.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.9.4 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.9.11 Particulate Control

(a) In order to comply with Condition D.9.7, the baghouses DC1-14 through DC7-14 for particulate control shall be in operation and control emissions from the woodworking operation (WW14) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.9.12 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.9.13 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 14), at least once per week when the woodworking process (WW 14) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.9.14 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.9.15 Record Keeping Requirements

(a) To document compliance with Conditions D.9.2 through D.9.6, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and VOC/HAP content limit established in Condition D.9.2 through D.9.6. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Condition D.9.9(b) and D.9.10(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.9.12, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.9.13, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.9.16 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.9.2 through D.9.6 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 19 - 2431 E. Kercher Drive

(a) One (1) woodworking operation, identified as WW 19, constructed in 2006, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 19, constructed in 2006, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 19 - 2431 E. Kercher Drive

(a) Seven (7) natural gas-fired space heaters, identified as R1-19 through R7-19, constructed in 1998, each with a maximum heat input of 0.15 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-19 and SH2-19, constructed in 1998, each with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 19, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 19, constructed in 2006, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.10.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 19) shall utilize one of the following application methods:

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.

D.10.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 19), the subfloor installation operations (SF 19), the assembly operations (ALO 19), the repair operations (RO 19), the touch-up stations (TP 19), and the final finish operations (FF 19), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.9 and D.11 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.10.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 19), the subfloor installation operations (SF 19), the assembly operations (ALO 19), the repair operations (RO 19), the touch-up stations (TP 19), and the final finish operations (FF 19), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.9 and D.11 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.10.4 Volatile Organic Compounds [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or

products (subfloor assembly operations SF 19) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.10.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to final finish operation (FF 19), when painting plastic, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.10.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.27 pounds per hour when operating at a process weight rate of 2,908 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.10.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.10.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC content and usage limitations contained in Conditions D.10.2, D.10.3, D.10.4, and D.10.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.10.2, D.10.3, D.10.4, and D.10.5 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.10.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.10.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.10.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the

waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.10.10 Particulate Control

(a) In order to comply with Condition D.10.6, the baghouses DC1-19 through DC7-19 for particulate control shall be in operation and control emissions from the woodworking operation (WW19) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.10.11 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.10.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 19), at least once per week when the woodworking process (WW 19)

is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.10.13 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.10.14 Record Keeping Requirements

(a) To document compliance with Conditions D.10.2 through D.10.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and VOC/HAP content limit established in Condition D.10.2 through D.10.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.10.8 (b) and D.10.9(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are

collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(3) The cleanup solvent usage for each month;

(4) The total VOC/HAP usage for each month; and

(5) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.10.11, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.10.12, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.10.15 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.10.2 through D.10.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 20 - 2769 Elders Drive

Five (5) lamination lines (identified as L1 through L5), constructed in 2007, used to manufacture exterior walls. Each lamination line has a maximum throughput capacity of 343.8 pounds of finished product per hour; and utilizes rollcoating application.

Insignificant Activities Plant 20 - 2769 Elders Drive

(a) Twenty-eight (28) metal inert gas (MIG) welding stations, each with a maximum wire consumption rate of 1.71 pounds per hour.

(b) Two (2) table saws used to cut styrofoam, identified as MPE 20.

(c) Twenty-six (26) natural gas-fired space heaters, identified as R1-20 through R26-20, constructed in 2004, each with a maximum heat input of 0.15 million British thermal units per hour.

(d) Two (2) natural gas-fired space heaters, identified as SH1-20 and SH2-20, constructed in 2004, each with a maximum heat input of 0.25 million British thermal units per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.11.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) Pursuant to MSOP 039-14842-00560, in order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the lamination lines (L1 through L3) to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Pursuant to MSOP 039-17647-00560, in order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the lamination lines (L4 and L5) to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.11.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the five lamination lines (L1 through L5), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.10 and D.13 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.11.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the five lamination lines (L1 through L5), and their associated clean-

up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.10 and D.12 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.11.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.11.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Conditions D.11.1 and D.11.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.11.1 and D.11.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.11.6 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.11.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.11.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.11.7 Record Keeping Requirements

(a) To document compliance with Conditions D.11.1, D.11.2, and D.11.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Condition D.11.1 through D.11.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.11.5(b) and D.11.6(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

D.11.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.11.1, D.11.2, and D.11.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.12 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 29 - 2642 Hackberry Drive

One (1) woodworking operation, identified as WW 29, constructed in 2004, with a maximum throughput of 6,464 pounds per hour, controlled by dust collectors DC1-29 and DC2-29.

Insignificant Activities Plant 29 - 2642 Hackberry Drive

One (1) miscellaneous woodworking operation, identified as MPE 29, constructed in 2004, with a maximum throughput of 6,450 lbs of wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.12.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 8.94 pounds per hour when operating at a process weight rate of 6,400 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.12.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.12.3 Particulate Control

(a) In order to comply with Condition D.12.1, the baghouses DC1-29 and DC2-29 for particulate control shall be in operation and control emissions from the woodworking operation (WW 29) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.12.4 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when venting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.12.5 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 29), at least once per week when the woodworking process (WW 29) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.12.6 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.12.7 Record Keeping Requirements

(a) To document compliance with Condition D.12.4, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document compliance with Condition D.12.5, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.13 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 31 - 2642 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 31, constructed in 1996, with a maximum throughput of 2,139.2 pounds per hour, controlled by dust collectors DC1-31 through DC7-31.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 31, constructed in 1996, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 31 - 2642 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-31 through TC3-31, constructed in 1996, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-31 and SH2-31, constructed in 1996, each with a maximum heat input of 0.50 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 31, constructed in 1996, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 31, constructed in 1996, with a maximum throughput of 261.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.13.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 31) shall utilize one of the following application methods:

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.

D.13.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 31), the subfloor installation operations (SF 31), the assembly operations (ALO 31), the repair operations (RO 31), the touch-up stations (TP 31), and the final finish operations (FF 31), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.12 and D.14 through D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.13.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 31), the subfloor installation operations (SF 31), the assembly operations (ALO 31), the repair operations (RO 31), the touch-up stations (TP 31), and the final finish operations (FF 31), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.11 and D.14 through D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.13.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 4.29 pounds per hour when operating at a process weight rate of 2,139.2 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.13.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.13.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.13.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.13.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.13.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.13.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.13.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.13.8 Particulate Control

(a) In order to comply with Condition D.13.4, the baghouses DC1-31 through DC7-31 for particulate control shall be in operation and control emissions from the woodworking operation (WW31) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.13.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.13.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 31), at least once per week when the woodworking process (WW 31) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.13.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.13.12 Record Keeping Requirements

(a) To document compliance with Conditions D.13.2 and D.13.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and/or the VOC/HAP emission limits established in Conditions D.13.2 and D.13.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.13.6(b) and D.13.7(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOCs/HAP emitted for each compliance period.

(b) To document compliance with Condition D.13.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.13.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.13.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.13.2 and D.13.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.14 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 50 - 2420 Davis Drive

(a) One (1) woodworking operation, identified as WW 50, constructed in 2004, with a maximum throughput of 3,278.5 pounds per hour, controlled by dust collectors DC1-50 through DC7-50.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 50, constructed in 2004, with a maximum throughput of four (4) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 50- 2420 Davis Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-50 through TC3-50, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-50, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 50, constructed in 2004, including two (2) metal inert gas (MIG) welders, with a maximum throughput of 1.0 lb electrode per hour each, and two (2) stick welders, with a maximum throughput of 0.50 lbs electrode per hour each, and two (2) oxyacetylene cutting torches.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 50, constructed in 2004, with a maximum throughput of 400 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.14.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 50) shall utilize one of the following application methods:

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.

D.14.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 50), the subfloor installation operations (SF 50), the assembly operations (ALO 50), the repair operations (RO 50), the touch-up stations (TP 50), and the final finish operations (FF 50), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.13, D.15, and D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.14.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 50), the subfloor installation operations (SF 50), the assembly operations (ALO 50), the repair operations (RO 50), the touch-up stations (TP 50), and the final finish operations (FF 50), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.11, D.13, D.15, and D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.14.4 Volatile Organic Compounds [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or

products (subfloor assembly operations SF 50) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.14.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to final finish operation (FF 50), when painting plastic, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.14.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.71 pounds per hour when operating at a process weight rate of 3,278.5 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.14.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.14.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitation contained in Conditions D.14.2, D.14.4, and D.14.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.14.2, D.14.4, and D.14.5 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.14.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.14.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.14.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the

waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.14.10 Particulate Control

(a) In order to comply with Condition D.14.6, the baghouses DC1-50 through DC7-50 for particulate control shall be in operation and control emissions from the woodworking operation (WW50) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.14.11 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.14.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 50), at least once per week when the woodworking process (WW 50)

is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.14.13 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.14.14 Record Keeping Requirements

(a) To document compliance with Conditions D.14.2 through D.14.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and/or the VOC/HAP emission limits established in Conditions D.14.2 through D.14.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.14.8(b) and D.14.9(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are

collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.14.11, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.14.12, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.14.15 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.14.2 through D.14.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.15 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 304 - 2775 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 304, constructed in 2003, with a maximum throughput of 2,114.6 pounds per hour, controlled by dust collectors DC1-304 through DC7-304.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 304, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates and uses less than five (5) gallons of coating per day.

Insignificant Activities Plant 304 - 2775 Hackberry Drive

(a) Three (3) natural gas-fired space heaters, identified as TC1-304 through TC3-304, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-304, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 304, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 304, constructed in 2003, with a maximum throughput of 258.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.15.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 304) shall utilize one of the following application methods:

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.

D.15.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 304), the subfloor installation operations (SF 304), the assembly operations (ALO 304), the repair operations (RO 304), the touch-up stations (TP 304), and the final finish operations (FF 304), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.14, and D.16, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.15.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 304), the subfloor installation operations (SF 304), the assembly operations (ALO 304), the repair operations (RO 304), the touch-up stations (TP 304), and the final finish operations (FF 304), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.11, D.13, D.14, and D.16, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.15.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 4.26 pounds per hour when operating at a process weight rate of 2,114.6 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.15.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.15.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Condition D.15.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Condition D.15.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.15.7 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.15.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.15.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.15.8 Particulate Control

(a) In order to comply with Condition D.15.4, the baghouses DC1-304 through DC7-304 for particulate control shall be in operation and control emissions from the woodworking operation (WW304) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.15.9 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.15.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 304), at least once per week when the woodworking process (WW 304) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.15.11 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the

event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.15.12 Record Keeping Requirements

(a) To document compliance with Conditions D.15.2 and D.15.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits and/or the VOC/HAP emission limits established in Conditions D.15.2 and D.15.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.15.6(b) and D.15.7(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.15.9, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.15.10, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.15.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.15.2 and D.15.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.16 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 311 - 2860 Hackberry Drive

(a) One (1) woodworking operation, identified as WW 311, constructed in 2004, with a maximum throughput of 3,344.7 pounds per hour, controlled by dust collectors DC1-311 through DC7-311.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 311, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as ALO 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities Plant 311 - 2860 Hackberry

(a) Three (3) natural gas-fired space heaters, identified as TC1-311 through TC3-311, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-311, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 311, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting/machining operation, identified as MPE 311, constructed in 2004, with a maximum throughput of 408.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.16.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 311) shall utilize one of the following application methods:

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.

D.16.2 VOC Limitations [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8]

The total VOC input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 311), the subfloor installation operations (SF 311), the assembly operations (ALO 311), the repair operations (RO 311), the touch-up stations (TP 311), and the final finish operations (FF 311), and their associated clean-up activities, when combined with the VOC input to the surface coating operations in Sections D.1 through D.15, shall not exceed ninety-six and one-tenths (96.1) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the VOC emissions from the insignificant activities from the entire source, VOC is limited to less than 100 tons per twelve (12) consecutive month period. Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.16.3 HAP Limitations [326 IAC 2-8] [326 IAC 2-4.1]

The total HAP input, including coatings, dilution solvents and cleaning solvents, to the surface coating operations, including the chassis prep operations (CP 311), the subfloor installation operations (SF 311), the assembly operations (ALO 311), the repair operations (RO 311), the touch-up stations (TP 311), and the final finish operations (FF 311), and their associated clean-up activities, when combined with the HAP input to the surface coating operations in Sections D.1 through D.11, and D.13 through D.15, shall not exceed eight and four tenths (8.4) tons per year of any single HAP, and less than 23.4 tons per year total HAP, with compliance determined at the end of each month.

Combined with the HAP emissions from the insignificant activities from the entire source, single HAP is limited to less than 10 tons per twelve (12) consecutive month period and total HAP is limited to less than 25 tons per twelve (12) consecutive month period . Compliance with these limits makes the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1(MACT) not applicable.

D.16.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee, when coating plastic shall limit the VOC input, including coatings, dilution solvents and cleaning

solvents, to final finish operation (FF 311), when painting plastic, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.16.5 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor installation operation SF 311) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

D.16.6 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.79 pounds per hour when operating at a process weight rate of 3,344.1 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.16.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.16.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Conditions D.16.2, D.16.4, and D.16.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of VOC in the waste shipped offsite for recycling or disposal is deducted from the monthly VOC input reported, the Permittee shall determine the VOC content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) VOC content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the VOC containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the VOC content of the VOC containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new VOC content shall be used in calculating the amount of VOC shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The VOC reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of VOC in the waste.

(3) Minimum Assumed VOC content: The VOC content of the waste shipped offsite may be assumed to be equal to the VOC content of the material with the lowest VOC content that could be present in the waste, as determined using the "as supplied" and "as applied" VOC data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the VOC containing waste stream and conduct an analysis for VOC content.

(d) Compliance with the VOC usage limitations contained in Conditions D.16.2, D.16.4. and D.16.5 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

(e) The VOC input for a month shall be calculated using the following equation:

VOC emitted = SCL - SR

Where:

SCL = The total amount of VOC, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of VOC, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.16.9 Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the HAP usage limitations contained in Condition D.16.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If the amount of HAP in the waste shipped offsite for recycling or disposal is deducted from the monthly HAP input reported, the Permittee shall determine the HAP content of the waste shipped offsite using one or a combination of the following methods:

(1) On-Site Sampling

(A) HAP content shall be determined pursuant to 326 IAC 8-1-4(a)(3) by EPA Reference Method 24 and the sampling procedures in 326 IAC 8-1-4 or other methods as approved by the Commissioner.

(B) A representative sample of the HAP containing waste to be shipped offsite shall be analyzed within ninety (90) days of the issuance of this permit 039-23645-00620.

(C) If multiple cleanup solvent waste streams are collected and drummed separately, a sample shall be collected and analyzed from each solvent waste stream.

(D) A new representative sample shall be collected and analyzed whenever a change or changes occur(s) that could result in a cumulative 10% or more decrease in the HAP content of the HAP containing waste. Such change could include, but is not limited to, the following:

(i) A change in coating selection or formulation, as supplied or as applied, or a change in solvent selection or formulation, or

(ii) An operational change in the coating application or cleanup operations.

The new HAP content shall be used in calculating the amount of HAP shipped offsite, starting with the date that the change occurred. The sample shall be collected and analyzed within 30 days of the change.

(2) Certified Waste Report: The HAP reported by analysis of an offsite waste processor may be used, provided the report certifies the amount of HAP in the waste.

(3) Minimum Assumed HAP content: The HAP content of the waste shipped offsite may be assumed to be equal to the HAP content of the material with the lowest HAP content that could be present in the waste, as determined using the "as supplied" and "as applied" HAP data sheets, for each month.

(c) IDEM reserves the right to request a representative sample of the HAP containing waste stream and conduct an analysis for HAP content.

(d) Compliance with the HAP usage limitations contained in Condition D.16.3 shall be demonstrated within 30 days of the end of each month. This shall be based on the total hazardous air pollutant input for the previous month, minus the amount of HAP in the

waste shipped out for recycling or disposal, and adding it to the previous 11 months total HAP input, minus the amount of HAP in the waste shipped out for recycling or disposal, so as to arrive at the HAP input for the most recent twelve (12) consecutive month period.

(e) The HAP input for a month shall be calculated using the following equation:

HAP emitted = SCL - SR

Where:

SCL = The total amount of HAP, in tons, delivered to the coating applicators, including coatings, dilutions solvents, and cleaning solvents, at the coating booths; and

SR = The total amount of HAP, in tons, shipped out for either recycling or disposal, including coatings, diluted solvents, and cleaning solvents, from the coating booths.

D.16.10 Particulate Control

(a) In order to comply with Condition D.16.6, the baghouses DC1-311 through DC7-311 for particulate control shall be in operation and control emissions from the woodworking operation (WW 311) at all times that the woodworking facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.16.11 Visible Emissions Notations

(a) Daily visible emission notations of the woodworking stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.16.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the woodworking process (WW 311), at least once per week when the woodworking process (WW

311) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.16.13 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.16.14 Record Keeping Requirements

(a) To document compliance with Conditions D.16.2 through D.16.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC/HAP usage limits established in Conditions D.16.2 through D.16.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC/HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.16.8(b) and D.16.9(b), then the following records shall be maintained:

(A) The amount of VOC/HAP containing waste shipped out to be recycled or disposed of each month. If multiple cleanup solvent waste streams are collected and drummed separately, the amount shipped out shall be recorded separately for each used solvent stream.

(B) The VOC/HAP content of the waste and all records necessary to verify the amount and VOC/HAP content of the VOC/HAP containing waste shipped out for recycling or disposal.

(C) The weight of VOC/HAP input, minus the weight of VOC/HAP shipped out to be recycled or disposed of, for each compliance period.

(4) The cleanup solvent usage for each month;

(5) The total VOC/HAP usage for each month; and

(6) The weight of VOC/HAP emitted for each compliance period.

(b) To document compliance with Condition D.16.11, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.16.12, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.16.14 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.16.2 through D.16.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Signature:
Printed Name:
Title/Position:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: All Surface Coating Operations Listed in Sections D.1 through D.11 and D.13 through D.16
Parameter: VOC
Limit: less than 96.1 tons per year

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: All Surface Coating Operations Listed in Sections D.1 through D.11 and D.13 through D.16
Parameter: Single HAP
Limit: less than 8.4 tons per year

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: All Surface Coating Operations Listed in Sections D.1 through D.11 and D.13 through D.16
Parameter: Total HAP
Limit: less than 23.4 tons per year

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 4 - Final Finish Operations FF 4 (Section D.4)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 12 - Final Finish Operations FF 12 (Section D.8)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 14 - Final Finish Operations FF14 (Section D.9)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 19 - Lamination Operations FF 19 (Section D.10)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 20 - Lamination Operations L1 through L3 (Section D.11)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 20 - Lamination Operations L4 and L5 (Section D.11)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic parts

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 50 - Final Finish Operations FF50 (Section D.14)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620
Facility: Plant 311 - Final Finish Operations FF 311 (Section D.16)
Parameter: VOC
Limit: less than 25 tons per year, when coating plastic

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Keystone RV Company
Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526
Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP Permit No.: F039-23645-00620

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked ANo deviations occurred this reporting period@.

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a New Source Construction and Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	**Keystone RV Company**
Source Location:	**2642 Hackberry Drive, Goshen, Indiana 46526**
County:	**Elkhart**
SIC Code:	**3792**
Operation Permit No.:	**F039-23645-00620**
Permit Reviewer:	**Brian Williams**

On December 3, 2008, the Office of Air Quality (OAQ) had a notice published in the Goshen News, Goshen, Indiana, stating that Keystone RV Company had applied for a New Source Construction and FESOP to construct and operate a new stationary recreational vehicle (RV) manufacturing operation. The notice also stated that the OAQ proposed to issue a New Source Construction and FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On December 31, 2008, on behalf of Keystone RV Company, Kevin Parks submitted comments to IDEM, OAQ on the draft New Source Construction and FESOP.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

> Condition D.1.7(a), Particulate Control, requires the use of control devices at all time when woodworking processes are in operation in accordance with Condition D.1.4. Condition D.1.4 refers to the requirement to prepare a Preventive Maintenance Plan. TecServ believes that Section D.1 is missing a Condition that supports D.1.7(a). Please see Section D.2, Condition D.2.4, Particulate, which is written in the same format as Section D.1 for clarification of this comment.

Response to Comment 1:

> IDEM agrees with the recommended changes, since the woodworking operation, identified as WW1 is subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) as noted in the original TSD. The permit has been revised as follows:

...

D.1.4 Particulate [326 IAC 6-3-2]

> **Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the woodworking operation shall not exceed 5.53 pounds per hour when operating at a process weight rate of 3,128 pounds per hour.**

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.~~4~~**5** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

...

D.1.~~5~~**6** Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

...

D.1.~~6~~**7** Hazardous Air Pollutants (HAP) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

...

D.1.~~7~~**8** Particulate Control

...

D.1.~~8~~**9** Visible Emissions Notations

...

D.1.~~9~~**10** Parametric Monitoring

...

D.1.1~~0~~**1** Broken or Failed Bag Detection

...

D.1.1~~1~~**2** Record Keeping Requirements

...

(b) To document compliance with Condition D.1.~~8~~**9**, the Permittee shall maintain records of daily visible emission notations of the woodworking stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document compliance with Condition D.1.~~9~~**10**, the Permittee shall maintain weekly records of the pressure drop. The Permittee shall include in its weekly record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that week).

...

D.1.1~~2~~**3** Reporting Requirements

...

Comment 2:

Conditions D.8.5(b) and D.9.6(b) limit the emissions of volatile organic compounds ("VOC") when coating wood products in the respective Final Finish Operations to less than 15 pounds per day. This Condition has been inserted so that 326 IAC 8-2-12, Wood Furniture and Cabinet Coating, will not apply. Keystone requests to voluntarily comply with this standard for emission units (facilities) FF12 and FF14. Therefore, please delete Conditions D.8.5(b) and D.9.6(b) and add emission unit FF12 to Condition D.8.1 and emission unit FF14 to Condition D.9.1. Please delete the subsequent reporting forms Page 170 of 180 and Page 172 of 180.

Response to Comment 2:

IDEM agrees with the recommended changes. The permit has been revised as follows:

...

D.8.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 12) **and the final finish operation (FF 12)** shall utilize one of the following application methods:

...

D.8.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] ~~[326 IAC 8-2-12]~~

~~(a)~~ In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents to final finish operation (FF 12) to less than 25 tons per twelve (12) consecutive month period, when coating plastic, with compliance determined at the end of each month.

~~(b) In order to render the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the final finish operation (FF 12) to less than 15 lbs per day, when coating wood.~~

...

D.9.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the assembly operations (ALO 14) **and the final finish operation (FF 14)** shall utilize one of the following application methods:

...

D.9.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] ~~[326 IAC 8-2-12]~~

~~(a)~~ In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to final finish operation (FF 14), when painting plastic, to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

~~(b) In order to render the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the final finish operation (FF 14) to less than 15 lbs per day, when coating wood.~~

...

~~FESOP Quarterly Report~~
~~Source Name: Keystone RV Company~~
~~Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~FESOP Permit No.: F039-23645-00620~~
~~Facility: Plant 12 - Final Finish Operations FF 12 (Section D.8)~~
~~Parameter: VOC~~
~~Limit: less than 15 pounds per day, when coating wood~~

...

~~FESOP Quarterly Report~~
~~Source Name: Keystone RV Company~~
~~Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~FESOP Permit No.: F039-23645-00620~~
~~Facility: Plant 14 - Final Finish Operations FF14 (Section D.9)~~
~~Parameter: VOC~~
~~Limit: less than 15 pound per day, when coating wood~~

...

Comment 3:

Keystone wishes to voluntarily comply with 326 IAC 8-2-9, Miscellaneous Metal Coating, for emission unit SF 311. Please replace Condition D.16.5 limiting the VOC emissions to less than 15 pounds per day with the requirement to use compliant coatings when coating metal in the Sub Floor Operations for Building 311. Please delete the reporting form Page 178 of 180.

Response to Comment 3:

IDEM agrees with the recommended changes. The permit has been revised as follows:

...

D.16.5 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

~~In order to render the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coatings) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and cleaning solvents, to the subfloor installation operation (SF 311) to less than 15 lbs per day, when coating metal.~~

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor installation operation SF 311) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

...

D.16.14 Record Keeping Requirements

...

(3) If the amount of VOC/HAP in the waste material is being deducted from the VOC/HAP input as allowed in Conditions D.16.~~7~~**8**(b) and D.16.~~8~~**9**(b), then the following records shall be maintained:

...

~~FESOP Quarterly Report~~
~~Source Name: Keystone RV Company~~
~~Source Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~Mailing Address: 2642 Hackberry Drive, Goshen, Indiana 46526~~
~~FESOP Permit No.: F039-23645-00620~~
~~Facility: Plant 311 - Final Finish Operations FF 311 (Section D.16)~~
~~Parameter: VOC~~
~~Limit: less than 15 pounds per day, when coating metal~~

...

Comment 4:

The recordkeeping requirements of Sections D.4.14, D.8.14, D.9.15, and D.15.12 require records to be taken on a weekly basis rather than a monthly basis. Since there are no emission limits that are based upon a weekly period, Keystone requests that the records for these Conditions be changed to a monthly basis.

Response to Comment 4:

IDEM agrees that the source should not be required to keep records on a weekly basis because there are no emission limits that are based upon a weekly period. As a result, Conditions D.4.14, D.8.14, D.9.15, and D.15.12 have been revised to require monthly records. The permit has been revised as follows:

...

D.4.14 Record Keeping Requirements

...

(2) The amount of coating material and solvent less water used on a ~~weekly~~ **monthly** basis.

...

(4) The cleanup solvent usage for each ~~week~~ **month**;

(5) The total VOC/HAP usage for each ~~week~~ **month**; and

...

D.8.14 Record Keeping Requirements

...

(2) The amount of coating material and solvent less water used on a ~~weekly~~ **monthly** basis.

...

(4) The cleanup solvent usage for each ~~week~~ **month**;

(5) The total VOC/HAP usage for each ~~week~~ **month**; and

...

D.9.15 Record Keeping Requirements

...

(2) The amount of coating material and solvent less water used on ~~weekly~~ **monthly** basis.

...

(4) The cleanup solvent usage for each ~~week~~ **month**;

(5) The total VOC/HAP usage for each ~~week~~ **month**; and

...

D.15.12 Record Keeping Requirements

...

(2) The amount of coating material and solvent less water used on ~~weekly~~ **monthly** basis.

...

(4) The cleanup solvent usage for each ~~week~~ **month**;

(5) The total VOC/HAP usage for each ~~week~~ **month**; and

...

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

(a) In order to render the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable; Condition D.4.4 requires the source to limit VOC emissions from the subfloor installation operation (SF 4) to less than 15 pounds per day. As a result, the source should have been required to maintain daily records of the VOC input for the subfloor installation operation (SF 4). However, in lieu of daily recordkeeping, Keystone RV Company has agreed to comply with the requirements of 326 IAC 8-2-9 for the subfloor installation operation (SF 4).

...

D.4.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

~~In order to render the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable, the Permittee shall limit the VOC input, including coatings, dilution solvents and~~

~~cleaning solvents, to the subfloor installation operation (SF 4) to less than 15 lbs per day, when coating metal.~~

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products (subfloor installation operation SF 4) may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

...

D.4.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

(a) Compliance with the VOC usage limitations contained in Conditions D.4.2**,** ~~and D.4.3~~ **D.4.4, and D.4.5** shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

...

(d) Compliance with the VOC usage limitations contained in Conditions D.4.2, D.4.~~3~~**4**, and D.4.~~4~~**5** shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound input for the previous month, minus the amount of VOC in the waste shipped out for recycling or disposal, and adding it to the previous 11 months total VOC input, minus the amount of VOC in the waste shipped out for recycling or disposal, so as to arrive at the VOC input for the most recent twelve (12) consecutive month period.

...

IDEM Contact

(a) Questions regarding this proposed New Source Construction and FESOP can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5375) or toll free at 1-800-451-6027 extension (4-5375).

(b) A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
New Source Construction and Federal Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	Keystone RV Company
Source Location:	2642 Hackberry Drive, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	3792
Operation Permit No.:	F039-23645-00620
Permit Reviewer:	ERG/TDP

The Office of Air Quality (OAQ) has reviewed the new source review and operating permit application from Keystone RV Company relating to the operation of a stationary recreational vehicle (RV) manufacturing facility.

History

On September 6, 2006, Keystone RV Company submitted an application to the OAQ requesting a new source construction and operating permit. During the review of this application, Keystone RV Company was identified as a collocated source of 17 buildings. This permit intends to bring all plants at the source into compliance with construction and operating permit rules.

Source Definition

This stationary RV manufacturing company consists of seventeen (17) buildings with a total of nineteen (19) plant designations:

(a) Plant 1 is located at 2525 Linden Drive, Goshen, Indiana;

(b) Plant 2 is located at 2478 Davis Drive, Goshen, Indiana;

(c) Plant 3 is located at 2855 Hackberry Drive, Goshen, Indiana;

(d) Plant 4 is located at 2400 East Kercher Drive, Goshen, Indiana;

(e) Plant 6 is located at 2642 Hackberry Drive, Goshen Indiana;

(f) Plant 7 is located at 2530 Linden Drive, Goshen, Indiana;

(g) Plant 8 is located at 2425 Davis Drive, Goshen, Indiana;

(h) Plant 12 is located at 2833 Sourwood Drive, Goshen, Indiana;

(i) Plant 14 is located at 2442 Davis Drive, Goshen, Indiana;

(j) Plant 18 is located at 2719 Hackberry Drive, Goshen, Indiana;

(k) Plant 19 is located at 2431 E. Kercher Drive, Goshen, Indiana;

(l) Plant 20 is located at 2769 Elders Drive, Goshen, Indiana;

(m) Plant 23 is located at 2694 Hackberry Drive, Goshen, Indiana;

(n) Plant 27 is located at 2769 Elders Drive, Goshen, Indiana;

(o) Plant 29 is located at 2642 Hackberry Drive, Goshen, Indiana;

(p) Plant 31 is located at 2642 Hackberry Drive, Goshen, Indiana;

(q) Plant 50 is located at 2420 Davis Drive, Goshen, Indiana;

(r) Plant 304 is located at 2775 Hackberry Drive, Goshen, Indiana; and

(s) Plant 311 is located at 2860 Hackberry Drive, Goshen, Indiana.

These plants are located on contiguous or adjacent properties, have the same SIC codes and are under common control, therefore they are considered one (1) source, as defined by 326 IAC 2-7-1(22).

Notes:

(a) 2642 Hackberry Drive, Goshen, Indiana is considered the main address of the source.

(b) The emissions units/operations are arranged by Plants.

(c) The Section D number indicated in brackets represents the corresponding Section D number of the permit.

Permitted Emission Units and Pollution Control Equipment

The source also consists of the following permitted emission unit:

Plant 20 - 2769 Elders Drive [Section D.11]

Five (5) lamination lines (identified as L1 through L5), constructed in 2007, used to manufacture exterior walls. Each lamination line has a maximum throughput capacity of 343.8 pounds of finished product per hour; and utilizes rollcoating application.

Emission Units and Pollution Control Equipment Constructed and Operated without a Permit

The source also consists of the following emission units that were constructed and are operating without a permit:

Plant 1 - 2525 Linden Drive [Section D.1]

(a) One (1) woodworking operation, identified as WW 1, constructed in 2002, with a maximum throughput of 3,128 pounds per hour, controlled by dust collectors DC1-1 through DC7-1.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 1, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics

(e) One (1) repair operation, identified as RO 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray

cans to coat plastic and metal substrates, and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates.

(g) One (1) final finishing operation, identified as FF 1, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 2 - 2478 Davis Drive [Section D.2]

(a) One (1) woodworking operation, identified as WW 2, constructed in 2004, with a maximum throughput of 2,705 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 2, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 2, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 3 - 2855 Hackberry Drive [Section D.3]

(a) One (1) woodworking operation, identified as WW 3, constructed in 2003, with a maximum throughput of 2,720 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 3, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans and uses less than five (5) gallons of coating per day.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates and uses less than five (5) gallons of coating per day.

(f) One (1) touch-up painting station, identified as TP 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates and uses less than five (5) gallons of coating per day.

(g) One (1) final finishing operation, identified as FF 3, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 4 - 2400 East Kercher Drive [Section D.4]

(a) One (1) woodworking operation, identified as WW 4, constructed in 2002, with a maximum throughput of 3,415.5 pounds per hour, controlled by dust collectors DC1-4 through DC7-4.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 4, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 4, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plants 6 - 2642 Hackberry Drive [Section D.5]

(a) One (1) woodworking operation, identified as WW 6, constructed in 1998 and 1999, with a maximum throughput of 161.25 pounds per hour, controlled by dust collectors DC1-6 and DC2-6.

(b) One (1) surface coating operation, for adhesive application, identified as AA 6, constructed in 2004, with a maximum throughput of 344 wood pieces per hour, utilizing brush application to coat wood and fabric.

Plant 7 - 2530 Linden Drive [Section D.6]

(a) One (1) woodworking operation, identified as WW 7, constructed in 2002, with a maximum throughput of 2,910.32 pounds per hour, controlled by dust collectors DC1-3 through DC7-3.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 7, constructed in 2002, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal substrates.

(g) One (1) final finishing operation, identified as FF 7, constructed in 2002, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 8 - 2425 Davis Drive [Section D.7]

(a) One (1) service repair operation, identified as SR 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

(b) One (1) touch-up painting station, identified as TP 8, constructed in 2006, with a maximum throughput of 0.10 RV units per hour, utilizing HVLP application and aerosol spray cans to coat metal and plastic substrates.

(c) One (1) parts washer, identified as PW-8, constructed in 2006, with an annual solvent throughput of 100 gallons.

Plant 12 - 2833 Sourwood Drive [Section D.8]

(a) One (1) woodworking operation, identified as WW 12, constructed in 1997, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 12, constructed in 1997, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 12, constructed in 1997, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 14 - 2442 Davis Drive [Section D.9]

(a) One (1) woodworking operation, identified as WW 14, constructed in 2005, with a maximum throughput of 2,975.2 pounds per hour, controlled by dust collectors DC1-14 through DC7-14.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 14, constructed in 2005, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 14, constructed in 2005, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 19 - 2431 E. Kercher Drive [Section D.10]

(a) One (1) woodworking operation, identified as WW 19, constructed in 2006, with a maximum throughput of 2,908 pounds per hour, controlled by dust collectors DC1-2 through DC7-2.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 19, constructed in 2006, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 19, constructed in 2006, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 23 - 2694 Hackberry Drive [Section D.11]

Four (4) laminating machines, identified as S1 through S4, constructed in 2005, utilizing roll coating for coating application, with a maximum throughput of 40 sidewalls per hour.

Plant 29 - 2462 Hackberry Drive [Section D.12]

One (1) woodworking operation, identified as WW 29, constructed in 2004, with a maximum throughput of 6,464 pounds per hour, controlled by dust collectors DC1-29 and DC2-29.

Plant 31 - 2642 Hackberry Drive [Section D.13]

(a) One (1) woodworking operation, identified as WW 31, constructed in 1996, with a maximum throughput of 2,139.2 pounds per hour, controlled by dust collectors DC1-31 through DC7-31.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 31, constructed in 1996, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 31, constructed in 1996, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 50 - 2420 Davis Drive [Section D.14]

(a) One (1) woodworking operation, identified as WW 50, constructed in 2004, with a maximum throughput of 3,278.5 pounds per hour, controlled by dust collectors DC1-50 through DC7-50.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 50, constructed in 2004, with a maximum throughput of four (4) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 50, constructed in 2004, with a maximum throughput of four (4) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 304 - 2775 Hackberry Drive [Section D.15]

(a) One (1) woodworking operation, identified as WW 304, constructed in 2003, with a maximum throughput of 2,114.6 pounds per hour, controlled by dust collectors DC1-304 through DC7-304.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 304, constructed in 2003, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 304, constructed in 2003, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Plant 311 - 2860 Hackberry Drive [Section D.16]

(a) One (1) woodworking operation, identified as WW 311, constructed in 2004, with a maximum throughput of 3,344.7 pounds per hour, controlled by dust collectors DC1-311 through DC7-311.

(b) One (1) surface coating operation, for chassis preparation, identified as CP 311, constructed in 2004, with a maximum throughput of three (3) prefabricated steel frames per hour, utilizing brush application and aerosol spray cans.

(c) One (1) surface coating operation, for subfloor installation, identified as SF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application to coat wood and metal.

(d) One (1) assembly operation, identified as AL0 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, wood, fabric, and plastics.

(e) One (1) repair operation, identified as RO 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat plastic and metal substrates.

(f) One (1) touch-up painting station, identified as TP 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing HVLP application and aerosol spray cans to coat plastic substrates.

(g) One (1) final finishing operation, identified as FF 311, constructed in 2004, with a maximum throughput of three (3) RV units per hour, utilizing brush application and aerosol spray cans to coat metal, plastic, and wood substrates.

Insignificant Activities

Plant 1 - 2525 Linden Drive [Section D.1]

(a) Three (3) natural gas-fired space heaters, identified as TC1-1 through TC3-1, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-1, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 1, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting operation, identified as MPE 1, constructed in 2002, with a maximum throughput of 269.1 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 2 - 2478 Davis Drive [Section D.2]

(a) Three (3) natural gas-fired space heaters, identified as TC1-2 through TC3-2, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-2, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 2, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per

hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 2, constructed in 2004, with a maximum throughput of 330 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 3 - 2855 Hackberry Drive [Section D.3]

(a) Three (3) natural gas-fired space heaters, identified as TC1-3 through TC3-3, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-3, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 3, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 3, constructed in 2003, with a maximum throughput of 234 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 4 - 2400 East Kercher Drive [Section D.4]

(a) Three (3) natural gas-fired space heaters, identified as TC1-4 through TC3-4, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-4, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 4, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 4, constructed in 2002, with a maximum throughput of 417 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 6 - 2642 Hackberry Drive [Section D.5]

(a) Three (3) natural gas-fired space heaters, identified as TC1-6 through TC3-6, constructed in 1998, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-6, constructed in 1998, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) miscellaneous woodworking operation, identified as MPE 6, constructed in 1998, with a maximum throughput of 156.32 lbs of wood pieces per hour.

Plant 7 - 2530 Linden Drive [Section D.6]

(a) Three (3) natural gas-fired space heaters, identified as TC1-7 through TC3-7, constructed in 2002, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-7, constructed in 2002, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 7, constructed in 2002, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 7, constructed in 2002, with a maximum throughput of 250.4 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 8 - 2425 Davis Drive [Section D.7]

(a) Three (3) natural gas-fired space heaters, identified as TC1-8 through TC3-8, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-8, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 8, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 0.10 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.05 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

Plant 12- 2833 Sourwood Drive [Section D.8]

(a) Three (3) natural gas-fired space heaters, identified as TC1-12 through TC3-12, constructed in 1997, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-12, constructed in 1997, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 12, constructed in 1997, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 12, constructed in 1997, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 14- 2442 Davis Drive [Section D.9]

(a) Three (3) natural gas-fired space heaters, identified as TC1-14 through TC3-14, constructed in 2005, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-14, constructed in 2005, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 14, constructed in 2005, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 14, constructed in 2005, with a maximum throughput of 363.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 18 - 2719 Hackberry Drive

(a) One (1) natural gas-fired space heater, identified as TC1-18, constructed in 2004, with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-18, constructed in 2004, with a maximum heat input of 0.15 million British thermal units per hour.

Plant 19 - 2431 E. Kercher Drive [Section D.10]

(a) Seven (7) natural gas-fired space heaters, identified as R1-19 through R7-19, constructed in 1998, each with a maximum heat input of 0.15 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-19 and SH2-19, constructed in 1998, each with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 19, constructed in 2006, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 19, constructed in 2006, with a maximum throughput of 348.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 20 - Emission Units - 2769 Elders Drive [Section D.11]

(a) Twenty-eight (28) metal inert gas (MIG) welding stations, each with a maximum wire consumption rate of 1.71 pounds per hour.

(b) Two (2) table saws used to cut styrofoam, identified as MPE 20.

(c) Twenty-six (26) natural gas-fired space heaters, identified as R1-20 through R26-20, constructed in 2004, each with a maximum heat input of 0.15 million British thermal units per hour.

(d) Two (2) natural gas-fired space heaters, identified as SH1-20 and SH2-20, constructed in 2004, each with a maximum heat input of 0.25 million British thermal units per hour.

Plant 23 - Emission Units - 2694 Hackberry Drive

(a) One (1) natural gas-fired space heater, identified as R1, constructed in 2005, with a maximum heat input of 1.5 million British thermal units per hour.

(b) One (1) welding and cutting operation, identified as WC 1, constructed in 2005, including seventy (70) metal inert gas (MIG) welders, with a maximum throughput of 1.2 lb electrode per hour.

Plant 29 - 2642 Hackberry Drive [Section D.12]

(a) One (1) miscellaneous woodworking operation, identified as MPE 29, constructed in 2004, with a maximum throughput of 6,450 lbs of wood parts per hour.

Plant 31 - 2642 Hackberry Drive [Section D.13]

(a) Three (3) natural gas-fired space heaters, identified as TC1-31 through TC3-31, constructed in 1996, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) Two (2) natural gas-fired space heaters, identified as SH1-31 and SH2-31, constructed in 1996, each with a maximum heat input of 0.50 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 31, constructed in 1996, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 31, constructed in 1996, with a maximum throughput of 261.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 50- 2420 Davis Drive [Section D.14]

(a) Three (3) natural gas-fired space heaters, identified as TC1-50 through TC3-50, constructed in 2006, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-50, constructed in 2006, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 50, constructed in 2004, including two (2) metal inert gas (MIG) welders, with a maximum throughput of 1.0 lb electrode per hour each, and two (2) stick welders, with a maximum throughput of 0.50 lbs electrode per hour each, and two (2) oxyacetylene cutting torches.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 50, constructed in 2004, with a maximum throughput of 400 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 304 - 2775 Hackberry Drive [Section D.15]

(a) Three (3) natural gas-fired space heaters, identified as TC1-304 through TC3-304, constructed in 2003, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-304, constructed in 2003, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 304, constructed in 2003, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting or machining operation, identified as MPE 304, constructed in 2003, with a maximum throughput of 258.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

Plant 311 - 2860 Hackberry Drive [Section D.16]

(a) Three (3) natural gas-fired space heaters, identified as TC1-311 through TC3-311, constructed in 2004, each with a maximum heat input of 0.58 million British thermal units per hour.

(b) One (1) natural gas-fired space heater, identified as SH1-311, constructed in 2004, with a maximum heat input of 0.25 million British thermal units per hour.

(c) One (1) welding and cutting operation, identified as WC 311, constructed in 2004, including one (1) metal inert gas (MIG) welder, with a maximum throughput of 1.0 lb electrode per hour, and one (1) stick welder, with a maximum throughput of 0.50 lbs electrode per hour, and one (1) oxyacetylene cutting torch.

(d) One (1) miscellaneous cutting/machining operation, identified as MPE 311, constructed in 2004, with a maximum throughput of 408.0 lbs of PVC pipe, aluminum tubing, and miscellaneous wood parts per hour.

All Facilities

(a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs less than twelve thousand (12,000) gallons, including:

(1) Tank T1, with a maximum capacity of 1,000 gallons, for the storage of gasoline.

(2) Tank T2, with a maximum capacity of 500 gallons, for the storage of diesel fuel.

Existing Approvals

Since the issuance of the MSOP 039-17647-00560 to Plant 20 on February 2, 2006, there have been no other approvals issued to this source.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit.

All previous permits are superseded by this permit.

Enforcement Issue

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the section entitled “Emission Units and Pollution Control Equipment Constructed and Operated without a Permit”.

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

Emission Calculations

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter from the woodworking operations were calculated after consideration of the controls.

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective July 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X. The 1-hour standard was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards

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

(2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Elkhart as attainment for the 8-hour ozone standard.

(3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Elkhart as attainment for the 8-hour ozone standard.

(4) 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 ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Elkhart County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(c) Elkhart County has been classified as attainment or unclassifiable in Indiana for SO2, NO_2, Pb, CO and PM_{10}. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD applicability.

Unrestricted Potential Emissions

These tables reflect the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	88.12
PM_{10}	89.06
$PM_{2.5}$	89.06
SO_2	0.11
VOC	696
CO	14.1
NO_x	16.8

HAPs	tons/year
MDI	14.6
Hexane	20.2
Toluene	30.1
Other HAP	7.92
Total	72.8

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their VOC emissions to less than Title V levels, therefore the source will be issued a New Source Construction and FESOP.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their single HAP emissions and total HAP emissions below Title V limits. Therefore, the source will be issued a New Source Construction and FESOP.

(d) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the most recent emission data provided by the source (2006).

Pollutant	Actual Emissions (tons/year)
PM	--
PM_{10}	--
SO_2	--
VOC	45.19
CO	--
NO_x	--
Hexane	1.98
Toluene	4.06
Total HAP	9.28

"--" Not provided.

Potential to Emit After Issuance

The source has opted to be a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/year)						
Process/ Emission Unit	**PM**	**PM_{10}/ $PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAP (total)**
Plant 1	5.66	5.71	0.01	All Surface Coating Operations are limited to <96.1 tons per year*	0.73	0.87	All Surface Coating Operations are limited to <8.4 tons per year of a single HAP and less than 23.4 tons per year of total HAP*
Plant 2	5.68	5.73	0.01		0.73	0.87	
Plant 3	5.34	5.39	0.01		0.73	0.87	
Plant 4	7.02	7.07	0.01		0.73	0.87	
Plant 6	1.34	1.39	0.01		1.45	1.73	
Plant 7	5.49	5.54	0.01		0.73	0.87	
Plant 8	0.41	0.46	0.01		0.73	0.87	
Plant 12	6.31	6.36	0.01		0.73	0.87	
Plant 14	6.52	6.57	0.01		0.73	0.87	
Plant 18	0.01	0.02	0.00		0.27	0.32	
Plant 19	6.41	6.52	0.01		0.73	0.87	
Plant 20	6.86	6.97	0.00		0.20	0.22	
Plant 23	1.93	1.96	0.00		0.55	0.66	
Plant 27	0.01	0.02	0.00		0.26	0.31	

	Potential to Emit (tons/year)						
Process/ Emission Unit	**PM**	**PM_{10}/ $PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAP (total)**
Plant 29	1.79	1.79	0.00		0.26	0.31	
Plant 31	5.60	5.67	0.01		1.01	1.20	
Plant 50	9.18	9.23	0.01		1.93	1.62	
Plant 304	5.55	5.60	0.01		0.73	0.87	
Plant 311	6.93	6.98	0.01		0.73	0.87	
Total	**88.1**	**89.1**	**0.11**	**99.9**	**14.1**	**16.8**	**9.9/24.9**
Part 70 Threshold	**N/A**	**100**	**100**	**100**	**100**	**100**	**10/25**
PSD Major Source Threshold	**250**	**250**	**250**	**250**	**250**	**250**	**--**

* The surface coating operations, including chassis prep, assembly, subfloor assembly, repair, touch-up, and final finish operations, at each plant are limited to less than 96.1 tons per year per 326 IAC 2-2. The emissions of VOC from natural gas combustion at these sources totals 1.75 tons per year.

Federal Rule Applicability

(a) The facilities are not subject to CAM because this source is not required to obtain a part 70 or 71 permit.

(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) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, are not included in the permit for the insignificant petroleum liquid storage tanks because the maximum capacity of each tank is less than 75 m^3.

(d) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations 40 CFR 60.390, Subpart MM, are not included in the permit for the recreational vehicle surface coating operations because this facility manufactures towable recreational vehicles, which do not meet the definition of an automobile or light duty truck.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, 40 CFR 63.3080, Subpart IIII, Surface Coating of Automobiles and Light-Duty Trucks, are not included in this permit because this facility manufactures towable recreational vehicles, which do not meet the definition of an automobile or light-duty truck as defined under 40 CFR 63.3176.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, 40 CFR 63.460, Subpart T, for Halogenated Solvent Cleaning, are not included in this permit because the parts washers at this facility do not use HAP-containing solvents.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Parts and Products, 40 CFR 63.5780 Subpart WWWW, are not included in the permit for this source because this source only applies surface coating to the plastic parts and does not manufacture plastic parts. Therefore, this source does not meet the definition of a reinforced plastic parts manufacturing source.

(h) The requirements of 40 CFR Part 63, Subpart JJ (National Emission Standard for Surface Coating of Wood Furniture) are not included in this permit for this source because the products manufactured at the source do not meet the definition of wood furniture or wood furniture components as listed at 40 CFR 63.801. Subpart JJ defines wood furniture as "any product made of wood…that is manufactured under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712." A wood furniture component is defined as "any part that is used in the manufacture of wood furniture."

This source's operation is described by standard industrial classification (SIC) code 3792, Travel Trailers and Campers. SIC Code 3792 is not listed in the definition of wood furniture.

(i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for (40 CFR Part 63, Subpart MMMM (National Emission Standards for Surface Coating of Miscellaneous Metal Parts and Products), are not included in the permit for this source because this facility has accepted federally enforceable emission limits under 326 IAC 2-8 to limit HAP emissions to less than 10 tons per year of a single HAP and less than 25 tons per year of total HAP.

This source determined that they have demonstrated compliance with these limits since January 2, 2007.

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants for (40 CFR Part 63, Subpart PPPP (National Emission Standards for Surface Coating of Plastic Parts and Products) are not included in the permit for this source because this facility has accepted federally enforceable emission limits under 326 IAC 2-8 to limit HAP emissions to less than 10 tons per year of a single HAP and less than 25 tons per year of total HAP.

This source determined that they have demonstrated compliance with these limits since April 19, 2007.

(k) The requirements of the National Emission Standards for Hazardous Air Pollutants for (40 CFR Part 63, Subpart HHHHHH (Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources) are not included in the permit for this rule applies to coatings of products made of metal, plastic or combination of plastic and metal that are not motor vehicles or mobile equipment. Even though Manganese (one of the target HAPs) is emitted, the source paints product that are motor vehicles or mobile equipment.

State Rule Applicability - Entire Source

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

This source consists of nineteen (19) individual facilities which were constructed at various times between 1995 and 2007. These facilities were determined to be collocated sources in September 2006. This source is not one of the 28 source categories. All of the emission units located at this source was constructed after the promulgation of the Prevention of Significant Deterioration (PSD) and Non-Attainment Area New Source Review regulations. Several emission units were constructed after June 15, 2004, when Elkhart County was designated as Non-Attainment for 8-hr ozone. As of November 7, 2007, Elkhart County has been re-designated as attainment for 8-hr ozone.

The potential to emit VOC from the source is greater than 250 tons per year. However, the source has accepted limits on the VOC emissions less than 96.1 tons per year. Therefore, this source is a minor source under 326 IAC 2-2 (PSD).

The source claimed that source-wide historical VOC emissions from these facilities has never exceeded 100 tons per year, the Permittee has accepted federally-enforceable limits on the input of VOC to the all surface coating operations such that total source VOC emissions remain less

than 100 tons per year. These limits are necessary to ensure the facilities are a minor source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

(a) The VOC input to all surface coating operations, and associated clean up activities, shall not exceed 96.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The following surface coating operations are limited under 326 IAC 2-2 and 326 IAC 2-7:

PLANT ID	EMISSION ID	Limit
Plant 1	Chassis Preparation (CP 1)	Less than 96.1 tons per year VOC
Plant 1	Subfloor Installation (SF 1)	
Plant 1	Assembly Operations (ALO 1)	
Plant 1	Repair Operations (RO 1)	
Plant 1	Touch Up (TP 1)	
Plant 1	Final Finish (FF 1)	
Plant 2	Chassis Preparation (CP 2)	
Plant 2	Subfloor Installation (SF 2)	
Plant 2	Assembly Operations (ALO 2)	
Plant 2	Repair Operations (RO 2)	
Plant 2	Touch Up (TP 2)	
Plant 2	Final Finish (FF 2)	
Plant 3	Chassis Preparation (CP 3)	
Plant 3	Subfloor Installation (SF 3)	
Plant 3	Assembly Operations (ALO 3)	
Plant 3	Repair Operations (RO 3)	
Plant 3	Touch Up (TP 3)	
Plant 3	Final Finish (FF 3)	
Plant 4	Chassis Preparation (CP 4)	
Plant 4	Subfloor Installation (SF 4)	
Plant 4	Assembly Operations (ALO 4)	
Plant 4	Repair Operations (RO 4)	
Plant 4	Touch Up (TP 4)	
Plant 4	Final Finish (FF 4)	
Plant 6	Adhesive Application (AA 6)	
Plant 7	Chassis Preparation (CP 7)	
Plant 7	Subfloor Installation (SF 7)	
Plant 7	Assembly Operations (ALO 7)	
Plant 7	Repair Operations (RO 7)	
Plant 7	Touch Up (TP 7)	
Plant 7	Final Finish (FF 7)	
Plant 8	Touch Up (TP 8)	
Plant 8	Service/Repair (SR 8)	
Plant 12	Chassis Preparation (CP 12)	
Plant 12	Subfloor Installation (SF 12)	
Plant 12	Assembly Operations (ALO 12)	
Plant 12	Repair Operations (RO 12)	
Plant 12	Touch Up (TP 12)	
Plant 12	Final Finish (FF 12)	
Plant 14	Chassis Preparation (CP 14)	
Plant 14	Subfloor Installation (SF 14)	
Plant 14	Assembly Operations (ALO 14)	
Plant 14	Repair Operations (RO 14)	
Plant 14	Touch Up (TP 14)	
Plant 14	Final Finish (FF 14)	
Plant 19	Chassis Preparation (CP 19)	
Plant 19	Subfloor Installation (SF 19)	
Plant 19	Assembly Operations (ALO 19)	

PLANT ID	EMISSION ID	Limit
Plant 19	Repair Operations (RO 19)	
Plant 19	Touch Up (TP 19)	
Plant 19	Final Finish (FF 19)	
Plant 20	Laminators (L1 through L5)	
Plant 31	Chassis Preparation (CP 31)	
Plant 31	Subfloor Installation (SF 31)	
Plant 31	Assembly Operations (ALO 31)	
Plant 31	Repair Operations (RO 31)	
Plant 31	Touch Up (TP 31)	
Plant 31	Final Finish (FF 31)	
Plant 50	Chassis Preparation (CP 50)	
Plant 50	Subfloor Installation (SF 50)	
Plant 50	Assembly Operations (ALO 50)	
Plant 50	Repair Operations (RO 50)	
Plant 50	Touch Up (TP 50)	
Plant 50	Final Finish (FF 50)	
Plant 304	Chassis Preparation (CP 304)	
Plant 304	Subfloor Installation (SF 304)	
Plant 304	Assembly Operations (ALO 304)	
Plant 304	Repair Operations (RO 304)	
Plant 304	Touch Up (TP 304)	
Plant 304	Final Finish (FF 304)	
Plant 311	Chassis Preparation (CP 311)	
Plant 311	Subfloor Installation (SF 311)	
Plant 311	Assembly Operations (ALO 311)	
Plant 311	Repair Operations (RO 311)	
Plant 311	Touch Up (TP 311)	
Plant 311	Final Finish (FF 311)	

This limit is structured so that when VOC emissions are included from natural gas combustion activities and other insignificant activities, the source-wide potential to emit of VOC remains less than 100 tons per year. Therefore, 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) are not applicable to this source.

Plant ID	PTE of VOC (tons/year)
Limited Emission Units	96.1
Insignificant Activities	3.80
Total Source PTE	**99.9**

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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

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

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

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

The operation of this facility has the potential to emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 would have applied to these facilities. However, actual emissions of single and total HAP pollutants from this facility have never exceeded the major source thresholds.

The source has agreed to limit their single HAP emissions and total HAP emissions below the major source thresholds as follows:

The HAP input to all surface coating operations, and associated clean up activities, shall not exceed 8.4 tons of any single HAP, or 23.4 tons of total HAP per twelve (12) consecutive month period with compliance determined at the end of each month.

The following surface coating operations are limited under 326 IAC 2-4.1:

PLANT ID	EMISSION ID	Limit
Plant 1	Chassis Preparation (CP 1)	Less than 8.4 tons per year of any single HAP, and less than 23.4 tons per year total HAP*
Plant 1	Subfloor Installation (SF 1)	
Plant 1	Assembly Operations (ALO 1)	
Plant 1	Repair Operations (RO 1)	
Plant 1	Touch Up (TP 1)	
Plant 1	Final Finish (FF 1)	
Plant 2	Chassis Preparation (CP 2)	
Plant 2	Subfloor Installation (SF 2)	
Plant 2	Assembly Operations (ALO 2)	
Plant 2	Repair Operations (RO 2)	
Plant 2	Touch Up (TP 2)	
Plant 2	Final Finish (FF 2)	
Plant 3	Chassis Preparation (CP 3)	
Plant 3	Subfloor Installation (SF 3)	
Plant 3	Assembly Operations (ALO 3)	
Plant 3	Repair Operations (RO 3)	
Plant 3	Touch Up (TP 3)	
Plant 3	Final Finish (FF 3)	
Plant 4	Chassis Preparation (CP 4)	
Plant 4	Subfloor Installation (SF 4)	
Plant 4	Assembly Operations (ALO 4)	
Plant 4	Repair Operations (RO 4)	
Plant 4	Touch Up (TP 4)	
Plant 4	Final Finish (FF 4)	
Plant 6	Adhesive Application (AA 6)	
Plant 7	Chassis Preparation (CP 7)	
Plant 7	Subfloor Installation (SF 7)	
Plant 7	Assembly Operations (ALO 7)	
Plant 7	Repair Operations (RO 7)	
Plant 7	Touch Up (TP 7)	
Plant 7	Final Finish (FF 7)	
Plant 8	Touch Up (TP 8)	
Plant 8	Service/Repair (SR 8)	
Plant 12	Chassis Preparation (CP 12)	
Plant 12	Subfloor Installation (SF 12)	
Plant 12	Assembly Operations (ALO 12)	
Plant 12	Repair Operations (RO 12)	
Plant 12	Touch Up (TP 12)	
Plant 12	Final Finish (FF 12)	
Plant 14	Chassis Preparation (CP 14)	

PLANT ID	EMISSION ID	Limit
Plant 14	Subfloor Installation (SF 14)	
Plant 14	Assembly Operations (ALO 14)	
Plant 14	Repair Operations (RO 14)	
Plant 14	Touch Up (TP 14)	
Plant 14	Final Finish (FF 14)	
Plant 19	Chassis Preparation (CP 19)	
Plant 19	Subfloor Installation (SF 19)	
Plant 19	Assembly Operations (ALO 19)	
Plant 19	Repair Operations (RO 19)	
Plant 19	Touch Up (TP 19)	
Plant 19	Final Finish (FF 19)	
Plant 20	Laminators (L1 through L5)	
Plant 31	Chassis Preparation (CP 31)	
Plant 31	Subfloor Installation (SF 31)	
Plant 31	Assembly Operations (ALO 31)	
Plant 31	Repair Operations (RO 31)	
Plant 31	Touch Up (TP 31)	
Plant 31	Final Finish (FF 31)	
Plant 50	Chassis Preparation (CP 50)	
Plant 50	Subfloor Installation (SF 50)	
Plant 50	Assembly Operations (ALO 50)	
Plant 50	Repair Operations (RO 50)	
Plant 50	Touch Up (TP 50)	
Plant 50	Final Finish (FF 50)	
Plant 304	Chassis Preparation (CP 304)	
Plant 304	Subfloor Installation (SF 304)	
Plant 304	Assembly Operations (ALO 304)	
Plant 304	Repair Operations (RO 304)	
Plant 304	Touch Up (TP 304)	
Plant 304	Final Finish (FF 304)	
Plant 311	Chassis Preparation (CP 311)	
Plant 311	Subfloor Installation (SF 311)	
Plant 311	Assembly Operations (ALO 311)	
Plant 311	Repair Operations (RO 311)	
Plant 311	Touch Up (TP 311)	
Plant 311	Final Finish (FF 311)	

This limit is structured so that when HAP emissions are included from welding, natural gas combustion activities, and other insignificant activities, the source-wide potential to emit of HAP remains less than the major source thresholds.

Plant ID	PTE of single HAP (tons/year)	PTE of total HAP (tons/year)
Limited Emission Units	8.4	23.4
Insignificant Activities	1.48 (Manganese)	1.55
Total Source PTE	**9.9**	**24.9**

Therefore, 326 IAC 2-4.1 (MACT) is not applicable to this source.

326 IAC 2-8 (FESOP)

The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC from this facility is greater than 100 tons per year, the potential to emit of any single HAP is greater than ten (10) tons per year, and the potential to emit of a combination of HAPs is greater than twenty-five (25) tons per year. However, the actual emissions from this facility have never exceeded major source thresholds.

The source has requested minor source limits for VOC and HAP for the surface coating and woodworking operations at this facility, pursuant to 326 IAC 2-8.

(a) The VOC input to all surface coating operations, and associated clean up activities, shall not exceed 96.1 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The following surface coating operations are limited under 326 IAC 2-8:

PLANT ID	EMISSION ID	Limit
Plant 1	Chassis Preparation (CP 1)	Less than 96.1 tons per year VOC
Plant 1	Subfloor Installation (SF 1)	
Plant 1	Assembly Operations (ALO 1)	
Plant 1	Repair Operations (RO 1)	
Plant 1	Touch Up (TP 1)	
Plant 1	Final Finish (FF 1)	
Plant 2	Chassis Preparation (CP 2)	
Plant 2	Subfloor Installation (SF 2)	
Plant 2	Assembly Operations (ALO 2)	
Plant 2	Repair Operations (RO 2)	
Plant 2	Touch Up (TP 2)	
Plant 2	Final Finish (FF 2)	
Plant 3	Chassis Preparation (CP 3)	
Plant 3	Subfloor Installation (SF 3)	
Plant 3	Assembly Operations (ALO 3)	
Plant 3	Repair Operations (RO 3)	
Plant 3	Touch Up (TP 3)	
Plant 3	Final Finish (FF 3)	
Plant 4	Chassis Preparation (CP 4)	
Plant 4	Subfloor Installation (SF 4)	
Plant 4	Assembly Operations (ALO 4)	
Plant 4	Repair Operations (RO 4)	
Plant 4	Touch Up (TP 4)	
Plant 4	Final Finish (FF 4)	
Plant 6	Adhesive Application (AA 6)	
Plant 7	Chassis Preparation (CP 7)	
Plant 7	Subfloor Installation (SF 7)	
Plant 7	Assembly Operations (ALO 7)	
Plant 7	Repair Operations (RO 7)	
Plant 7	Touch Up (TP 7)	
Plant 7	Final Finish (FF 7)	
Plant 8	Touch Up (TP 8)	
Plant 8	Service/Repair (SR 8)	
Plant 12	Chassis Preparation (CP 12)	
Plant 12	Subfloor Installation (SF 12)	
Plant 12	Assembly Operations (ALO 12)	
Plant 12	Repair Operations (RO 12)	
Plant 12	Touch Up (TP 12)	
Plant 12	Final Finish (FF 12)	
Plant 14	Chassis Preparation (CP 14)	
Plant 14	Subfloor Installation (SF 14)	
Plant 14	Assembly Operations (ALO 14)	
Plant 14	Repair Operations (RO 14)	
Plant 14	Touch Up (TP 14)	
Plant 14	Final Finish (FF 14)	
Plant 19	Chassis Preparation (CP 19)	

PLANT ID	EMISSION ID	Limit
Plant 19	Subfloor Installation (SF 19)	
Plant 19	Assembly Operations (ALO 19)	
Plant 19	Repair Operations (RO 19)	
Plant 19	Touch Up (TP 19)	
Plant 19	Final Finish (FF 19)	
Plant 20	Laminators (L1 through L5)	
Plant 31	Chassis Preparation (CP 31)	
Plant 31	Subfloor Installation (SF 31)	
Plant 31	Assembly Operations (ALO 31)	
Plant 31	Repair Operations (RO 31)	
Plant 31	Touch Up (TP 31)	
Plant 31	Final Finish (FF 31)	
Plant 50	Chassis Preparation (CP 50)	
Plant 50	Subfloor Installation (SF 50)	
Plant 50	Assembly Operations (ALO 50)	
Plant 50	Repair Operations (RO 50)	
Plant 50	Touch Up (TP 50)	
Plant 50	Final Finish (FF 50)	
Plant 304	Chassis Preparation (CP 304)	
Plant 304	Subfloor Installation (SF 304)	
Plant 304	Assembly Operations (ALO 304)	
Plant 304	Repair Operations (RO 304)	
Plant 304	Touch Up (TP 304)	
Plant 304	Final Finish (FF 304)	
Plant 311	Chassis Preparation (CP 311)	
Plant 311	Subfloor Installation (SF 311)	
Plant 311	Assembly Operations (ALO 311)	
Plant 311	Repair Operations (RO 311)	
Plant 311	Touch Up (TP 311)	
Plant 311	Final Finish (FF 311)	

This limit is structured so that when VOC emissions are included from natural gas combustion activities and other insignificant activities, the source-wide potential to emit of VOC remains less than 100 tons per year.

Plant ID	PTE of VOC (tons/year)
Limited Emission Units	96.1
Insignificant Activities	3.80
Total Source PTE	**99.9**

Therefore, 326 IAC 2-7 (Part 70) is not applicable to this source.

(b) The HAP input to all surface coating operations, and associated clean up activities, shall not exceed 8.4 tons of any single HAP, or 23.4 tons of total HAP per twelve (12) consecutive month period with compliance determined at the end of each month.

The following surface coating operations are limited under 326 IAC 2-8:

PLANT ID	EMISSION ID	Limit
Plant 1	Chassis Preparation (CP 1)	Less than 8.4 tons per year of any single HAP, and less than 23.4 tons per year total HAP*
Plant 1	Subfloor Installation (SF 1)	
Plant 1	Assembly Operations (ALO 1)	
Plant 1	Repair Operations (RO 1)	
Plant 1	Touch Up (TP 1)	
Plant 1	Final Finish (FF 1)	

PLANT ID	EMISSION ID	Limit
Plant 2	Chassis Preparation (CP 2)	
Plant 2	Subfloor Installation (SF 2)	
Plant 2	Assembly Operations (ALO 2)	
Plant 2	Repair Operations (RO 2)	
Plant 2	Touch Up (TP 2)	
Plant 2	Final Finish (FF 2)	
Plant 3	Chassis Preparation (CP 3)	
Plant 3	Subfloor Installation (SF 3)	
Plant 3	Assembly Operations (ALO 3)	
Plant 3	Repair Operations (RO 3)	
Plant 3	Touch Up (TP 3)	
Plant 3	Final Finish (FF 3)	
Plant 4	Chassis Preparation (CP 4)	
Plant 4	Subfloor Installation (SF 4)	
Plant 4	Assembly Operations (ALO 4)	
Plant 4	Repair Operations (RO 4)	
Plant 4	Touch Up (TP 4)	
Plant 4	Final Finish (FF 4)	
Plant 6	Adhesive Application (AA 6)	
Plant 7	Chassis Preparation (CP 7)	
Plant 7	Subfloor Installation (SF 7)	
Plant 7	Assembly Operations (ALO 7)	
Plant 7	Repair Operations (RO 7)	
Plant 7	Touch Up (TP 7)	
Plant 7	Final Finish (FF 7)	
Plant 8	Touch Up (TP 8)	
Plant 8	Service/Repair (SR 8)	
Plant 12	Chassis Preparation (CP 12)	
Plant 12	Subfloor Installation (SF 12)	
Plant 12	Assembly Operations (ALO 12)	
Plant 12	Repair Operations (RO 12)	
Plant 12	Touch Up (TP 12)	
Plant 12	Final Finish (FF 12)	
Plant 14	Chassis Preparation (CP 14)	
Plant 14	Subfloor Installation (SF 14)	
Plant 14	Assembly Operations (ALO 14)	
Plant 14	Repair Operations (RO 14)	
Plant 14	Touch Up (TP 14)	
Plant 14	Final Finish (FF 14)	
Plant 19	Chassis Preparation (CP 19)	
Plant 19	Subfloor Installation (SF 19)	
Plant 19	Assembly Operations (ALO 19)	
Plant 19	Repair Operations (RO 19)	
Plant 19	Touch Up (TP 19)	
Plant 19	Final Finish (FF 19)	
Plant 20	Laminators (L1 through L5)	
Plant 31	Chassis Preparation (CP 31)	
Plant 31	Subfloor Installation (SF 31)	
Plant 31	Assembly Operations (ALO 31)	
Plant 31	Repair Operations (RO 31)	
Plant 31	Touch Up (TP 31)	
Plant 31	Final Finish (FF 31)	
Plant 50	Chassis Preparation (CP 50)	
Plant 50	Subfloor Installation (SF 50)	
Plant 50	Assembly Operations (ALO 50)	
Plant 50	Repair Operations (RO 50)	

PLANT ID	EMISSION ID	Limit
Plant 50	Touch Up (TP 50)	
Plant 50	Final Finish (FF 50)	
Plant 304	Chassis Preparation (CP 304)	
Plant 304	Subfloor Installation (SF 304)	
Plant 304	Assembly Operations (ALO 304)	
Plant 304	Repair Operations (RO 304)	
Plant 304	Touch Up (TP 304)	
Plant 304	Final Finish (FF 304)	
Plant 311	Chassis Preparation (CP 311)	
Plant 311	Subfloor Installation (SF 311)	
Plant 311	Assembly Operations (ALO 311)	
Plant 311	Repair Operations (RO 311)	
Plant 311	Touch Up (TP 311)	
Plant 311	Final Finish (FF 311)	

This limit is structured so that when HAP emissions are included from welding, natural gas combustion activities, and other insignificant activities, the source-wide potential to emit of single and total HAP remains less than the major source thresholds.

Plant ID	PTE of single HAP (tons/year)	PTE of total HAP (tons/year)
Limited Emission Units	8.4	23.4
Insignificant Activities	1.5 (Manganese)	1.55
Total Source PTE	**9.9**	**24.9**

Therefore, 326 IAC 2-7 (Part 70) is not applicable to this source.

326 IAC 6-4 (Fugitive Dust Emissions)

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

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

This source is not subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) because the potential to emit fugitive particulate matter is negligible.

State Rule Applicability – Plant 1 - 2525 Linden Drive [Section D.1]

Surface Coating Operations

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

(a) The chassis preparation operation, identified as CP1, the repair operation, identified as RO1, and the touch-up painting station, identified as TP1, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF1, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF1, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO1, is not subject to 326 IAC 6-3-2 because coatings are applied by brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the chassis assembly operations (identified as CP 1), the subfloor installation operations (identified as SF 1), the assembly operations (identified as ALO 1), the repair operations (identified as RO 1), the final finish operations (identified as FF1), and the touch-up painting station (identified as TP 1), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

(a) When painting metal, the assembly operations (identified as ALO 1), the chassis assembly operations (identified as CP 1), the subfloor installation operations (identified as SF1), the repair operations (identified as RO 1), the final finish operations (identified as FF1), and the touch-up painting station (identified as TP 1), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals in these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

(b) The foam sealants used in the chassis operations are not considered “protective, functional, or decorative films” as defined in 326 IAC 8-1-0.5.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 1), the repair operations (identified as RO 1), the subfloor installation operations (identified as SF 1), and the touch-up painting station (identified as TP 1), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric.

(b) The assembly operation (identified as ALO 1) and the final finish operations (identified as FF 1) are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or “vinyl coating” as defined in 326 IAC 8-2-11.

The assembly operations apply adhesives to fabric to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

The final finish operations apply polish to finished RV exteriors.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 1), the repair operations (identified as RO 1), and the touch-up painting station (identified as TP 1), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply adhesives to wood furnishings.

(b) When painting wood, the subfloor installation operations (identified as SF 1) and the final finish operations, identified as FF 1, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood furniture and cabinets are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 1) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and actual VOC emissions greater than 15 lbs/day. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are either not applied to wood furnishings or are applied in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 1, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 1 shall be limited to 5.53 pounds of particulate emissions per hour when operating at a process weight rate of 3,128 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-1 through DC7-1, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE-1) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these facilities are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-1 through TC3-1, and the one (1) natural gas-fired space heater, identified as SH1-1, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-1 through TC3-1, and the one (1) natural gas-fired space heater, identified as SH-1, are not subject to 326 IAC 6-2 because these heaters are not sources of indirect heating.

State Rule Applicability – Plant 2 - 2478 Davis Drive [Section D.2]

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

(a) The chassis preparation operation, identified as CP 2, the repair operation, identified as RO 2, and the touch-up painting station, identified as TP 2, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 2, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 2, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 2, is not subject to 326 IAC 6-3-2 because coatings are applied by brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the chassis assembly operations (identified as CP 2), the subfloor installation operations (identified as SF 2), the assembly operations (identified as ALO 2), the repair operations (identified as RO 2), the final finish operations (identified as FF2), and the touch-up painting station (identified as TP 2), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

(a) When painting metal, the assembly operations (identified as ALO 2), the chassis assembly operations (identified as CP 2), the subfloor installation operations (identified as SF 2), the repair operations (identified as RO 2), and the final finish operations (identified as FF 2), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals from these operations are less than fifteen (15) lbs per day. All other coatings in these operations are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 2) are not applied to metal substrates. Foam sealants used in the chassis operation do not meet the definition of coatings as a “protective, decorative, or functional film” under 326 IAC 8-1-0.5.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 2), and the subfloor installation operations (identified as SF2) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 2), the repair operations (identified as RO 2), the touch-up painting station (identified as TP 2), and the final finish operations (identified as FF 2) are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or vinyl coating” as described in 326 IAC 8-2-11.

The assembly operations apply adhesives to glue fabric and wood parts together, and cement and joint compounds to connect PVC pipes.

The touch-up and repair operations apply paint and body fillers to RV exteriors.

The final finish operations apply polishes to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 2), the repair operations (identified as RO 2), and the touch-up painting station (identified as TP 2), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) When painting wood, the subfloor installation operations (identified as SF 2) and the final finish operations, identified as FF 2, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 2) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and the actual VOC emissions exceed 15 lbs/day. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are either not applied to wood furnishings or are applied in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 2, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 2 shall be limited to 5.02 pounds of particulate emissions per hour when operating at a process weight rate of 2,705 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-2 through DC7-2, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 2) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 2) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-2 through TC3-2, and the one (1) natural gas-fired space heater, identified as SH1-2, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-2 through TC3-2, and the one (1) natural gas-fired space heater, identified as SH1-2, are not subject to 326 IAC 6-2 because these are not sources of indirect heating.

State Rule Applicability – Plant 3 - 2855 Hackberry Drive [Section D.3]

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

(a) The chassis preparation operation, identified as CP 3, the repair operation, identified as RO 3, and the touch-up painting station, identified as TP 3, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these

operations use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 3, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 3, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 3, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the chassis assembly operations (identified as CP 3), the subfloor installation operations (identified as SF 3), the assembly operations (identified as AL0 3), the repair operations (identified as RO 3), the final finish operations (identified as FF 3), and the touch-up painting station (identified as TP 3), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

The assembly operations (identified as ALO 3), the chassis assembly operations (identified as CP 3), the subfloor installation operations (identified as SF 3), the repair operations (identified as RO 3), the touch-up painting station (identified as TP 3), and the final finish operations (identified as FF 3), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals from these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 3), the subfloor installation operations (identified as SF 3), and the touch-up painting station (TP 3) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 3), the repair operations (identified as RO 3), and the final finish operations (identified as FF 3) are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or vinyl coating” as described in 326 IAC 8-2-11.

The assembly operations apply adhesives to glue fabric and wood parts together, and cement and joint compounds to connect PVC pipes.

The touch-up and repair operations apply paint and body fillers to RV exteriors.

The final finish facilities apply polishes to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 3), the repair operations (identified as RO 3), and the touch-up painting station (identified as TP 3), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) When painting wood, the subfloor installation operations (identified as SF 3) and the final finish operations (identified as FF 3) are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 3) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and the actual VOC emissions are greater than 15 lbs/day. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are not applied to wood furnishings.

Woodworking Operations

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

The woodworking operations, identified as WW 3, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 3 shall be limited to 5.04 pounds of particulate emissions per hour when operating at a process weight rate of 2,720 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-3 through DC7-3, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 3) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 3) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-3 through TC3-3, and the one (1) natural gas-fired space heater, identified as SH1-3, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-3 through TC3-3, and the one (1) natural gas-fired space heater, identified as SH1-2, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 4 - 2400 East Kercher Drive [Section D.4]

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

(a) The repair operation, identified as RO 4, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this operation uses less than five (5) gallons of coating per day, and is exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 4, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 4, and the chassis preparation operation, identified as CP 4, are not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The touch-up painting station, identified as TP 4 is not subject to 326 IAC 6-3-2 because this facility uses less than 5 gallons of coating per day. Therefore, these units are exempt per 326 IAC 6-3-1(b)(15).

(e) The assembly operation, identified as ALO 4, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 4), the subfloor installation operations (identified as SF 4), the assembly operations (identified as AL0 4), the repair operations (identified as RO 4), and the touch-up painting station (identified as TP 4), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

(b) The potential to emit from the final finish operations (identified as FF 4), constructed in 2002, exceeds twenty-five tons per year. Therefore, this facility should have been evaluated pursuant to 326 IAC 8-1-6 (Best Available Control Technology). However, the source has provided historical VOC emissions which indicate that the actual emissions from the final finish operations (FF 4) have never exceeded 25 tons per year. The Permittee has agreed to limit the VOC input to the final finish operations (FF 4) to less

than 25 tons per year when coating plastic. Compliance with these limits shall render the requirements of 326 IAC 8-1-6 not applicable.

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

(a) When painting metal, the assembly operations (identified as ALO 4), the repair operations (identified as RO 4), the chassis prep operations (CP 4), and the final finish operations (identified as FF 4), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals in each of these facilities are less than fifteen (15) lbs per day. All other coatings are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 4) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operation (CP 4) do not meet the definition of “coating” as a "protective, functional, or decorative film”, per 326 IAC 8-1-0.5.

(d) The subfloor operations (identified as SF 4) are subject to 326 IAC 8-2-9 because the potential to emit VOC from this facility is greater than 15 lbs per day. However, actual emissions from this operation have never exceeded 15 lbs/day. The subfloor operations (identified as SF 4) shall be limited to less than 15 lbs per day of VOC input. This limit is necessary to ensure that actual emissions do not exceed 15 lbs per day and that 326 IAC 8-2-9 is not applicable to this facility.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 4) and the subfloor installation operations (identified as SF 4) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 4), the repair operations (identified as RO 4), the touch-up painting station (identified as TP2), and the final finish operations (identified as FF 4) are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or vinyl coating” as described in 326 IAC 8-2-11.

The assembly operations apply adhesives to glue fabric and wood parts together, and cement and joint compounds to connect PVC pipes.

The touch-up and repair operations apply paint and body fillers to non-vinyl RV exteriors.

The final finish operations apply polishes to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 4), the repair operations (identified as RO 4), and the touch-up painting station (identified as TP 4), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these operations do not apply coatings to wood furnishings.

(b) The final finish operations, identified as FF 4, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 4) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and the actual emissions of VOC are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

(d) The subfloor operations (identified as SF 4) shall be limited to less than 15 lbs per day of VOC input. This limit is necessary to ensure that 326 IAC 8-2-12 is not applicable to this facility.

(e) The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 4, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 4 shall be limited to 5.87 pounds of particulate emissions per hour when operating at a process weight rate of 3,415.5 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-4 through DC7-4, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 4) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 4) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The three (3) natural gas fired space heaters, identified as TC1-4 through TC3-4, and the one (1) natural gas-fired space heater, identified as SH1-4, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The three (3) natural gas fired space heaters, identified as TC1-4 through TC3-4, and the one (1) natural gas-fired space heater, identified as SH1-4, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 6 - 2642 Hackberry Drive [Section D.5]

Surface Coating

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The adhesives application operation, identified as AA 6, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

326 IAC 8-1-6 (Best Available Control Technology)
The adhesives application operation (identified as AA 6), is not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from this facility is less than 25 tons per year.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)
The adhesives application operation (identified as AA 6) is not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because no coatings in this facility are applied to metal substrates.

326 IAC 8-2-11 (Fabric and vinyl coating)
The adhesive application operation (identified as AA 6) is not subject to 326 IAC 8-2-11 because this facility does not perform “fabric coating” or “vinyl coating” as described in 326 IAC 8-2-11. This facility applies adhesives to glue wood and fabric parts together.

326 IAC 8-2-12 (Wood furniture and cabinet coating)
The adhesive application operations (identified as AA 6) are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

Woodworking Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The woodworking operations, identified as WW 6, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 6 shall be limited to 0.76 pounds of particulate emissions per hour when operating at a process weight rate of 161.3 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-6 through DC2-6, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Miscellaneous Cutting or Machining Operations

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

The miscellaneous particulate operations (MPE 6) are not subject to 326 IAC 6-3 because the facilities have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-6 through TC3-6, and the one (1) natural gas-fired space heater, identified as SH1-6, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-6 through TC3-6, and the one (1) natural gas-fired space heater, identified as SH1-6, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 7 - 2530 Linden Drive [Section D.6]

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

(a) The repair operation, identified as RO 7, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this operation uses less than five (5) gallons of coating per day, and is exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 7, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 7, and the chassis preparation operation, identified as CP 7, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8).

Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The touch-up painting station, identified as TP 7 is not subject to 326 IAC 6-3-2 because the facility uses less than five (5) gallons per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(15).

(e) The assembly operation, identified as ALO 7, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the chassis assembly operations (identified as CP 7), the subfloor installation operations (identified as SF 7), the assembly operations (identified as ALO 7), the repair operations (identified as RO 7), the touch-up painting station (identified as TP 7), and the final finish operations (identified as FF 7), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

(a) When painting metal, the assembly operations (identified as ALO 7), the subfloor installation operations (SF 7), the repair operations (identified as RO 7), the chassis prep operations (CP 7), and the final finish operations (identified as FF 7), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals from each facility are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 7) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operation (CP 7) do not meet the definition of "coating" under 326 IAC 8-1-0.5 as a "protective, decorative, or functional film".

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 7), the touch-up painting station (TP 7), and the subfloor installation operations (identified as SF 7) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these operations do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 7), the repair operations (identified as RO 7), and the final finish operations (identified as FF 7) are not subject to 326 IAC 8-2-11 because these facilities do not perform "fabric coating" or vinyl coating" as described in 326 IAC 8-2-11.

The assembly operations apply adhesives to glue fabric and wood parts together, and cement and joint compounds to connect PVC pipes.

The repair operations apply body fillers to non-vinyl plastic parts.

The final finish operations apply polishes to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 7), the repair operations (identified as RO 7), and the touch-up painting station (identified as TP 7), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The subfloor installation operations (identified as SF 7) and the final finish operations, identified as FF 7, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 7) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and the actual VOC emissions are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

(d) The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 7, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 7 shall be limited to 5.27 pounds of particulate emissions per hour when operating at a process weight rate of 2,910.3 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-7 through DC7-7, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 7) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 7) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-7 through TC3-7, and the one (1) natural gas-fired space heater, identified as SH1-7, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-7 through TC3-7, and the one (1) natural gas-fired space heater, identified as SH1-7, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 8 - 2425 Davis Drive [Section D.7]

Surface Coating

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

The service and repair operation, identified as SR 8, and the touch-up paint operation, identified as TP 8, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the service and repair operations (identified as SR 8) and the touch-up painting operations (identified as TP 8), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

When painting metal, the service and repair operations (identified as SR 8) and the touch-up painting operations (identified as TP 8), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals from these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

326 IAC 8-2-11 (Fabric and vinyl coating)

The service and repair operations (identified as SR 8) and the touch-up painting operations (identified as TP 8) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The touch-up painting operations (identified as TP 8) are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The service and repair operations (identified as SR 8), are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

Degreasing Operations

326 IAC 8-3-2 (Cold Cleaner Operations)

The parts washing operation, identified as PW 8 is subject to 326 IAC 8-3-2 (Cold Cleaner Operations) because this facility was constructed after January 1, 1990. According to 326 IAC 8-3-2, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

(a) The parts washing operation, identified as PW 8, is subject to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), because this facility was constructed after July 1, 1990 and does not have a remote reservoir. Pursuant to 326 IAC 8-3-5(a), for cold cleaner degreaser operations, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9OC) (one hundred twenty degrees Fahrenheit (120OF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Welding and Cutting Operations

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

The welding operations (WC 8) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9). Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-8 through TC3-8, and the one (1) natural gas-fired space heater, identified as SH1-8, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-8 through TC3-8, and the one (1) natural gas-fired space heater, identified as SH1-8, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 12 - 2833 Sourwood Drive [Section D.8]

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

(a) The repair operation, identified as RO 12, the touch-up painting station, identified as TP 12, and the chassis preparation operation, identified as CP 12, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because this operation uses less than five (5) gallons of coating per day, and is exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 12, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 12, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 12, is subject to 326 IAC 6-3-2 because the operation uses aerosol coating spray cans in quantities greater than five (5) gallons per day. The source will use dry filters as control, operated in accordance with the manufacturer's specifications to comply with 326 IAC 6-3-2(d).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 12), the subfloor installation operations (identified as SF 12), the assembly operations (identified as AL0 12), the repair operations (identified as RO 12), and the touch-up painting station (identified as TP 12), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

(b) The final finish operations, identified as FF 12, would be subject to 326 IAC 8-1-6 because the potential to emit of VOC from this operation is greater than 25 tons per year.

However, actual emissions of VOC from the final finish operations have never been equal to or exceeded 25 tons per year. Therefore, the source has decided to limit the input of VOC to the final finish operations to less than 25 tons per year when coating plastic. Compliance with this limit renders the requirements of 326 IAC 8-1-6 not applicable.

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

(a) When painting metal, the assembly operations (identified as ALO 12), the chassis operations (CP 12), the final finish operations (identified as FF 12) and the repair operations (identified as RO 12), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings (excluding adhesives) applied to metals from these operations are less than fifteen (15) lbs per day. All other coatings in these operations are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 12) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operation (CP 12) do not meet the definition of “coating” per 326 IAC 8-1-0.5.

(d) The subfloor installation operation (SF 12) is subject to 326 IAC 8-2-9 because the facility has actual emissions of VOC greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five tenths (3.5) pounds of VOC per gallon of coating excluding water, delivered to a coating applicator that applies extreme performance coatings.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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 calculations provided by the source, the coatings used in this facility are in compliance with these limits.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 12), and the subfloor installation operations (identified as SF 12) are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 12), the repair operations (identified as RO 12), the touch-up painting station (identified as TP 12), and the final finish operations (identified as FF 12) are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or vinyl coating” as described in 326 IAC 8-2-11.

The assembly operations apply adhesives to glue fabric and wood parts together, and cement and joint compounds to connect PVC pipes.

The touch-up and repair operations apply paint and body fillers to non-vinyl RV exteriors.

The final finish operations apply polishes to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 12), the repair operations (identified as RO 12), the subfloor installation operations (SF 12), and the touch-up painting station (identified as TP 12), are not subject to 326 IAC 8-2-12 (Wood furniture

and cabinet coating) because these operations do not apply coatings to wood furnishings.

(b) When painting wood, the final finish operations are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because the actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day, however, the potential VOC emissions are greater than 15 lbs/day, therefore, IDEM, OAQ has included the following limitations.

The final finish operations (identified as FF 12) shall be limited to less than 15 lbs per day of VOC input. This limit is necessary to ensure that actual emissions do not exceed 15 lbs per day and that 326 IAC 8-2-12 is not applicable to this operation.

(c) The assembly operations (identified as ALO 12) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and the actual VOC emissions are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are either not applied to wood furnishings or are not used in quantities greater than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 12, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 12 shall be limited to 5.27 pounds of particulate emissions per hour when operating at a process weight rate of 2,908 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-12 through DC7-12, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 12) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 12) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-12 through TC3-12, and the one (1) natural gas-fired space heater, identified as SH1-12, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-12 through TC3-12, and the one (1) natural gas-fired space heater, identified as SH1-12, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 14 - 2442 Davis Drive [Section D.9]

Surface Coating Operations

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

(a) The repair operation, identified as RO 14, the touch-up painting station, identified as TP 14, and the chassis preparation operation, identified as CP 14, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 14, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 14, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO14, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 14), the subfloor installation operations (identified as SF 14), the assembly operations (identified as ALO 14), the repair operations (identified as RO 14), and the touch-up painting station (identified as TP 14), are not subject to 326 IAC 8-1-6 (Best Available Control

Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

(b) When painting plastic, the final finish operations, identified as FF 14, are subject to 326 IAC 8-1-6 because the potential to emit of VOC from this operation is greater than 25 tons per year. However, actual emissions of VOC have from the final finish operations have never been equal to or greater than 25 tons per year. Therefore, the source has decided to limit the input of VOC to the final finish operations to less than 25 tons per year when coating plastics. Compliance with this limit renders the requirements of 326 IAC 8-1-6 not applicable.

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

(a) When painting metal, the assembly operations (ALO 14), the final finish operations (identified as FF 14) and the repair operations (identified as RO 14), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals from these operations are less than fifteen (15) lbs per day. All other coatings in these operations are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 14) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operation (CP 14) do not meet the definition of “coating” under 326 IAC 8-1-0.5.

(d) The subfloor installation operations (identified as SF 14) are subject to 326 IAC 8-2-9 because these facilities have actual emissions of VOC greater than 15 lbs/day for metal coating.

Pursuant to 326 IAC 8-2-9, the Permittee may not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of fifty-two hundredths (0.52) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings. Solvent sprayed from the application equipment during clean up 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.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 14), the touch-up painting station (TP 14), the repair operations (identified as RO 14), the subfloor installation operations (identified as SF 14), and the final finish operations (identified as FF 14), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 14) are not subject to 326 IAC 8-2-11 because this facility does not perform “fabric coating” or “vinyl coating” as defined in 326 IAC 8-2-11. The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 14), the repair operations (identified as RO 14), the subfloor installation operations (identified as SF 14), and the touch-up painting station (identified as TP 14), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The final finish operations, identified as FF 14, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because the actual emissions

of VOC from coatings applied to wood are less than fifteen (15) lbs per day, however, the potential emissions are greater than 15 lbs per day of VOC input, therefore, actual emissions are limited to less than 15 lbs per day and that 326 IAC 8-2-12 is not applicable to this facility.

(c) The assembly operations (identified as ALO 14) are subject to 326 IAC 8-2-12 because adhesives are used to coat wood cabinets and have actual VOC emissions greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings from this facility are either not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 14, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 14 shall be limited to 5.35 pounds of particulate emissions per hour when operating at a process weight rate of 2,975.2 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-14 through DC7-14, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 14) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 14) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The three (3) natural gas fired space heaters, identified as TC1-14 through TC3-14, and the one (1) natural gas-fired space heater, identified as SH1-14, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The three (3) natural gas fired space heaters, identified as TC1-14 through TC3-14, and the one (1) natural gas-fired space heater, identified as SH1-14, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 18 - 2719 Hackberry Drive [No Section D]

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The two (2) natural gas fired space heaters, identified as TC1-18 and SH1-18, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The two (2) natural gas fired space heaters, identified as TC1-18 and SH1-18, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 19 - 2431 E. Kercher Drive [Section D.10]

Surface Coating Operations

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

(a) The repair operation, identified as RO 19, the touch up operation (identified as TP 19), and the chassis preparation operation, identified as CP 19, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 19, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 19, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 19, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 19), the subfloor installation operations (identified as SF 19), the assembly operations (identified as ALO 19), the repair operations (identified as RO 19), and the touch-up painting station (identified as TP 19), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

(b) When painting plastic, the final finish operation (identified FF 19) is subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from this facility is greater than twenty-five (25) tons per year of VOC when coating plastic. However, the actual emissions of VOC from this facility have never been equal to or exceeded twenty-five (25) tons per year. Therefore, the Permittee has accepted limitations on the input of VOC to this facility, such that the limited PTE shall not exceed 25 tons per year when coating plastic. Compliance with these input limitations shall render the requirements of 326 IAC 8-1-6 not applicable to the final finish operations.

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

(a) When painting metal, the assembly operations (identified as ALO 19, the final finish operations (identified as FF 19) and the repair operations (identified as RO 19), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because actual emissions of VOC from coatings applied to metals from these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 19) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operations (CP 19) do not meet the definition of “coating” as defined in 326 IAC 8-1-0.5, as a “protective, functional, or decorative film”.

(d) The subfloor operations (identified as SF 19) are subject to 326 IAC 8-2-9 because this facility has actual emissions of VOC greater than fifteen (15) lbs per day. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicator at the subfloor operations shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance 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 subfloor operations can comply with this requirement.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 19), the touch-up painting station (TP 19), the subfloor installation operations (identified as SF 19), and the final finish operations (identified as FF 19), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 19) and the repair operations (identified as RO 19), are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or “vinyl coating” as defined in 326 IAC 8-2-11. The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes. The repair operation applies body fillers to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 19), the repair operations (identified as RO 19), the subfloor installation operations (SF 19), and the touch-up painting station (identified as TP 19), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The final finish operation is not subject to 326 IAC 8-2-12, even though this facility was constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 19) are subject to 326 IAC 8-2-12 because adhesives are used to coat pre-fabricated wood furniture and the actual VOC emissions are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation (ALO 19) that are applied to wood furniture are manually applied using wipe applications. All other coatings used in this facility are either not applied to wood furnishings or are used in less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 19, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 19 shall be limited to 5.27 pounds of particulate emissions per hour when operating at a process weight rate of 2,908 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-19 through DC7-19, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 19) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 19) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The twenty-six (26) natural gas fired space heaters, and the two (2) natural gas-fired space heater, identified as SH1-19 and SH2-19, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The twenty-six (26) natural gas fired space heaters, and the two (2) natural gas-fired space heater, identified as SH1-19 and SH2-19, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 20 - 2769 Elders Drive [Section D.11]

Surface Coating Operations

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

The laminating operations, identified as L1 through L5, are not subject to 326 IAC 6-3-2 because these operations use rollcoating application. Pursuant to 326 IAC 6-3-1(b)(6), these operations are exempt from the requirements of 326 IAC 6-3.

326 IAC 8-1-6 (Best Available Control Technology)

(a) The laminating operations, identified as L1 through L3, are not subject to 326 IAC 8-1-6 (Best Available Control Technology). These facilities were constructed in 2002 and permitted under MSOP 039-14842-00560, issued December 07, 2001. These facilities had a potential to emit VOC greater than 25 tons per year. Pursuant to MSOP 039-14842-00560, the input of VOC to the laminating operations, L1 through L3, is limited to less than twenty-five (25) tons per year.

Compliance with these limits renders the requirements of 326 IAC 8-1-6 (Best Available Control Technology) not applicable to these facilities.

(b) The laminating operations identified as L4 and L5, constructed in 2006, were permitted under MSOP 039-17647-00560, issued February 2, 2006. These facilities had a potential to emit of VOC greater than 25 tons per year. Pursuant to MSOP 039-17647-00560, the input of VOC to the laminating operations, L4 and L5, was limited to less than twenty-five (25) tons per year.

Compliance with these limits renders the requirements of 326 IAC 8-1-6 (Best Available Control Technology) not applicable to these facilities.

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

The laminating operations, identified as L1 through L5, are not subject to 326 IAC 8-2-9, because these facilities do not coat metal substrates.

326 IAC 8-2-11 (Fabric and vinyl coating)

The laminating operations, identified as L1 through L5, are not subject to 326 IAC 8-2-11, because these facilities do not coat fabric or vinyl.

326 IAC 8-2-12 (Wood furniture and cabinet coating)
The laminating operations, identified as L1 through L5, are not subject to 326 IAC 8-2-12, because these facilities do not coat wood furniture.

Welding and Cutting Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The welding operations (WC 20) and the cutting operations (MPE 20) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour each. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(14).

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The twenty-six (26) natural gas fired space heaters, identified as R1-20 through R26-20, and the two (2) natural gas-fired space heaters, identified as SH1-20 and SH2-20, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The twenty-six (26) natural gas fired space heaters, identified as R1-20 through R26-20, and the two (2) natural gas-fired space heaters, identified as SH1-20 and SH2-20, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 23 - 2694 Hackberry Drive [No Section D]

Surface Coating Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The laminating operations, identified as S1 through S4, are not subject to 326 IAC 6-3-2 because these operations use rollcoating application. Pursuant to 326 IAC 6-3-1(b)(6), these operations are exempt from the requirements of 326 IAC 6-3.

326 IAC 8-1-6 (Best Available Control Technology)
The laminating operations, identified as S1 through S4, are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because there are no VOC emissions from these facilities.

326 IAC 8-2 (VOC Rules)
The laminating operations, identified as S1 through S4, are not subject to 326 IAC 8-2 (VOC rules), because there are no VOC emissions from these facilities.

Welding and Cutting Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The welding operations (WC 23) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The natural gas fired space heater, identified as R1, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from this operation is less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The natural gas fired space heater, identified as R1, is not subject to 326 IAC 6-3 because it is not a source of indirect heating.

State Rule Applicability – Plant 29 - 2642 Hackberry Drive [Section D.12]

Woodworking Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The woodworking operations, identified as WW 29, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 29 shall be limited to 8.94 pounds of particulate emissions per hour when operating at a process weight rate of 6,400 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-29 and DC2-29, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The cutting operations (MPE 29) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

State Rule Applicability – Plant 31 - 2642 Hackberry Drive [Section D.13]

Surface Coating Operations

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

(a) The repair operation, identified as RO 31, the touch up operation (identified as TP 31), and the chassis preparation operation, identified as CP 31, is not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 31, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 31, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 31, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

When painting plastic, the chassis assembly operations (identified as CP 31), the subfloor installation operations (identified as SF 31), the assembly operations (identified as AL0 31), the repair operations (identified as RO 31), the final finish operations (identified as FF 31), and the touch-up painting station (identified as TP 31), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit VOC from each facility is less than 25 tons per year.

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

(a) The assembly operations (identified as ALO 31), the subfloor operations (identified as SF 31), the final finish operations (identified as FF 31) and the repair operations (identified as RO 31), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 3190, because both the potential and actual emissions of VOC from coatings applied to metals at these facilities are less than fifteen (15) lbs per day. All other coatings applied in these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 31) are not applied to metal substrates.

(c) The foam sealants applied in the chassis prep operation (CP 31) do not meet the definition of “coating” as defined in 326 IAC 8-1-0.5, as a “protective, decorative, or functional film”.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 31), the touch-up painting station (TP 31), the subfloor installation operations (identified as SF 31), and the final finish operations (identified as FF 31), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 31) and the repair operations (identified as RO 31), are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or “vinyl coating” as defined in 326 IAC 8-2-11.

The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

The repair operation applies body fillers to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 31), the repair operations (identified as RO 31), and the touch-up painting station (identified as TP 31), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The subfloor installation operations (identified as SF 31) and the final finish operations are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 3190, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 31) are subject to 326 IAC 8-2-12 because adhesives are used to coat pre-fabricated wood furniture and the actual VOC emissions are greater than 15 lbs per day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings used at this facility are either not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 31, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 31 shall be limited to 4.29 pounds of particulate emissions per hour when operating at a process weight rate of 2,139.2 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-31 through DC7-31, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 31) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 31) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, (identified as TC1-31 through TC3-31), and the two (2) natural gas-fired space heaters, (identified as SH1-31 and SH2-31), are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, (identified as TC1-31 through TC3-31), and the two (2) natural gas-fired space heaters, (identified as SH1-31 and SH2-31), are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability - Plant 50 - 2420 Davis Drive [Section D.14]

Surface Coating Operations

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

(a) The repair operation, (identified as RO 50), the touch up operation (identified as TP 50), and the chassis preparation operation, (identified as CP 50), are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 50, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 50, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 50, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 50), the subfloor installation operations (identified as SF 50), the assembly operations (identified as AL0 50), the repair operations (identified as RO 50), and the touch-up painting station (identified as TP 50), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit VOC from each facility is less than 25 tons per year.

(b) When painting plastic, the final finish operations (identified as FF 50) have the potential to emit greater than twenty-five (25) tons per year VOC. However, the source has provided historical actual VOC emissions which indicate that the VOC emissions this facility has never been equal to or greater than twenty-five (25) tons per year. Therefore, these facilities shall be limited to less than 25 tons per year VOC input when coating plastic. Compliance with this limit renders the requirements of 326 IAC 8-1-6 not applicable.

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

(a) The assembly operations (identified as ALO 50, the final finish operations (identified as FF 50) and the repair operations (identified as RO 50), are not subject to 326 IAC 8-2-9

(Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals at these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 50) are not applied to metal substrates.

(c) Foam sealants and rubberized sealants used in the chassis operations do not meet the definition of "coatings" under 326 IAC 8-1-0.5, and are not subject to this rule.

(d) The subfloor operations (identified as SF 50) are subject to 326 IAC 8-2-9 because these operations have actual emissions from metal coating greater than fifteen (15) lbs of VOC per day.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicator at the subfloor operations shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance 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 subfloor operations (SF 50) can comply with this requirement.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 50), the touch-up painting station (TP 50), the subfloor installation operations (identified as SF 50), and the final finish operations (identified as FF 50), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 50) and the repair operations (identified as RO 50), are not subject to 326 IAC 8-2-11 because these facilities do not perform "fabric coating" or "vinyl coating" as defined in 326 IAC 8-2-11.

The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

The repair operation applies body fillers to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 50), the repair operations (identified as RO 50), the subfloor installation operations (SF 50), and the touch-up painting station (identified as TP 50), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) When painting wood, the final finish operations are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 50) are subject to 326 IAC 8-2-12 because adhesives are used to coat pre-fabricated wood furniture and the actual VOC emissions are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings used in this facility are either not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 50, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 50 shall be limited to 5.71 pounds of particulate emissions per hour when operating at a process weight rate of 3,278.5 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-50 through DC8-50, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 50) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 50) are subject to 326 IAC 6-3 because the operations have a potential to emit particulate greater than five hundred fifty-one thousandths (0.551) pounds per hour.

Pursuant to 326 IAC 6-3-2, the particulate from the cutting operations MPE 50 shall be limited to 1.39 pounds of particulate emissions per hour when operating at a process weight rate of 400 pounds per hour.

This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Natural Gas Combustion

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The three (3) natural gas fired space heaters, identified as TC1-50 through TC3-50, and the one (1) natural gas-fired space heater, identified as SH1-50, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The three (3) natural gas fired space heaters, identified as TC1-50 through TC3-50, and the one (1) natural gas-fired space heater, identified as SH1-50, are not subject to 326 IAC 6-3 because these are not sources of indirect heating.

State Rule Applicability – Plant 304 - 2775 Hackberry Drive [Section D.15]

Surface Coating Operations

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

(a) The repair operation, identified as RO 304, the touch up operation (identified as TP 304), and the chassis preparation operation, identified as CP 304, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 304, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 304, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 304, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)
When painting plastic, the chassis assembly operations (identified as CP 304), the subfloor installation operations (identified as SF 304), the assembly operation (identified as ALO 304), the repair operation (identified as RO 304), the final finish operations (identified as FF 304), and the touch-up painting station (identified as TP 304), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

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

(a) The assembly operations (identified as ALO 304), the subfloor operations (identified as SF 304), the final finish operations (identified as FF 304) and the repair operations

(identified as RO 304), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals at these facilities are less than fifteen (15) lbs per day. All other coatings in these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 304) are not applied to metal substrates.

(c) The foam sealants used in the chassis prep operations (CP 304) do not meet the definition of "coating" per 326 IAC 8-1-0.5, therefore, these facilities are not subject to this rule.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 304), the touch-up painting station (TP 304), the subfloor installation operations (identified as SF 304), and the final finish operations (identified as FF 304), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 304) and the repair operations (identified as RO 304), are not subject to 326 IAC 8-2-11 because these facilities do not perform "fabric coating" or "vinyl coating" as defined in 326 IAC 8-2-11.

The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

The repair operation applies body fillers to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 304), the repair operations (identified as RO 304), the subfloor installation operations (SF 304) and the touch-up painting station (identified as TP 304), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The final finish operations, identified as FF 304, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 30490, because both the potential and actual emissions of VOC from coatings applied to wood are less than fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 304) are subject to 326 IAC 8-2-12 because adhesives are used to coat pre-fabricated wood furniture and the actual VOC emissions are greater than 15 lbs/day.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings used at this facility are either not applied to wood furnishings or are used in quantities less than 10 gallons/day.

Woodworking Operations

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

The woodworking operations, identified as WW 304, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 304 shall be limited to 4.26 pounds of particulate emissions per hour when operating at a process weight rate of 2,114.6 pounds per hour.

This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-304 through DC7-304, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 304) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 304) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-304 through TC3-304, and the one (1) natural gas-fired space heaters, identified as SH1-304, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-304 through TC3-304, and the one (1) natural gas-fired space heaters, identified as SH1-304,are not subject to 326 IAC 6-3 because these units are not sources of indirect heating.

State Rule Applicability – Plant 311 - 2860 Hackberry Drive [Section D.16]

Surface Coating Operations

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

(a) The repair operation, identified as RO 311, the touch up operation (identified as TP 311), and the chassis preparation operation, identified as CP 311, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations each use less than five (5) gallons of coating per day, and are exempt per 326 IAC 6-3-1(b)(15).

(b) The subfloor installation operation, identified as SF 311, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coating, which are exempt per 326 IAC 6-3-1(b)(8).

(c) The final finish operation, identified as FF 311, is not subject to 326 IAC 6-3-2 because this operation uses brushes to apply coatings, which are exempt per 326 IAC 6-3-1(b)(8). Solvents and cleaners which are applied in these operations using aerosol spray cans are not a surface coatings as defined under 326 IAC 6-3-1.5(5), and are used in quantities less than 5 gallons per day.

(d) The assembly operation, identified as ALO 311, is not subject to 326 IAC 6-3-2 because coatings are applied by aerosol, brush or roll coating, which are exempt per 326 IAC 6-3-1(b)(12), 326 IAC 6-3-1(b)(6) and 326 IAC 6-3-1(b)(8). Two coatings are applied using airless application, however, these coatings are used in quantities less than 5 gallons per day. Therefore, these materials are exempt per 326 IAC 6-3-1(b)(15).

326 IAC 8-1-6 (Best Available Control Technology)

(a) When painting plastic, the chassis assembly operations (identified as CP 311), the subfloor installation operations (identified as SF 311), the assembly operations (identified as AL0 311), the repair operations (identified as RO 311), and the touch-up painting station (identified as TP 311), are not subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC from each facility is less than 25 tons per year.

(b) The final finish operations (identified as FF 311) are subject to 326 IAC 8-1-6 (Best Available Control Technology) because the potential to emit of VOC is greater than twenty-five (25) tons per year. However, actual emissions of VOC from this facility have never exceeded twenty-five tons per year. The Permittee has accepted limits on the VOC input to the final finish operations when coating plastic. Compliance with these limits ensures that the requirements of 326 IAC 8-1-6 (Best Available Control Technology) do not apply.

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

(a) The assembly operations (identified as ALO 311), the final finish operations (identified as FF 311) and the repair operations (identified as RO 311), are not subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to metals at these facilities are less than fifteen (15) lbs per day. All other coatings used at these facilities are not applied to metal substrates.

(b) The coatings used in the touch-up painting station (identified as TP 311) are not applied to metal substrates.

(c) Foam sealants used in the chassis operations are not considered “coatings” under 326 IAC 8-1-0.5, therefore, 326 IAC 8-2-9 does not apply to these facilities.

(d) The subfloor operations (identified as SF 311) are subject to 326 IAC 8-2-9 because the potential to emit VOC exceeds 15 lbs per day. However, the actual emissions of VOC

from this operation have never exceeded 15 lbs per day. Therefore, the subfloor operatons (identified as SF 311) shall be limited to less than 15 lbs per day of VOC input. This limit is necessary to ensure that actual emissions of VOC do not exceed 15 lbs per day and the 326 IAC 8-2-9 is not applicable to this facility.

326 IAC 8-2-11 (Fabric and vinyl coating)

(a) The chassis assembly operations (identified as CP 311), the touch-up painting station (TP 311), the subfloor installation operations (identified as SF 311), and the final finish operations (identified as FF 311), are not subject to 326 IAC 8-2-11 (Fabric and vinyl coating) because these facilities do not coat fabric or vinyl.

(b) The assembly operations (identified as ALO 311) and the repair operations (identified as RO 311), are not subject to 326 IAC 8-2-11 because these facilities do not perform “fabric coating” or “vinyl coating” as defined in 326 IAC 8-2-11.

The assembly operation applies adhesives to glue fabric and wood together, and cement and joint compounds to connect PVC pipes.

The repair operation applies body fillers to non-vinyl RV parts.

326 IAC 8-2-12 (Wood furniture and cabinet coating)

(a) The chassis assembly operations (identified as identified as CP 311), the repair operations (identified as RO 311), the subfloor installation operations (SF 311), and the touch-up painting station (identified as TP 311), are not subject to 326 IAC 8-2-12 (Wood furniture and cabinet coating) because these facilities do not apply coatings to wood furnishings.

(b) The final finish operations, identified as FF 311, are not subject to 326 IAC 8-2-12, even though these facilities were constructed after July 1, 1990, because both the potential and actual emissions of VOC from coatings applied to wood have never exceeded fifteen (15) lbs per day.

(c) The assembly operations (identified as ALO 311) are subject to 326 IAC 8-2-12 because adhesives are used to coat pre-fabricated wood furniture.

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings that are applied to wood furniture and cabinets shall utilize one of the following application methods:

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.

The surface coatings for the assembly operation that are applied to wood furniture are manually applied using wipe applications. All other coatings used at this facility are either not applied to wood furnishings or are used in quantities less than 10 gallons per day.

Woodworking Operations

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

The woodworking operations, identified as WW 311, are subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Pursuant to 326 IAC 6-3-2, the particulate from the woodworking operations WW 311 shall be limited to 5.79 pounds of particulate emissions per hour when operating at a process weight rate of 3,344.1 pounds per hour. This limitation is determined by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collectors, identified as DC1-311 through DC7-311, shall be in operation at all times the woodworking facilities are in operation, in order to comply with this limit.

Welding and Cutting Operations

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

(a) The welding operations (WC 311) are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not consume more than six hundred twenty-five (625) pounds of rod or wire per day. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(9).

(b) The cutting operations (MPE 311) are not subject to 326 IAC 6-3 because the operations have a potential to emit less than five hundred fifty-one thousandths (0.551) pounds per hour. Therefore, these operations are exempt per 326 IAC 6-3-1(b)(4).

Natural Gas Combustion

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

The three (3) natural gas fired space heaters, identified as TC1-311 through TC3-311, and the one (1) natural gas-fired space heater, identified as SH1-311, are not subject to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because potential emissions of particulate from these operations are less than five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The three (3) natural gas fired space heaters, identified as TC1-311 through TC3-311, and the one (1) natural gas-fired space heaters, identified as SH1-311,are not subject to 326 IAC 6-3 because these units are not sources of indirect heating.

State Rule Applicability - All Plants - Insignificant Tanks

326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels)

The two insignificant tanks, identified as T1 and T2, are not subject to 326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels) because these tanks are not located in Clark, Floyd, Lake, or Porter County.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance

Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this source are as follows:

Plant 1 - **2525 Linden Drive [Section D.1]**

(a) The surface coating operations, including the chassis prep operations (CP 1), the subfloor installation operations (SF 1), the assembly operations (ALO 1), the repair operations (RO 1), the touch-up stations (TP 1), and the final finish operations (FF 1), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.1.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW1) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-1 through DC7-1 for particulate control shall be in operation and control emissions from the woodworking operation (WW1) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the

material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 2 - 2478 Davis Drive [Section D.2]

(a) The surface coating operations, including the chassis prep operations (CP 2), the subfloor installation operations (SF 2), the assembly operations (ALO 2), the repair operations (RO 2), the touch-up stations (TP 2), and the final finish operations (FF 2), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.2.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW2) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-2 through DC7-2 for particulate control shall be in operation and control emissions from the woodworking operation (WW2) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 3 - 2855 Hackberry Drive [Section D.3]

(a) The surface coating operations, including the chassis prep operations (CP 3), the subfloor installation operations (SF 3), the assembly operations (ALO 3), the repair operations (RO 3), the touch-up stations (TP 3), and the final finish operations (FF 3), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.3.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW3) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-3 through DC7-3 for particulate control shall be in operation and control emissions from the woodworking operation (WW3) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 4 - 2400 East Kercher Drive [Section D.4]

(a) The surface coating operations, including the chassis prep operations (CP 4), the subfloor installation operations (SF 4), the assembly operations (ALO 4), the repair operations (RO 4), the touch-up stations (TP 4), and the final finish operations (FF 4), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.4.2 and D.4.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.4.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW4) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-4 through DC7-4 for particulate control shall be in operation and control emissions from the woodworking operation (WW4) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 6 - 2642 Hackberry Drive [Section D.5]

(a) The surface coating operations, including the adhesive application operations (AA 6), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.5.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW6) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-6 and DC2-6 for particulate control shall be in operation and control emissions from the woodworking operation (WW6) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 7 - 2530 Linden Drive [Section D.6]

(a) The surface coating operations, including the chassis prep operations (CP 7), the subfloor installation operations (SF 7), the assembly operations (ALO 7), the repair operations (RO 7), the touch-up stations (TP 7), and the final finish operations (FF 7), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.6.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.6.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW7) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-7 through DC7-7 for particulate control shall be in operation and control emissions from the woodworking operation (WW7) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 8 - 2425 Davis Drive [Section D.7]

(a) The service repair operations (TP 8) and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC content and usage limitations contained in Conditions D.7.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.7.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Plant 12 - 2833 Sourwood Drive [Section D.8]

(a) The surface coating operations, including the chassis prep operations (CP 12), the subfloor installation operations (SF 12), the assembly operations (ALO 12), the repair operations (RO 7), the touch-up stations (TP 12), and the final finish operations (FF 12), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.8.2, D.8.3, and D.8.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine-compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.8.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW12) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-12 through DC7-12 for particulate control shall be in operation and control emissions from the woodworking operation (WW12) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 14 - 2442 Davis Drive [Section D.9]

(a) The surface coating operations, including the chassis prep operations (CP 14), the subfloor installation operations (SF 14), the assembly operations (ALO 14), the repair operations (RO 14), the touch-up stations (TP 14), and the final finish operations (FF 14), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC content and usage limitations contained in Conditions D.9.2, D.9.3, and D.9.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.9.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW14) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-14 through DC7-14 for particulate control shall be in operation and control emissions from the woodworking operation (WW14) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 19 - 2431 E. Kercher Drive [Section D.10]

(a) The surface coating operations, including the chassis prep operations (CP 19), the subfloor installation operations (SF 19), the assembly operations (ALO 19), the repair operations (RO 19), the touch-up stations (TP 19), and the final finish operations (FF 19), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC content and usage limitations contained in Conditions D.10.2, D.10.3, and D.10.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.10.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW19) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-19 through DC7-19 for particulate control shall be in operation and control emissions from the woodworking operation (WW19) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 20 - 2769 Elders Drive [Section D.11]

(a) The surface coating operations, including the laminators (L1 through L5), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the usage limitations contained in Condition D.11.1 and D.11.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.11.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Plant 29 - 2642 Hackberry Drive [Section D.12]

(a) The woodworking operation (WW29) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-29 and DC2-29 for particulate control shall be in operation and control emissions from the woodworking operation (WW29) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 31 - 2642 Hackberry Drive [Section D.13]

(a) The surface coating operations, including the chassis prep operations (CP 31), the subfloor installation operations (SF 31), the assembly operations (ALO 31), the repair operations (RO 31), the touch-up stations (TP 31), and the final finish operations (FF 31), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.13.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.13.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW31) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-31 through DC7-31 for particulate control shall be in operation and control emissions from the woodworking operation (WW31) at all

times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 50 - 2769 Elders Drive [Section D.14]

(a) The surface coating operations, including the chassis prep operations (CP 50/51), the subfloor installation operations (SF 50), the assembly operations (ALO 50), the repair operations (RO 50), the touch-up stations (TP 50), and the final finish operations (FF 50), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC content and usage limitations contained in Conditions D.14.2, D.14.4, and D.14.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.14.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW50) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-50 through DC8-50 for particulate control shall be in operation and control emissions from the woodworking operation (WW50) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with

respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 304 - 2775 Hackberry Drive [Section D.15]

(a) The surface coating operations, including the chassis prep operations (CP 304), the subfloor installation operations (SF 304), the assembly operations (ALO 304), the repair operations (RO 304), the touch-up stations (TP 304), and the final finish operations (FF 304), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.15.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.15.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW304) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-304 through DC7-304 for particulate control shall be in operation and control emissions from the woodworking operation (WW304) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee

satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Plant 311 - 2860 Hackberry Drive [Section D.16]

(a) The surface coating operations, including the chassis prep operations (CP 311), the subfloor installation operations (SF 311), the assembly operations (ALO 311), the repair operations (RO 311), the touch-up stations (TP 311), and the final finish operations (FF 311), and their associated clean-up activities have applicable compliance determination conditions as specified below:

(1) Compliance with the VOC usage limitations contained in Conditions D.16.2 and D.21.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Compliance with the HAP usage limitations contained in Conditions D.16.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" HAP data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) The woodworking operation (WW311) has applicable compliance determination conditions as specified below:

(1) The baghouses DC1-311 through DC7-311 for particulate control shall be in operation and control emissions from the woodworking operation (WW311) at all times that the woodworking facilities are in operation. In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(2) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency

provisions of this permit (Section B - Emergency Provisions). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

The compliance determination requirements for the surface coating facilities at each plant are necessary to ensure the facilities meet the minor VOC limits under 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), 326 IAC 8-1-6 (Best Available Control Technology), and also the VOC content limits of 326 IAC 8-2-9 (Miscellaneous Metal Coating).

The compliance monitoring requirements applicable to this source are as follows:

Control	**Parameter**	**Frequency**	**Range**	**Excursions and Exceedances**
DC1-1 - DC7-1 (Baghouses controlling Woodworking Operation WW1)	Water Pressure Drop	Weekly	3.0 to 6.0inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-2 - DC7-2 (Baghouses controlling Woodworking Operation WW2)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-3 - DC7-3 (Baghouses controlling Woodworking Operation WW3)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-4 - DC7-4 (Baghouses controlling Woodworking Operation WW4)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-6 - DC2-6 (Baghouses controlling Woodworking Operation WW6)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-7 - DC7-7 (Baghouses controlling Woodworking Operation WW7)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-12 - DC7-12 (Baghouses controlling Woodworking Operation WW12)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-14 - DC7-14 (Baghouses controlling Woodworking Operation WW14)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-19 - DC7-19 (Baghouses controlling Woodworking Operation	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps

Control	Parameter	Frequency	Range	Excursions and Exceedances
WW19)	Visible Emissions	Daily	Normal-Abnormal	
DC1-29 - DC2-29 (Baghouses controlling Woodworking Operation WW29)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-31 - DC7-31(Baghouses controlling Woodworking Operation WW31)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-50 - DC8-50 (Baghouses controlling Woodworking Operation WW50)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-304 - DC7-304(Baghouses controlling Woodworking Operation WW304)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	
DC1-311 - DC7-311(Baghouses controlling Woodworking Operation WW311)	Water Pressure Drop	Weekly	3.0 to 6.0 inches	Response Steps
	Visible Emissions	Daily	Normal-Abnormal	

These monitoring conditions are necessary because the baghouses for the woodworking operations at each plant must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations).

Recommendation

The staff recommends to the Commissioner that the Federal Enforcable Operating Permit 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 14, 2005. Additional information was received on March 18, 2008, September 12, 2008, and November 11, 2008.

Conclusion

The operation of this stationary recreational vehicle (RV) manufacturing facility shall be subject to the conditions of the attached Federal Enforcable Operating Permit No. F039-23645-00620.

Emissions Calculations
Source Wide Summary of Emissions

Company Name: Keystone RV Company
Address City IN Zip: 2642 Hackberry Drive, Goshen, Indiana 46526
Title V" 039-23645-00620
Reviewer: ERG/TDP
Date: November 29, 2007

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Plant 1	5.66	5.71	0.01	0.87	44.89	0.73	2.11	5.03
Plant 2	5.68	5.73	0.01	0.87	45.28	0.73	2.13	5.07
Plant 3	5.34	5.39	0.01	0.87	39.04	0.73	1.84	4.38
Plant 4	7.02	7.07	0.01	0.87	69.46	0.73	3.27	7.77
Plant 6	1.34	1.39	0.01	0.87	1.69	0.73	0.00	7.58E-04
Plant 7	5.49	5.54	0.01	0.87	41.77	0.73	1.97	4.68
Plant 8	0.41	0.46	0.01	0.87	1.09	0.73	0.00	0.01
Plant 12	6.39	6.44	0.01	0.87	58.15	0.73	2.74	6.51
Plant 14	6.52	6.57	0.01	0.87	60.36	0.73	2.85	6.77
Plant 18	0.01	0.02	0.00	0.32	0.02	0.27	0.00	2.78E-04
Plant 19	6.41	6.52	0.01	1.93	58.21	1.62	2.74	6.51
Plant 20	6.86	6.97	0.01	1.93	55.13	1.62	1.82	2.36
Plant 23	1.93	1.96	0.00	0.66	0.04	0.55	0.00	1.18
Plant 27	0.01	0.02	0.00	0.31	0.02	0.26	0.00	2.67E-04
Plant 29	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00E+00
Plant 31	5.60	5.67	0.01	1.20	43.74	1.01	2.06	4.90
Plant 50	9.18	9.23	0.01	0.87	66.60	0.73	3.14	7.47
Plant 304	5.55	5.60	0.01	0.87	42.94	0.73	2.02	4.81
Plant 311	6.93	6.98	0.01	0.87	67.90	0.73	3.20	7.60
TOTALS	**88.12**	**89.06**	**0.11**	**16.80**	**696.33**	**14.11**	**30.07**	**72.76**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Plant 1	0.02	0.08	2.78E-06	1.42	5.39E-04	1.03	0.24	0.04	0.01	2.11	0.06	1.59E-02	2.80E-04	4.38E-05	9.72E-04	5.03
Plant 2	0.02	0.08	2.80E-06	1.43	5.44E-04	1.03	0.24	0.04	0.01	2.13	0.06	1.59E-02	2.80E-04	4.38E-05	9.72E-04	5.07
Plant 3	0.01	0.07	2.41E-06	1.23	4.69E-04	0.89	0.21	0.04	0.01	1.84	0.05	1.59E-02	2.80E-04	4.38E-05	9.72E-04	4.38
Plant 4	0.02	0.13	4.30E-06	2.20	8.35E-04	1.59	0.37	0.07	0.02	3.27	0.10	1.59E-02	2.80E-04	4.38E-05	9.72E-04	7.77
Plant 6	0.00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.58E-04
Plant 7	0.01	0.08	2.58E-06	1.32	5.02E-04	0.95	0.22	0.04	0.01	1.97	0.06	1.59E-02	2.80E-04	4.38E-05	9.72E-04	4.68
Plant 8	4.54E-05	2.37E-04	8.05E-09	3.19E-07	1.56E-06	0.00E+00	6.89E-04	1.27E-04	0.00E+00	3.91E-03	1.82E-04	2.65E-03	2.41E-04	4.38E-06	7.36E-04	9.59E-03
Plant 12	0.02	0.11	3.60E-06	1.84	6.99E-04	1.33	0.31	0.06	0.02	2.74	0.08	1.59E-02	2.80E-04	4.38E-05	9.72E-04	6.51
Plant 14	0.02	0.11	3.74E-06	1.91	7.27E-04	1.38	0.32	0.06	0.02	2.85	0.08	1.59E-02	2.80E-04	4.38E-05	9.72E-04	6.77
Plant 18	0.00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78E-04
Plant 19	0.02	0.11	3.60E-06	1.84	6.99E-04	1.33	0.31	0.06	0.02	2.74	0.08	1.59E-02	2.80E-04	4.38E-05	9.72E-04	6.51
Plant 20	0.00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10
Plant 23	0.00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.00	0.00	0.00	1.17
Plant 27	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	2.67E-04
Plant 29	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	2.67E-04
Plant 31	0.02	0.08	2.70E-06	1.38	5.25E-04	1.00	0.23	0.04	0.01	2.06	0.06	1.59E-02	2.80E-04	4.38E-05	9.72E-04	4.90
Plant 50	0.02	0.12	4.12E-06	2.11	8.00E-04	1.52	0.35	0.06	0.02	3.14	0.09	3.17E-02	5.61E-04	8.76E-04	1.94E-03	7.47
Plant 304	0.01	0.08	2.66E-06	1.36	5.16E-04	0.98	0.23	0.04	0.01	2.02	0.06	1.59E-02	2.80E-04	4.38E-05	9.72E-04	4.81
Plant 311	0.02	0.12	4.20E-06	2.15	8.16E-04	1.55	0.36	0.07	0.02	3.20	0.09	1.59E-02	2.80E-04	4.38E-05	9.72E-04	7.60
Total Emissions (TPY) by HAP	**0.21**	**1.17**	**3.95E-05**	**20.19**	**7.67E-03**	**14.58**	**3.39**	**0.62**	**0.18**	**30.07**	**0.87**	**1.48**	**3.88E-03**	**1.36E-03**	**0.01**	**72.76**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0463	3.000	5.39	5.39	0.75	17.98	3.28	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0006	3.000	7.40	3.74	0.01	0.15	0.03	0.01	16.85	50%	Metal
Potential to Emit															**0.76**	**18.14**	**3.31**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.63E-02	3.000	0.00%	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	1.03	0.00	0.00	0.00	0.00	0.00	1.03
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.75E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.03**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.03**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0313	3.000	0.45	0.42	0.04	0.94	0.17	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0490	3.000	3.29	3.29	0.48	11.62	2.12	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0702	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.52**	**12.56**	**2.29**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	3.13E-02	3.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.90E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.76	0.00	1.16
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	7.02E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.76**	**0.00**	**1.16**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0085	3.000	2.78	2.54	0.06	1.56	0.28	0.15	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1990	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1265	3.000	1.12	0.56	0.21	5.09	0.93	1.44	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0345	3.000	4.65	3.48	0.36	8.64	1.58	0.34	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.2765	3.000	1.05	0.56	2.14	51.38	9.38	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0026	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0357	3.000	7.39	6.17	0.66	15.84	2.89	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**3.44**	**82.51**	**15.06**	**1.93**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	8.51E-03	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.15E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.99E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.27E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.45E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.28E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.15E-04	3.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.65E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.15E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.57E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.01**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0028	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0005	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0016	3.000	3.37	3.37	0.02	0.39	0.07	0.04	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0109	3.000	3.35	3.35	0.11	2.64	0.48	0.16	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0087	3.000	4.99	4.99	0.13	3.14	0.57	0.02	138.13	50%	Metal
Potential to Emit															**0.26**	**6.23**	**1.14**	**0.22**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.76E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.60E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.61E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.09E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	8.74E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 1)

FESOP:

18-Oct-07

Company Name: **Keystone RV Company - Plant 1**
Address City IN Zip: **2525 Linden Drive, Goshen, Indiana 46526**
FESOP: **039-23645-00620**
Reviewer: **ERG/TDP**
Date: **October 10, 2008**

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.09	0.02	0.00	54.04	50%	Metal
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0414	3.000	4.71	3.59	0.45	10.71	1.95	0.17	59.86	50%	Metal
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.08	0.02	0.00	47.88	50%	Metal
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0008	3.000	5.50	4.90	0.01	0.28	0.05	0.01	54.44	50%	Metal
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0006	3.000	6.10	6.10	0.01	0.25	0.05	0.01	29.05	75%	Metal
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0018	3.000	6.90	6.90	0.04	0.91	0.17	0.00	242.96	75%	Metal
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0023	3.000	4.89	4.40	0.03	0.73	0.13	0.02	19.13	75%	Metal
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0005	3.000	2.50	2.50	0.00	0.08	0.02	0.01	3.79	75%	Metal
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.06	0.01	0.00	749.97	75%	Metal
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0028	3.000	6.22	6.10	0.05	1.21	0.22	0.00	152.49	75%	Metal
Potential to Emit															**0.60**	**14.42**	**2.63**	**0.23**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.45E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	4.14E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.44
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.45E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	8.05E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.75E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.07
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.84E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.08
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.30E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.60E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.15E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.76E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.51**	**0.06**	**0.64**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.05	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0136	3.000	7.09	6.09	0.25	5.95	1.09	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0023	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0092	3.000	6.59	6.59	0.18	4.37	0.80	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1990	3.000	6.51	6.51	3.89	93.24	17.02	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0132	3.000	4.16	0.98	0.04	0.93	0.17	0.07	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0052	3.000	6.42	1.67	0.03	0.62	0.11	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0115	3.000	6.59	6.59	0.23	5.46	1.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0167	3.000	6.53	0.99	0.05	1.19	0.22	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.05	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.66**	**111.87**	**20.42**	**0.09**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.15E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.30E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.36E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.84	0.00	1.08
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.30E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	9.20E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	1.99E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.32E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	5.18E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.15E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.67E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.30E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.15E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.07**	**2.78E-06**	**0.00**	**0.00**	**0.00**	**0.24**	**0.00**	**0.00**	**0.84**	**0.00**	**1.15**

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

Emissions Calculations
Welding and Thermal Cutting (WC 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 1)

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Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.53**
Material Input Rate (lb/hr) = **3,128.0**

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 1)

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-1	0.580	15.2
Forced Air Furnace	1	SH1-1	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-1	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-1	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 1
Address City IN Zip: 2525 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 1)	0.01	0.01	0.00	0.00	3.31	0.00	0.01	1.03
Subfloor Installation (SF 1)	0.00	0.00	0.00	0.00	2.29	0.00	0.76	1.16
Assembly Line Operations (ALO 1)	1.93	1.93	0.00	0.00	15.06	0.00	0.00	1.01
Repair Operations (RO 1)	0.22	0.22	0.00	0.00	1.14	0.00	0.00	0.01
Touchup Paint Operation (TP 1)	0.23	0.23	0.00	0.00	2.63	0.00	0.51	0.64
Final Finish (FF 1)	0.09	0.09	0.00	0.00	20.42	0.00	0.84	1.15
Welding/Cutting/Brazing (WC 1)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 1)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 1)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 1)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**5.66**	**5.71**	**0.005**	**0.872**	**44.89**	**0.732**	**2.11**	**5.03**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 1)	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.03
Subfloor Installation (SF 1)	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	1.16
Assembly Line Operations (ALO 1)	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
Repair Operations (RO 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 1)	0.02	0.01	0.00	0.00	5.39E-04	0.00	0.00	0.04	0.00	0.51	0.06	0.00	0.00	0.00	0.00	0.64
Final Finish (FF 1)	0.00	0.07	2.78E-06	0.00	0.00	0.00	0.24	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.00	1.15
Welding/Cutting/Brazing (WC 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 1)	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
Miscellaneous Fugitive PM Equipment (MPE 1)	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
Natural Gas Combustion (NGC 1)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.08**	**2.78E-06**	**1.42**	**5.39E-04**	**1.03**	**0.24**	**0.04**	**0.01**	**2.11**	**0.06**	**0.02**	**0.00**	**0.00**	**0.00**	**5.03**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0467	3.000	5.39	5.39	0.76	18.14	3.31	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0006	3.000	7.40	3.74	0.01	0.16	0.03	0.01	16.85	50%	Metal
Potential to Emit															**0.76**	**18.29**	**3.34**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.67E-02	3.000	0.00%	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	1.03	0.00	0.00	0.00	0.00	0.00	1.03
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.80E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.03**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.04**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0316	3.000	0.45	0.42	0.04	0.95	0.17	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0494	3.000	3.29	3.29	0.49	11.72	2.14	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0708	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.53**	**12.67**	**2.31**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	1.16E-02	3.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.94E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.76	0.00	1.17
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	7.08E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.76**	**0.00**	**1.17**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0086	3.000	2.78	2.54	0.07	1.57	0.29	0.15	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.2007	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1276	3.000	1.12	0.56	0.21	5.14	0.94	1.45	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0348	3.000	4.65	3.48	0.36	8.71	1.59	0.35	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.2876	3.000	1.05	0.58	2.16	51.82	9.46	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60815	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0027	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0360	3.000	7.39	6.17	0.67	15.98	2.92	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**3.47**	**83.22**	**15.19**	**1.95**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	8.58E-03	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.16E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	2.01E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.28E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.48E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.29E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.16E-04	3.000	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	0.00
Assembly	Oatey	60815	Plumbing	Pipe Joint Compound	16.68	2.67E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.16E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.60E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.02**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0028	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0005	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0016	3.000	3.37	3.37	0.02	0.39	0.07	0.04	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0110	3.000	3.35	3.35	0.11	2.66	0.49	0.16	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0088	3.000	4.99	4.99	0.13	3.17	0.58	0.03	138.13	50%	Metal
Potential to Emit															**0.26**	**6.29**	**1.15**	**0.22**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.78E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.64E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.62E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.10E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	8.82E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.09	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0418	3.000	4.71	3.59	0.45	10.80	1.97	0.18	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.08	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0008	3.000	5.50	4.90	0.01	0.29	0.05	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0006	3.000	6.10	6.10	0.01	0.25	0.05	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0019	3.000	6.90	6.90	0.04	0.92	0.17	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0023	3.000	4.89	4.40	0.03	0.73	0.13	0.02	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0005	3.000	2.50	2.50	0.00	0.08	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasrut	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.06	0.01	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0028	3.000	6.22	6.10	0.05	1.22	0.22	0.00	152.49	75%	Plastic
Potential to Emit															**0.61**	**14.54**	**2.65**	**0.23**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.48E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	4.18E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.45	0.45
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.48E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	8.12E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.80E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.07
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.86E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.08	0.08
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.32E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.64E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasrut	7.60	1.14E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.78E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.52**	**0.06**	**0.65**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.05	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0137	3.000	7.09	6.09	0.25	6.01	1.10	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0023	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0093	3.000	6.59	6.59	0.18	4.40	0.80	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.2007	3.000	6.51	6.51	3.92	94.05	17.16	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0133	3.000	4.16	0.98	0.04	0.94	0.17	0.07	1,088.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0052	3.000	6.42	1.67	0.03	0.63	0.11	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0116	3.000	6.59	6.59	0.23	5.50	1.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0168	3.000	6.53	0.99	0.05	1.20	0.22	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.05	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.70**	**112.84**	**20.59**	**0.09**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.16E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.32E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.37E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.85	0.00	1.09
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.32E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	9.28E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	2.01E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.33E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	5.22E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.16E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.68E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.32E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.16E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.07**	**2.80E-06**	**0.00**	**0.00**	**0.00**	**0.24**	**0.00**	**0.00**	**0.85**	**0.00**	**1.16**

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

Emissions Calculations
Welding and Thermal Cutting (WC 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.13	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.63	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	#####	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.63	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 2)

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.02**
Material Input Rate (lb/hr) = **2,705.0**

Methodology:

Potential Emission (uncontrolled):

Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):

Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 2)

Company Name: Keystone RV Company - Plant 2
Address: 2479 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-2	0.580	15.2
Forced Air Furnace	1	SH1-2	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-2	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-2	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 2
Address: 2478 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 2)	0.01	0.01	0.00	0.00	3.34	0.00	0.01	1.04
Subfloor Installation (SF 2)	0.00	0.00	0.00	0.00	2.31	0.00	0.76	1.17
Assembly Line Operations (ALO 2)	1.95	1.95	0.00	0.00	15.19	0.00	0.00	1.02
Repair Operations (RO 2)	0.22	0.22	0.00	0.00	1.15	0.00	0.00	0.01
Touchup Paint Operation (TP 2)	0.23	0.23	0.00	0.00	2.65	0.00	0.52	0.65
Final Finish (FF 2)	0.09	0.09	0.00	0.00	20.59	0.00	0.85	1.16
Welding/Cutting/Brazing (WC 2)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 2)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 2)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 2)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**5.68**	**5.73**	**0.005**	**0.872**	**45.28**	**0.732**	**2.13**	**5.07**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 2)	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.04
Subfloor Installation (SF 2)	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	1.17
Assembly Line Operations (ALO 2)	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Repair Operations (RO 2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 2)	0.02	0.01	0.00	0.00	5.44E-04	0.00	0.00	0.04	0.00	0.52	0.06	0.00	0.00	0.00	0.00	0.65
Final Finish (FF 2)	0.00	0.07	2.80E-06	0.00	0.00	0.00	0.24	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00	1.16
Welding/Cutting/Brazing (WC 2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 2)	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
Miscellaneous Fugitive PM Equipment (MPE 2)	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
Natural Gas Combustion (NGC 2)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.08**	**2.80E-06**	**1.43**	**5.44E-04**	**1.03**	**0.24**	**0.04**	**0.01**	**2.13**	**0.06**	**0.02**	**0.00**	**0.00**	**0.00**	**5.07**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0403	3.000	5.39	5.39	0.65	15.64	2.85	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0005	3.000	7.40	3.74	0.01	0.13	0.02	0.01	16.85	50%	Metal
Potential to Emit															**0.66**	**15.77**	**2.88**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.03E-02	3.000	0.00%	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	0.89	0.00	0.00	0.00	0.00	0.00	0.89
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.00E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.89**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.90**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0272	3.000	0.45	0.42	0.03	0.82	0.15	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0426	3.000	3.29	3.29	0.42	10.10	1.84	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0610	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.45**	**10.92**	**1.99**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	2.72E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.26E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.66	0.00	1.01
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	6.10E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.66**	**0.00**	**1.01**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0074	3.000	2.78	2.54	0.06	1.35	0.25	0.13	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1730	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1100	3.000	1.12	0.56	0.18	4.43	0.81	1.25	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0300	3.000	4.65	3.48	0.31	7.51	1.37	0.30	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.1100	3.000	1.05	0.56	1.86	44.68	8.15	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0023	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0310	3.000	7.39	6.17	0.57	13.77	2.51	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**2.99**	**71.74**	**13.09**	**1.68**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	7.40E-03	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.22
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.00E-04	3.000	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
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.73E-01	3.000	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
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.10E-01	3.000	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
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.00E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.66
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.11E+00	3.000	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
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.00E-04	3.000	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
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.30E-03	3.000	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
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.00E-04	3.000	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
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.10E-02	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.88**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.88**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0024	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0004	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0014	3.000	3.37	3.37	0.01	0.34	0.06	0.03	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0095	3.000	3.35	3.35	0.10	2.29	0.42	0.14	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0076	3.000	4.99	4.99	0.11	2.73	0.50	0.02	138.13	50%	Metal
Potential to Emit															**0.23**	**5.42**	**0.99**	**0.19**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.40E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.00E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.40E-03	3.000	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
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	9.50E-03	3.000	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
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	7.60E-03	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.08	0.01	0.00	54.04	50%	Metal
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0360	3.000	4.71	3.59	0.39	9.31	1.70	0.15	59.86	50%	Metal
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.07	0.01	0.00	47.88	50%	Metal
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0007	3.000	5.50	4.90	0.01	0.25	0.05	0.01	54.44	50%	Metal
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0005	3.000	6.10	6.10	0.01	0.22	0.04	0.00	29.05	75%	Metal
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0016	3.000	6.90	6.90	0.03	0.79	0.15	0.00	242.96	75%	Metal
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0020	3.000	4.89	4.40	0.03	0.63	0.12	0.02	19.13	75%	Metal
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0004	3.000	2.50	2.50	0.00	0.07	0.01	0.01	3.79	75%	Metal
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.05	0.01	0.00	749.97	75%	Metal
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0024	3.000	6.22	6.10	0.04	1.05	0.19	0.00	152.49	75%	Metal
Potential to Emit															**0.52**	**12.54**	**2.29**	**0.20**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.00E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	3.60E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.38
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.00E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	7.00E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.00E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.06
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.60E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.07
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.00E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.00E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.00E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.40E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.01**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.44**	**0.05**	**0.56**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0002	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.04	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0118	3.000	7.09	6.09	0.22	5.18	0.94	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0020	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0080	3.000	6.59	6.59	0.16	3.80	0.69	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1730	3.000	6.51	6.51	3.38	81.08	14.80	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0115	3.000	4.16	0.98	0.03	0.81	0.15	0.06	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0045	3.000	6.42	1.67	0.02	0.54	0.10	0.01	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0100	3.000	6.59	6.59	0.20	4.74	0.87	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0145	3.000	6.53	0.99	0.04	1.03	0.19	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.04	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.05**	**97.27**	**17.75**	**0.08**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.00E-04	3.000	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
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.00E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.18E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.73	0.00	0.94
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.00E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	8.00E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	1.73E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.15E-02	3.000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	4.50E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.00E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.45E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.00E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.00E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.06**	**2.41E-06**	**0.00**	**0.00**	**0.00**	**0.21**	**0.00**	**0.00**	**0.73**	**0.00**	**1.00**

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

Emissions Calculations
Welding and Thermal Cutting (WC 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 3)

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Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.04**
Material Input Rate (lb/hr) = **2,720.0**

Methodology:

Potential Emission (uncontrolled):

Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):

Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 3)

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-3	0.580	15.2
Forced Air Furnace	1	SH1-3	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-3	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-3	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 3
Address: 2855 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 3)	0.01	0.01	0.00	0.00	2.88	0.00	0.01	0.90
Subfloor Installation (SF 3)	0.00	0.00	0.00	0.00	1.99	0.00	0.66	1.01
Assembly Line Operations (ALO 3)	1.68	1.68	0.00	0.00	13.09	0.00	0.00	0.88
Repair Operations (RO 3)	0.19	0.19	0.00	0.00	0.99	0.00	0.00	0.01
Touchup Paint Operation (TP 3)	0.20	0.20	0.00	0.00	2.29	0.00	0.44	0.56
Final Finish (FF 3)	0.08	0.08	0.00	0.00	17.75	0.00	0.73	1.00
Welding/Cutting/Brazing (WC 3)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 3)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 3)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 3)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**5.34**	**5.39**	**0.005**	**0.872**	**39.04**	**0.732**	**1.84**	**4.38**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 3)	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.90
Subfloor Installation (SF 3)	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	1.01
Assembly Line Operations (ALO 3)	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
Repair Operations (RO 3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 3)	0.01	0.01	0.00	0.00	4.69E-04	0.00	0.00	0.04	0.00	0.44	0.05	0.00	0.00	0.00	0.00	0.56
Final Finish (FF 3)	0.00	0.06	2.41E-06	0.00	0.00	0.00	0.21	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.00	1.00
Welding/Cutting/Brazing (WC 3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 3)	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
Miscellaneous Fugitive PM Equipment (MPE 3)	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
Natural Gas Combustion (NGC 3)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.01**	**0.07**	**2.41E-06**	**1.23**	**4.69E-04**	**0.89**	**0.21**	**0.04**	**0.01**	**1.84**	**0.05**	**0.02**	**0.00**	**0.00**	**0.00**	**4.38**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0717	3.000	5.39	5.39	1.16	27.83	5.08	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0009	3.000	7.40	3.74	0.01	0.24	0.04	0.01	16.85	50%	Metal
Potential to Emit															**1.17**	**28.07**	**5.12**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	7.17E-02	3.000	0.00%	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	1.59	0.00	0.00	0.00	0.00	0.00	1.59
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	8.90E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.59**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.60**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0484	3.000	0.45	0.42	0.06	1.45	0.27	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0758	3.000	3.29	3.29	0.75	17.98	3.28	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.1086	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.81**	**19.43**	**3.55**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % hexamethylene-1,6 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	4.84E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	7.58E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	1.17	0.00	1.80
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	1.09E-01	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.17**	**0.00**	**1.80**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0132	3.000	2.78	2.54	0.10	2.41	0.44	0.23	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.3079	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1958	3.000	1.12	0.56	0.33	7.88	1.44	2.23	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0534	3.000	4.65	3.48	0.56	13.37	2.44	0.53	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.9758	3.000	1.05	0.56	3.31	79.52	14.51	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0041	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0002	3.000	0.41	0.41	0.00	0.01	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0552	3.000	7.39	6.17	1.02	24.52	4.47	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**5.32**	**127.71**	**23.31**	**2.99**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	1.32E-02	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.78E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	3.08E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.96E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	5.34E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.98E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.78E-04	3.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	4.09E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.78E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	5.52E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.57**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.57**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0043	3.000	0.26	0.26	0.00	0.08	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0007	3.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0025	3.000	3.37	3.37	0.03	0.60	0.11	0.06	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0169	3.000	3.35	3.35	0.17	4.08	0.75	0.25	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0135	3.000	4.99	4.99	0.20	4.86	0.89	0.04	138.13	50%	Metal
Potential to Emit															**0.40**	**9.65**	**1.76**	**0.34**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % examethylene-1, diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	4.27E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	7.12E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	2.49E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.69E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	1.35E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0005	3.000	4.76	3.78	0.01	0.15	0.03	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0641	3.000	4.71	3.59	0.69	16.57	3.02	0.27	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0005	3.000	4.47	3.35	0.01	0.13	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0012	3.000	5.50	4.90	0.02	0.44	0.08	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0009	3.000	6.10	6.10	0.02	0.39	0.07	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0028	3.000	6.90	6.90	0.06	1.41	0.26	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0036	3.000	4.89	4.40	0.05	1.13	0.21	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0007	3.000	2.50	2.50	0.01	0.13	0.02	0.02	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0002	3.000	7.50	7.50	0.00	0.10	0.02	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0043	3.000	6.22	6.10	0.08	1.88	0.34	0.01	152.49	75%	Plastic
Potential to Emit															**0.93**	**22.32**	**4.07**	**0.35**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	5.34E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	6.41E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.68
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	5.34E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	1.25E-03	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	8.90E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.04	0.11
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.85E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.03	0.12
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	3.56E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.05
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	7.12E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.78E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	4.27E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.02**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.00**	**0.79**	**0.10**	**1.00**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0002	3.000	2.92	0.76	0.0004	0.01	0.002	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0004	3.000	4.83	3.09	0.003	0.08	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0210	3.000	7.09	6.09	0.38	9.21	1.68	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0036	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0142	3.000	6.59	6.59	0.28	6.76	1.23	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.3079	3.000	6.51	6.51	6.01	144.32	26.34	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0205	3.000	4.16	0.98	0.06	1.44	0.26	0.11	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0080	3.000	6.42	1.67	0.04	0.96	0.18	0.03	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0178	3.000	6.59	6.59	0.35	8.45	1.54	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0258	3.000	6.53	0.99	0.08	1.84	0.34	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0004	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0002	3.000	5.94	5.94	0.00	0.08	0.01	0.00	51.29	100%	Wood
Potential to Emit															**7.21**	**173.15**	**31.60**	**0.14**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.78E-04	3.000	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
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	3.56E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	2.10E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	1.30	0.00	1.67
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	3.56E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.42E-02	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	3.08E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	2.05E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.11
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	8.01E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.78E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	2.58E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	3.56E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.78E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.11**	**4.30E-06**	**0.00**	**0.00**	**0.00**	**0.37**	**0.00**	**0.00**	**1.30**	**0.00**	**1.78**

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

Emissions Calculations
Welding and Thermal Cutting (WC 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 4)

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Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46 lb loss/hr
Total Loss Estimate =	2.03 tons/year

Process Particulate Emissions
Woodworking Activities (WW 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.87**
Material Input Rate (lb/hr) = **3,415.5**

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 4)

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-4	0.580	15.2
Forced Air Furnace	1	SH1-4	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-4	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-4	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 4
Address : 2400 E. Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 4)	0.01	0.01	0.00	0.00	5.12	0.00	0.01	1.60
Subfloor Installation (SF 4)	0.00	0.00	0.00	0.00	3.55	0.00	1.17	1.80
Assembly Line Operations (ALO 4)	2.99	2.99	0.00	0.00	23.31	0.00	0.00	1.57
Repair Operations (RO 4)	0.34	0.34	0.00	0.00	1.76	0.00	0.00	0.02
Touchup Paint Operation (TP 4)	0.35	0.35	0.00	0.00	4.07	0.00	0.79	1.00
Final Finish (FF 4)	0.14	0.14	0.00	0.00	31.60	0.00	1.30	1.78
Welding/Cutting/Brazing (WC 4)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 4)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 4)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 4)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**7.02**	**7.07**	**0.005**	**0.872**	**69.46**	**0.732**	**3.27**	**7.77**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 4)	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.60
Subfloor Installation (SF 4)	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	1.17	0.00	0.00	0.00	0.00	0.00	1.80
Assembly Line Operations (ALO 4)	0.00	0.00	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
Repair Operations (RO 4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 4)	0.02	0.02	0.00	0.00	8.35E-04	0.00	0.00	0.07	0.00	0.79	0.10	0.00	0.00	0.00	0.00	1.00
Final Finish (FF 4)	0.00	0.11	4.30E-06	0.00	0.00	0.00	0.37	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	1.78
Welding/Cutting/Brazing (WC 4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 4)	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
Miscellaneous Fugitive PM Equipment (MPE 4)	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
Natural Gas Combustion (NGC 4)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.13**	**4.30E-06**	**2.20**	**8.35E-04**	**1.59**	**0.37**	**0.07**	**0.02**	**3.27**	**0.10**	**0.02**	**0.00**	**0.00**	**0.00**	**7.77**

Process Particulate Emissions
Woodworking Activities (WW 6)

Company Name: Keystone RV Company - Plant 6
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	700	0.005	38.9	18.00	99.00%	13.14
DC2	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **21.59**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **4.93**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	700	0.005	38.9	18.00	99.00%	0.13
DC2	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.22**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.05**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **0.76**
Material Input Rate (lb/hr) = **161.3**

Methodology:

Potential Emission (uncontrolled):

Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):

Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 6)

.

Company Name: **Keystone RV Company - Plant 6**
Address: **2642 Hackberry Drive, Goshen, Indiana 46526**
FESOP: **039-23645-00620**
Reviewer: **ERG/TDP**
Date: **October 10, 2008**

One (1) Band Saw MPE1

344.00	pieces/hr	x	36.00	in long	x	0.063	in thick lauan	x	0.03125	in wide blade	=	24.19 in3 loss/hr
24.19	in3 loss/hr	/	1,728	in3/ft3	x	18.00	lb/ft3	=	0.25	lb loss/hr		

Total Loss Estimate =	0.25	lb loss/hr
Total Loss Estimate =	1.10	tons/year

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Adhesive Application (AA 5)

Company Name: Keystone RV Company - Plant 6
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TOP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gallunit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Adhesive Application	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	0.0020	344.0	1.05	0.56	0.38	9.01	1.65	0.00	1.42	100%	Wood/Fabric
Potential to Emit															**0.38**	**9.01**	**1.65**	**0.00**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gallunit) * Maximum (unit/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gallunit) * Maximum (unit/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gallunit) * Maximum (unit/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (unit/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 (lb/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gallunit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Adhesive Application	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.95E-03	344.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

METHODOLOGY

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

Natural Gas Combustion (NGC 6)

Company Name: Keystone RV Company - Plant 6
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-6	0.580	15.2
Forced Air Furnace	1	SH1-6	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-6	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-6	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company: Keystone RV Company - Plant 6
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Adhesive Application (AA 6)	0.00	0.00	0.00	0.00	1.65	0.00	0.00	0.00
Miscellaneous Woodworking (WW 6)	0.22	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 6)	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 6)	0.017	0.066	0.005	0.872	0.05	0.732	0.00	7.58E-04
TOTALS	**1.34**	**1.39**	**0.005**	**0.872**	**1.69**	**0.732**	**0.00**	**0.00**

***Hazardous Air Pollutant Emissions from Natural Gas Fuel Combustion Only**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0431	3.000	5.39	5.39	0.70	16.73	3.05	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0005	3.000	7.40	3.74	0.01	0.14	0.03	0.01	16.85	50%	Metal
Potential to Emit															**0.70**	**16.87**	**3.08**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.31E-02	3.000	0.00%	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	0.95	0.00	0.00	0.00	0.00	0.00	0.95
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.35E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.95**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.96**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0291	3.000	0.45	0.42	0.04	0.87	0.16	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0456	3.000	3.29	3.29	0.45	10.81	1.97	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0653	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.49**	**11.68**	**2.13**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	2.91E-02	3.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.56E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.70	0.00	1.08
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	6.53E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.70**	**0.00**	**1.08**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0079	3.000	2.78	2.54	0.06	1.45	0.26	0.14	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1851	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1177	3.000	1.12	0.56	0.20	4.74	0.86	1.34	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0321	3.000	4.65	3.48	0.33	8.03	1.47	0.32	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.1877	3.000	1.05	0.56	1.99	47.80	8.72	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0025	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0332	3.000	7.39	6.17	0.61	14.74	2.69	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**3.20**	**76.77**	**14.01**	**1.80**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	7.92E-03	3.000	0.00%	0.00%	0.00%	40.00%	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	0.24
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.07E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.85E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.18E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.21E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.19E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.07E-04	3.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.46E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.07E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.32E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.94**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0026	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0004	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0015	3.000	3.37	3.37	0.02	0.36	0.07	0.03	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0102	3.000	3.35	3.35	0.10	2.45	0.45	0.15	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0081	3.000	4.99	4.99	0.12	2.92	0.53	0.02	138.13	50%	Metal
Potential to Emit															**0.24**	**5.80**	**1.06**	**0.21**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.57E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.28E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.50E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.02E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	8.13E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.09	0.02	0.00	54.04	50%	Metal
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0385	3.000	4.71	3.59	0.42	9.96	1.82	0.16	59.86	50%	Metal
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.08	0.01	0.00	47.88	50%	Metal
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0007	3.000	5.50	4.90	0.01	0.26	0.05	0.01	54.44	50%	Metal
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0005	3.000	6.10	6.10	0.01	0.23	0.04	0.00	29.05	75%	Metal
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0017	3.000	6.90	6.90	0.04	0.85	0.16	0.00	242.96	75%	Metal
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0021	3.000	4.89	4.40	0.03	0.68	0.12	0.02	19.13	75%	Metal
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0004	3.000	2.50	2.50	0.00	0.08	0.01	0.01	3.79	75%	Metal
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.06	0.01	0.00	749.97	75%	Metal
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0026	3.000	6.22	6.10	0.05	1.13	0.21	0.00	152.49	75%	Metal
Potential to Emit															**0.56**	**13.42**	**2.45**	**0.21**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.21E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	3.85E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.41
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.21E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	7.49E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.35E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.07
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.71E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.07
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.14E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.28E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.07E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.57E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.01**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.48**	**0.06**	**0.60**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0002	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.05	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0126	3.000	7.09	6.09	0.23	5.54	1.01	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0021	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0086	3.000	6.59	6.59	0.17	4.06	0.74	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1851	3.000	6.51	6.51	3.61	86.76	15.83	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0123	3.000	4.16	0.98	0.04	0.87	0.16	0.07	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0048	3.000	6.42	1.67	0.02	0.58	0.11	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0107	3.000	6.59	6.59	0.21	5.08	0.93	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0155	3.000	6.53	0.99	0.05	1.10	0.20	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.05	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.34**	**104.08**	**19.00**	**0.08**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.07E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.14E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.26E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.78	0.00	1.00
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.14E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	8.56E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	1.85E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.23E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	4.82E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.07E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.55E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.14E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.07E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.07**	**2.58E-06**	**0.00**	**0.00**	**0.00**	**0.22**	**0.00**	**0.00**	**0.78**	**0.00**	**1.07**

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

Emissions Calculations
Welding and Thermal Cutting (WC 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 7)

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Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.27**
Material Input Rate (lb/hr) = **2,910.3**

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 7)

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-7	0.580	15.2
Forced Air Furnace	1	SH1-7	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-7	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-7	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 7
Address: 2530 Linden Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 7)	0.01	0.01	0.00	0.00	3.08	0.00	0.01	0.96
Subfloor Installation (SF 7)	0.00	0.00	0.00	0.00	2.13	0.00	0.70	1.08
Assembly Line Operations (ALO 7)	1.80	1.80	0.00	0.00	14.01	0.00	0.00	0.94
Repair Operations (RO 7)	0.21	0.21	0.00	0.00	1.06	0.00	0.00	0.01
Touchup Paint Operation (TP 7)	0.21	0.21	0.00	0.00	2.45	0.00	0.48	0.60
Final Finish (FF 7)	0.08	0.08	0.00	0.00	19.00	0.00	0.78	1.07
Welding/Cutting/Brazing (WC 7)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 7)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 7)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 7)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**5.49**	**5.54**	**0.005**	**0.872**	**41.77**	**0.732**	**1.97**	**4.68**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 7)	0.00	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.96
Subfloor Installation (SF 7)	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	1.08
Assembly Line Operations (ALO 7)	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
Repair Operations (RO 7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 7)	0.01	0.01	0.00	0.00	5.02E-04	0.00	0.00	0.04	0.00	0.48	0.06	0.00	0.00	0.00	0.00	0.60
Final Finish (FF 7)	0.00	0.07	2.58E-06	0.00	0.00	0.00	0.22	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	1.07
Welding/Cutting/Brazing (WC 7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 7)	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
Miscellaneous Fugitive PM Equipment (MPE 7)	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
Natural Gas Combustion (NGC 7)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.01**	**0.08**	**2.58E-06**	**1.32**	**5.02E-04**	**0.95**	**0.22**	**0.04**	**0.01**	**1.97**	**0.06**	**0.02**	**0.00**	**0.00**	**0.00**	**4.68**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Service & Repair Touchup Painting Operation (TP B)

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00420
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	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 (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	3.00E-05	0.100	4.76	3.78	0.00	0.00	0.00	0.00	54.04	50%	Plastic/Metal
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gun Purpose - Gloss Black - Work Day	5.80	89.00%	27.68%	61.32%	23.80%	6.00%	3.60E-05	0.100	4.71	3.59	0.00	0.03	0.01	0.00	59.86	50%	Plastic/Metal
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	3.00E-05	0.100	4.47	3.35	0.00	0.00	0.00	0.00	47.88	50%	Plastic/Metal
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	7.00E-05	0.100	5.50	4.90	0.00	0.00	0.00	0.00	54.44	50%	Plastic/Metal
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	5.00E-05	0.100	6.10	6.10	0.00	0.00	0.00	0.00	29.05	75%	Plastic/Metal
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	1.60E-04	0.100	6.90	6.90	0.00	0.00	0.00	0.00	242.95	75%	Plastic/Metal
Touchup Paint	BASF	DC7RNR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	2.00E-04	0.100	4.89	4.40	0.00	0.00	0.00	0.00	19.13	75%	Plastic/Metal
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	68.00%	4.00E-05	0.100	2.50	2.50	0.00	0.00	0.00	0.00	3.79	75%	Plastic/Metal
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasurit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	1.00E-05	0.100	7.50	7.50	0.00	0.00	0.00	0.00	749.97	75%	Plastic/Metal
Touchup Paint	BASF	LR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	7.00%	4.00%	2.40E-04	0.100	6.22	6.16	0.00	0.00	0.00	0.00	152.49	75%	Plastic/Metal
Potential to Emit															**0.002**	**0.04**	**0.01**	**0.001**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

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) * (lb/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lb/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating > Sum of all solvents used

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.00E-05	0.100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gun Purpose - Gloss Black - Work Day	5.80	3.60E-05	0.100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	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
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.00E-05	0.100	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	7.00E-05	0.100	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.00E-05	0.100	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	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	0.00	0.00
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.60E-04	0.100	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	DC7RNR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.00E-04	0.100	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.00E-05	0.100	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	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
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasurit	7.60	1.00E-05	0.100	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	LR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.40E-04	0.100	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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
VOC and Particulate
From Surface Coating Operations
Service & Repair Operations (SR 8)

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	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 (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	81.40%	74.24%	9.16%	73.94%	16.53%	1.0000E-05	0.100	2.92	0.76	0.0000	0.00	0.000	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.87	63.00%	31.00%	32.00%	35.94%	18.77%	2.0000E-05	0.100	4.83	3.09	0.000	0.00	0.00	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	1.1800E-03	0.100	7.09	6.09	0.00	0.02	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	2.6000E-04	0.100	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	8.0000E-04	0.100	6.59	6.59	0.00	0.01	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Carme-Cardwell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	1.7300E-02	0.100	6.51	6.51	0.01	0.27	0.05	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	1.1500E-03	0.100	4.16	0.98	0.00	0.00	0.00	0.00	1.089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-102	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	4.5000E-04	0.100	6.42	1.67	0.00	0.00	0.00	0.00	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	1.6000E-03	0.100	6.59	6.59	0.00	0.02	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	1.4500E-03	0.100	6.53	0.99	0.00	0.00	0.00	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	2.0000E-05	0.100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M080-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	1.0000E-05	0.100	5.94	5.94	0.00	0.00	0.00	0.00	51.29	100%	Wood
Potential to Emit															**0.01**	**0.32**	**0.06**	**0.0003**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

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 hrs/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 (lb/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.00E-05	0.100	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.87	2.00E-05	0.100	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.18E-03	0.100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.00%	0.00%	0.00%	67.00%	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	TCI	Acetone	Cleaner	Acetone	6.59	2.00E-04	0.100	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	8.00E-04	0.100	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	0.00
Final Finish	Carme-Cardwell	CC-911	Cleaner	Citrus Cleaner	9.37	1.73E-02	0.100	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.15E-03	0.100	0.00%	5.00%	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
Final Finish	Cyclo	C-102	Cleaner	Max Clean - All Purpose	8.34	4.50E-04	0.100	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.60E-03	0.100	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.45E-03	0.100	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.00E-05	0.100	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	0.00
Final Finish	RPM Wood Finishes	M080-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.00E-05	0.100	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**8.05E-09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

Emissions Calculations
Welding and Thermal Cutting (WC 8)

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	0.10	0.10	0.00520	0.00318	0.00001	0.00001	0.00001	0.00052	0.00032	0.00000	0.00000	0.00000	0.00032
Stick (E5154 electrode)	1	0.05	0.05	0.02410	0.00034	-	-	0.00010	0.00121	0.00002	-	-	0.00001	0.00002
		Total Electrodes	0.15											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.09	0.00	0.0001	0.00000	0.0002	0.00
Potential Emissions lbs/day									2.14	0.01	0.001	0.000	0.00	0.02
Potential Emissions tons/year									0.39	2.65E-03	2.41E-04	4.38E-06	7.36E-04	3.63E-03

METHODOLOGY

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

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

Emissions Calculations
Service & Repair Parts Washer (PW 8)

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

VOC Emissions from Parts Washer

Parts Washer Identification	Solvent Name	Solvent Density (lb/gal)	Annual Solvent Throughput (gal)	Weight Percent VOC	Annual Emission Rate TPY
SR4-8	Mineral Spirits	6.51	300.00	100.00%	0.98
	Total Annual Emission Rate				0.98

METHODOLOGY

Annual Emission Rate = [(Solvent Density (lb/gal) x Annual Throughput (gal) x Weight % VOC)] / 2,000 (lb/ton)

TPY - Tons per Year

Hazardous Air Pollutants - This material does not contain hazardous air pollutants (HAP)

Natural Gas Combustion (NGC 8)

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-8	0.580	15.2
Forced Air Furnace	1	SH1-8	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-8	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-8	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 8
Address: 2425 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Service & Repair Touchup Paint Operation (TP 8)	0.00	0.00	0.00	0.00	0.01	0.00	1.48E-03	0.00
Service & Repair (SR 8)	0.00	0.00	0.00	0.00	0.06	0.00	2.43E-03	0.00
Welding/Cutting/Brazing (WC 8)	0.39	0.39	0.00	0.00	0.00	0.00	0.00E+00	3.63E-03
Service & Repair Parts Wahser (PW 8)	0.00	0.00	0.00	0.00	0.98	0.00	0.00E+00	0.00E+00
Natural Gas Combustion (NGC 8)	0.017	0.066	0.005	0.872	0.048	0.732	0.00E+00	7.58E-04
TOTALS	**0.41**	**0.46**	**0.005**	**0.872**	**1.09**	**0.732**	**3.91E-03**	**9.59E-03**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Service & Repair Touchup Paint Operation (TP 8)	4.50E-05	3.09E-05	0.00E+00	0.00E+00	1.56E-06	0.00E+00	0.00E+00	1.27E-04	0.00E+00	1.48E-03	1.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-03
Service & Repair (SR 8)	4.04E-07	2.06E-04	8.05E-09	3.19E-07	0.00E+00	0.00E+00	6.89E-04	0.00E+00	0.00E+00	2.43E-03	1.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03
Welding/Cutting/Brazing (WC 8)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-03	2.41E-04	4.38E-06	7.36E-04	3.63E-03
Service & Repair Parts Wahser (PW 8)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Natural Gas Combustion (NGC 8)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.58E-04
Total Emissions (TPY) by HAP	**4.54E-05**	**2.37E-04**	**8.05E-09**	**3.19E-07**	**1.56E-06**	**0.00E+00**	**6.89E-04**	**1.27E-04**	**0.00E+00**	**3.91E-03**	**1.82E-04**	**2.65E-03**	**2.41E-04**	**4.38E-06**	**7.36E-04**	**9.59E-03**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0600	3.000	5.39	5.39	0.97	23.30	4.25	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0007	3.000	7.40	3.74	0.01	0.20	0.04	0.01	16.85	50%	Metal
Potential to Emit															**0.98**	**23.50**	**4.29**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	6.00E-02	3.000	0.00%	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	1.33	0.00	0.00	0.00	0.00	0.00	1.33
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	7.45E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.33**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.34**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0405	3.000	0.45	0.42	0.05	1.22	0.22	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0635	3.000	3.29	3.29	0.63	15.05	2.75	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0909	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.68**	**16.27**	**2.97**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	4.05E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	6.35E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.98	0.00	1.51
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	9.09E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.98**	**0.00**	**1.51**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0110	3.000	2.78	2.54	0.08	2.02	0.37	0.19	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.2578	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1639	3.000	1.12	0.56	0.27	6.60	1.20	1.87	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0447	3.000	4.65	3.48	0.47	11.19	2.04	0.45	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.6539	3.000	1.05	0.56	2.77	66.57	12.15	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0034	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0462	3.000	7.39	6.17	0.86	20.52	3.75	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**4.45**	**106.90**	**19.51**	**2.50**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	1.10E-02	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.49E-04	3.000	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
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	2.58E-01	3.000	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
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.64E-01	3.000	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
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	4.47E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.65E+00	3.000	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
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.49E-04	3.000	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
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	3.43E-03	3.000	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
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.49E-04	3.000	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
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	4.62E-02	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.31**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0036	3.000	0.26	0.26	0.00	0.07	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0006	3.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0021	3.000	3.37	3.37	0.02	0.51	0.09	0.05	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0142	3.000	3.35	3.35	0.14	3.42	0.62	0.21	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0113	3.000	4.99	4.99	0.17	4.07	0.74	0.03	138.13	50%	Metal
Potential to Emit															**0.34**	**8.07**	**1.47**	**0.29**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	3.58E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	5.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	2.09E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.42E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	1.13E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0004	3.000	4.76	3.78	0.01	0.12	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0536	3.000	4.71	3.59	0.58	13.87	2.53	0.22	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0004	3.000	4.47	3.35	0.00	0.11	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0010	3.000	5.50	4.90	0.02	0.37	0.07	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0007	3.000	6.10	6.10	0.01	0.33	0.06	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0024	3.000	6.90	6.90	0.05	1.18	0.22	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0030	3.000	4.89	4.40	0.04	0.94	0.17	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0006	3.000	2.50	2.50	0.00	0.11	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.08	0.01	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0036	3.000	6.22	6.10	0.07	1.57	0.29	0.00	152.49	75%	Plastic
Potential to Emit															**0.78**	**18.68**	**3.41**	**0.29**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	4.47E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	5.36E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.57
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	4.47E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	1.04E-03	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	7.45E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.09
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.38E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.10
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.98E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.04
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	5.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.49E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	3.58E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**	**0.66**	**0.08**	**0.83**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0003	3.000	4.83	3.09	0.003	0.07	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0176	3.000	7.09	6.09	0.32	7.71	1.41	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0030	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0119	3.000	6.59	6.59	0.24	5.66	1.03	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.2578	3.000	6.51	6.51	5.03	120.81	22.05	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0171	3.000	4.16	0.98	0.05	1.21	0.22	0.09	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0067	3.000	6.42	1.67	0.03	0.81	0.15	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0149	3.000	6.59	6.59	0.29	7.07	1.29	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0216	3.000	6.53	0.99	0.06	1.54	0.28	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0003	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.06	0.01	0.00	51.29	100%	Wood
Potential to Emit															**6.04**	**144.94**	**26.45**	**0.11**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.49E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.98E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.76E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	1.09	0.00	1.39
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.98E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.19E-02	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	2.58E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.71E-02	3.000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	6.71E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.49E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	2.16E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.98E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.49E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.09**	**3.60E-06**	**0.00**	**0.00**	**0.00**	**0.31**	**0.00**	**0.00**	**1.09**	**0.00**	**1.49**

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

Emissions Calculations
Welding and Thermal Cutting (WC 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 12)

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Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = 5.27
Material Input Rate (lb/hr) = 2,908.0

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 12)

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-12	0.580	15.2
Forced Air Furnace	1	SH1-12	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-12	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-12	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 12
Address: 2833 Sourwood Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 12)	0.01	0.01	0.00	0.00	4.29	0.00	0.01	1.34
Subfloor Installation (SF 12)	0.00	0.00	0.00	0.00	2.97	0.00	0.98	1.51
Assembly Line Operations (ALO 12)	2.50	2.50	0.00	0.00	19.51	0.00	0.00	1.31
Repair Operations (RO 12)	0.29	0.29	0.00	0.00	1.47	0.00	0.00	0.02
Touchup Paint Operation (TP 12)	0.29	0.29	0.00	0.00	3.41	0.00	0.66	0.83
Final Finish (FF 12)	0.11	0.11	0.00	0.00	26.45	0.00	1.09	1.49
Welding/Cutting/Brazing (WC 12)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 12)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 12)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 12)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**6.39**	**6.44**	**0.005**	**0.872**	**58.15**	**0.732**	**2.74**	**6.51**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 12)	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.34
Subfloor Installation (SF 12)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	1.51
Assembly Line Operations (ALO 12)	0.00	0.00	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Repair Operations (RO 12)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 12)	0.02	0.01	0.00	0.00	6.99E-04	0.00	0.00	0.06	0.00	0.66	0.08	0.00	0.00	0.00	0.00	0.83
Final Finish (FF 12)	0.00	0.09	3.60E-06	0.00	0.00	0.00	0.31	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	1.49
Welding/Cutting/Brazing (WC 12)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 12)	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
Miscellaneous Fugitive PM Equipment (MPE 12)	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
Natural Gas Combustion (NGC 12)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.11**	**3.60E-06**	**1.84**	**6.99E-04**	**1.33**	**0.31**	**0.06**	**0.02**	**2.74**	**0.08**	**0.02**	**0.00**	**0.00**	**0.00**	**6.51**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0625	3.000	5.39	5.39	1.01	24.24	4.42	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0008	3.000	7.40	3.74	0.01	0.21	0.04	0.01	16.85	50%	Metal
Potential to Emit															**1.02**	**24.44**	**4.46**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	6.25E-02	3.000	0.00%	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	1.38	0.00	0.00	0.00	0.00	0.00	1.38
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	7.75E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.38**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.39**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0422	3.000	0.45	0.42	0.05	1.27	0.23	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0660	3.000	3.29	3.29	0.65	15.66	2.86	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0946	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.71**	**16.92**	**3.09**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	4.22E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	6.60E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	1.02	0.00	1.57
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	9.46E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.02**	**0.00**	**1.57**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0115	3.000	2.78	2.54	0.09	2.10	0.38	0.20	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.2682	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1705	3.000	1.12	0.56	0.29	6.86	1.25	1.94	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0465	3.000	4.65	3.48	0.48	11.64	2.12	0.46	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.7205	3.000	1.05	0.56	2.89	69.25	12.64	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0036	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0002	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0465	3.000	7.39	6.17	0.86	20.66	3.77	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**4.60**	**110.52**	**20.17**	**2.60**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	1.15E-02	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.35
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.55E-04	3.000	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
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	2.68E-01	3.000	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
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.71E-01	3.000	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
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	4.65E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.72E+00	3.000	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
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.55E-04	3.000	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
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	3.57E-03	3.000	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
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.55E-04	3.000	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
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	4.65E-02	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.36**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0037	3.000	0.26	0.26	0.00	0.07	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0006	3.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0022	3.000	3.37	3.37	0.02	0.53	0.10	0.05	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0147	3.000	3.35	3.35	0.15	3.56	0.65	0.22	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0118	3.000	4.99	4.99	0.18	4.23	0.77	0.03	138.13	50%	Metal
Potential to Emit															**0.35**	**8.40**	**1.53**	**0.30**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	3.72E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	6.20E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	2.17E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.47E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	1.18E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0005	3.000	4.76	3.78	0.01	0.13	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0558	3.000	4.71	3.59	0.60	14.43	2.63	0.23	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0005	3.000	4.47	3.35	0.00	0.11	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0011	3.000	5.50	4.90	0.02	0.38	0.07	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0008	3.000	6.10	6.10	0.01	0.34	0.06	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0025	3.000	6.90	6.90	0.05	1.23	0.22	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0031	3.000	4.89	4.40	0.04	0.98	0.18	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0006	3.000	2.50	2.50	0.00	0.11	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0002	3.000	7.50	7.50	0.00	0.08	0.02	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0037	3.000	6.22	6.10	0.07	1.63	0.30	0.00	152.49	75%	Plastic
Potential to Emit															**0.81**	**19.43**	**3.55**	**0.30**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	4.65E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	5.58E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.60
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	4.65E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	1.09E-03	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	7.75E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.10
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.48E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.10
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	3.10E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.04
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	6.20E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.55E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	3.72E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**	**0.69**	**0.08**	**0.87**

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

Emissions Calculations
Welding and Thermal Cutting (WC 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0002	3.000	2.92	0.76	0.0004	0.01	0.002	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0003	3.000	4.83	3.09	0.003	0.07	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0183	3.000	7.09	6.09	0.33	8.02	1.46	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0031	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0124	3.000	6.59	6.59	0.25	5.88	1.07	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.2682	3.000	6.51	6.51	5.24	125.67	22.94	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0178	3.000	4.16	0.98	0.05	1.26	0.23	0.10	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0070	3.000	6.42	1.67	0.03	0.84	0.15	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0155	3.000	6.59	6.59	0.31	7.35	1.34	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0225	3.000	6.53	0.99	0.07	1.60	0.29	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0003	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0002	3.000	5.94	5.94	0.00	0.07	0.01	0.00	51.29	100%	Wood
Potential to Emit															**6.28**	**150.78**	**27.52**	**0.12**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.55E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	3.10E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.83E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	1.13	0.00	1.45
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	3.10E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.24E-02	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	2.68E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.78E-02	3.000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	6.98E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.55E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	2.25E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	3.10E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.55E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.10**	**3.74E-06**	**0.00**	**0.00**	**0.00**	**0.32**	**0.00**	**0.00**	**1.13**	**0.00**	**1.55**

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 14)

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Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = 5.35
Material Input Rate (lb/hr) = 2,975.2

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 14)

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-14	0.580	15.2
Forced Air Furnace	1	SH1-14	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-14	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-14	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 14
Address: 2442 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 14)	0.01	0.01	0.00	0.00	4.46	0.00	0.01	1.39
Subfloor Installation (SF 14)	0.00	0.00	0.00	0.00	3.09	0.00	1.02	1.57
Assembly Line Operations (ALO 14)	2.60	2.60	0.00	0.00	20.17	0.00	0.00	1.36
Repair Operations (RO 14)	0.30	0.30	0.00	0.00	1.53	0.00	0.00	0.02
Touchup Paint Operation (TP 14)	0.30	0.30	0.00	0.00	3.55	0.00	0.69	0.87
Final Finish (FF 14)	0.12	0.12	0.00	0.00	27.52	0.00	1.13	1.55
Welding/Cutting/Brazing (WC 14)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 14)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 14)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 14)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**6.52**	**6.57**	**0.005**	**0.872**	**60.36**	**0.732**	**2.85**	**6.77**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 14)	0.00	0.00	0.00	0.00	0.00	1.38	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.39
Subfloor Installation (SF 14)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	1.57
Assembly Line Operations (ALO 14)	0.00	0.00	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36
Repair Operations (RO 14)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 14)	0.02	0.01	0.00	0.00	7.27E-04	0.00	0.00	0.06	0.00	0.69	0.08	0.00	0.00	0.00	0.00	0.87
Final Finish (FF 14)	0.00	0.10	3.74E-06	0.00	0.00	0.00	0.32	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.00	1.55
Welding/Cutting/Brazing (WC 14)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 14)	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
Miscellaneous Fugitive PM Equipment (MPE 14)	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
Natural Gas Combustion (NGC 14)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.11**	**3.74E-06**	**1.91**	**7.27E-04**	**1.38**	**0.32**	**0.06**	**0.02**	**2.85**	**0.08**	**0.02**	**0.00**	**0.00**	**0.00**	**6.77**

Natural Gas Combustion (NGC 18)

Company Name: Keystone RV Company - Plant 18
Address: 2719 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnace	1	TC1-18	0.580	5.1
Forced Air Furnace	1	SH1-18	0.150	1.3
TOTALS	**2**		**0.73**	**6.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-18	0.005	0.02	0.00	0.25	0.21	0.01	2.2E-04
SH1-18	0.001	0.00	0.00	0.07	0.06	0.00	5.7E-05
TOTALS	**0.006**	**0.024**	**0.002**	**0.320**	**0.269**	**0.018**	**2.8E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 18
Address: 2719 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Natural Gas Combustion (NGC 29)	0.006	0.024	0.002	0.320	0.018	0.269	0.00	2.78E-04
TOTALS	**0.01**	**0.02**	**0.002**	**0.320**	**0.02**	**0.269**	**0.00**	**2.78E-04**

***Not Determined - Hazardous Air Pollutant Emissions from Fuel Combustion Only**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0600	3.000	5.39	5.39	0.97	23.30	4.25	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0007	3.000	7.40	3.74	0.01	0.20	0.04	0.01	16.85	50%	Metal
Potential to Emit															**0.98**	**23.50**	**4.29**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	6.00E-02	3.000	0.00%	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	1.33	0.00	0.00	0.00	0.00	0.00	1.33
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	7.45E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.33**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.34**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0405	3.000	0.45	0.42	0.05	1.22	0.22	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0635	3.000	3.29	3.29	0.63	15.05	2.75	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0909	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.68**	**16.27**	**2.97**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	4.05E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	6.35E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.98	0.00	1.51
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	9.09E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.98**	**0.00**	**1.51**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0110	3.000	2.78	2.54	0.08	2.02	0.37	0.19	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.2578	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1639	3.000	1.12	0.56	0.27	6.60	1.20	1.87	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0447	3.000	4.65	3.48	0.47	11.19	2.04	0.45	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.6539	3.000	1.05	0.56	2.77	66.57	12.15	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0034	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0462	3.000	7.39	6.17	0.86	20.52	3.75	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**4.45**	**106.90**	**19.51**	**2.50**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	1.10E-02	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.49E-04	3.000	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
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	2.58E-01	3.000	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
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.64E-01	3.000	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
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	4.47E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.65E+00	3.000	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
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.49E-04	3.000	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
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	3.43E-03	3.000	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
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.49E-04	3.000	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
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	4.62E-02	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.31**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0036	3.000	0.26	0.26	0.00	0.07	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0006	3.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0021	3.000	3.37	3.37	0.02	0.51	0.09	0.05	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0142	3.000	3.35	3.35	0.14	3.42	0.62	0.21	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0113	3.000	4.99	4.99	0.17	4.07	0.74	0.03	138.13	50%	Metal
Potential to Emit															**0.34**	**8.07**	**1.47**	**0.29**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	3.58E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	5.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	2.09E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.42E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	1.13E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0004	3.000	4.76	3.78	0.01	0.12	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0536	3.000	4.71	3.59	0.58	13.87	2.53	0.22	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0004	3.000	4.47	3.35	0.00	0.11	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0010	3.000	5.50	4.90	0.02	0.37	0.07	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0007	3.000	6.10	6.10	0.01	0.33	0.06	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0024	3.000	6.90	6.90	0.05	1.18	0.22	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0030	3.000	4.89	4.40	0.04	0.94	0.17	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0006	3.000	2.50	2.50	0.00	0.11	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.08	0.01	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0036	3.000	6.22	6.10	0.07	1.57	0.29	0.00	152.49	75%	Plastic
Potential to Emit															**0.78**	**18.68**	**3.41**	**0.29**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	4.47E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	5.36E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.57
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	4.47E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	1.04E-03	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	7.45E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.09
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.38E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.10
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.98E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.04
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	5.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.49E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	3.58E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**	**0.66**	**0.08**	**0.83**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0003	3.000	4.83	3.09	0.003	0.07	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0176	3.000	7.09	6.09	0.32	7.71	1.41	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0030	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0119	3.000	6.59	6.59	0.24	5.66	1.03	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.2578	3.000	6.51	6.51	5.03	120.81	22.05	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0171	3.000	4.16	0.98	0.05	1.21	0.22	0.09	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0067	3.000	6.42	1.67	0.03	0.81	0.15	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0149	3.000	6.59	6.59	0.29	7.07	1.29	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0216	3.000	6.53	0.99	0.06	1.54	0.28	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0003	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.06	0.01	0.00	51.29	100%	Wood
Potential to Emit															**6.04**	**144.94**	**26.45**	**0.11**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.49E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.98E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.76E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	1.09	0.00	1.39
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.98E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.19E-02	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	2.58E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.71E-02	3.000	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	6.71E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.49E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	2.16E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.98E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.49E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.09**	**3.60E-06**	**0.00**	**0.00**	**0.00**	**0.31**	**0.00**	**0.00**	**1.09**	**0.00**	**1.49**

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

Emissions Calculations
Welding and Thermal Cutting (WC 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 19)

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Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = 5.27
Material Input Rate (lb/hr) = 2,908.0

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 19)

Company Name: Keystone RV Company - Plant 19
Address: 2431 East Kercher Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Radiant Space Heaters	26	R1-7-19	0.150	34.2
Forced Air Furnaces	2	SH1-2-19	0.250	4.4
TOTALS	**28**		**4.40**	**38.5**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
R1-7-19	0.03	0.13	0.01	1.71	1.43	0.09	1.5E-03
SH1-2-19	0.00	0.02	0.00	0.22	0.18	0.01	1.9E-04
TOTALS	**0.037**	**0.146**	**0.012**	**1.927**	**1.619**	**0.106**	**1.7E-03**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 19
Address: 2420 Davis Drive, Goshen, Indiana 46526
Title V: 039-23645-00620
Reviewer: ERG/TDP
Date: October 4, 2007

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 19)	0.01	0.01	0.00	0.00	4.29	0.00	0.01	1.34
Subfloor Installation (SF 19)	0.00	0.00	0.00	0.00	2.97	0.00	0.98	1.51
Assembly Line Operations (ALO 19)	2.50	2.50	0.00	0.00	19.51	0.00	0.00	1.31
Repair Operations (RO 19)	0.29	0.29	0.00	0.00	1.47	0.00	0.00	0.02
Touchup Paint Operation (TP 19)	0.29	0.29	0.00	0.00	3.41	0.00	0.66	0.83
Final Finish (FF 19)	0.11	0.11	0.00	0.00	26.45	0.00	1.09	1.49
Welding/Cutting/Brazing (WC 19)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 19)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 19)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 19)	0.037	0.146	0.012	1.927	0.106	1.619	0.00	1.68E-03
TOTALS	**6.41**	**6.52**	**0.012**	**1.927**	**58.21**	**1.619**	**2.74**	**6.51**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 19)	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.34
Subfloor Installation (SF 19)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	1.51
Assembly Line Operations (ALO 19)	0.00	0.00	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Repair Operations (RO 19)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 19)	0.02	0.01	0.00	0.00	6.99E-04	0.00	0.00	0.06	0.00	0.66	0.08	0.00	0.00	0.00	0.00	0.83
Final Finish (FF 19)	0.00	0.09	3.60E-06	0.00	0.00	0.00	0.31	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	1.49
Welding/Cutting/Brazing (WC 19)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 19)	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
Miscellaneous Fugitive PM Equipment (MPE 19)	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
Natural Gas Combustion (NGC 19)	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	1.68E-03
Total Emissions (TPY) by HAP	**0.02**	**0.11**	**3.60E-06**	**1.84**	**6.99E-04**	**1.33**	**0.31**	**0.06**	**0.02**	**2.74**	**0.08**	**0.02**	**0.00**	**0.00**	**0.00**	**6.51**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Lamination Lines (L1 through L3)

Company Name: Keystone RV Company - Plant 20
Address: 2769 Elders Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
L1-L3	Bostick	6.82	64.90%	0.00%	64.90%	0.00%	16.00%	0.1300	5.620	4.43	4.43	3.23	80.44	14.16	0.00	27.66	100%	Styrofoam
L1-L3	Misty Glue	8.05	60.00%	0.00%	60.00%	0.00%	39.00%	0.1300	5.620	4.83	4.83	3.53	95.79	15.46	0.00	12.38	100%	Styrofoam
L1-L3	No. 4 Cleaner	10.84	10.00%	2.00%	10.00%	0.00%	88.00%	0.0120	5.620	1.08	1.08	0.07	0.45	0.32	0.00	1.23	100%	Styrofoam
L1-L3	Dyna Solve	8.67	97.00%	0.00%	97.00%	0.00%	0.00%	0.0004	5.620	8.41	8.41	0.02	0.89	0.08	0.00	--	100%	Styrofoam
L1-L3	Dynflake	9.98	0.00%	0.00%	0.00%	0.00%	97.00%	0.0020	5.620	0.00	0.00	0.00	0.00	0.00	0.00	--	100%	Styrofoam
L1-L3	Lacquer	10.09	100.00%	0.00%	100.00%	0.00%	0.00%	0.0120	5.620	10.09	10.09	0.68	38.59	2.98		--	100%	Styrofoam
L1-L3	Adhesive	8.90	0.00%	0.00%	0.00%	0.00%	98.00%	6.1800	5.620	0.00	0.00	0.00	0.00	0.00		0.00	100%	Styrofoam
Potential to Emit												**7.54**	**216.2**	**33.0**	**7.54**	**216.2**	**33.00**	**0.00**

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Methylene Chloride	Weight % Tetrachloroethylene	Weight % Trichloroethene	Methylene Chloride Emissions (ton/yr)	Tetrachloroethylene Emissions (ton/yr)	Trichloroethene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
L1-L3	Bostick	6.82	0.1300	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L1-L3	Misty Glue	8.05	0.1300	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L1-L3	No. 4 Cleaner	10.84	0.0120	5.620	85.00%	10.00%	10.00%	2.72	0.32	0.32	3.36
L1-L3	Dyna Solve	8.67	0.0004	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L1-L3	Dynflake	9.98	0.0020	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L1-L3	Lacquer	10.09	0.0120	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L1-L3	Adhesive	8.90	6.1800	5.620	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions								**2.72**	**0.32**	**0.32**	**3.36**

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
VOC and Particulate
From Surface Coating Operations
Lamination Lines (L4 and L5)

Company Name: Keystone RV Company - Plant 20
Address: 2769 Elders Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
L4-L5	Bostick	6.82	64.90%	0.00%	64.90%	0.00%	16.00%	0.1300	3.750	4.43	4.43	2.16	35.81	9.45	0.00	27.66	100%	Styrofoam
L4-L5	Misty Glue	8.05	60.00%	0.00%	60.00%	0.00%	39.00%	0.1300	3.750	4.83	4.83	2.35	42.65	10.31	0.00	12.38	100%	Styrofoam
L4-L5	No. 4 Cleaner	10.84	10.00%	2.00%	10.00%	0.00%	88.00%	0.0120	3.750	1.08	1.08	0.05	0.20	0.21	0.00	1.23	100%	Styrofoam
L4-L5	Dyna Solve	8.67	97.00%	0.00%	97.00%	0.00%	0.00%	0.0004	3.750	8.41	8.41	0.01	0.40	0.06	0.00	--	100%	Styrofoam
L4-L5	Dynflake	9.98	0.00%	0.00%	0.00%	0.00%	97.00%	0.0020	3.750	0.00	0.00	0.00	0.00	0.00	0.00	--	100%	Styrofoam
L4-L5	Lacquer	10.09	100.00%	0.00%	100.00%	0.00%	0.00%	0.0120	3.750	10.09	10.09	0.45	17.18	1.99		--	100%	Styrofoam
L4-L5	Adhesive	8.90	0.00%	0.00%	0.00%	0.00%	98.00%	6.1800	3.750	0.00	0.00	0.00	0.00	0.00		0.00	100%	Styrofoam
Potential to Emit												**5.03**	**96.2**	**22.0**	**5.03**	**96.2**	**22.02**	**0.00**

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Methylene Chloride	Weight % Tetrachloroethylene	Weight % Trichloroethene	Methylene Chloride Emissions (ton/yr)	Tetrachloroethylene Emissions (ton/yr)	Trichloroethene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
L4-L5	Bostick	6.82	0.1300	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L4-L5	Misty Glue	8.05	0.1300	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L4-L5	No. 4 Cleaner	10.84	0.0120	3.750	85.00%	10.00%	10.00%	1.82	0.21	0.21	2.24
L4-L5	Dyna Solve	8.67	0.0004	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L4-L5	Dynflake	9.98	0.0020	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L4-L5	Lacquer	10.09	0.0120	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
L4-L5	Adhesive	8.90	6.1800	3.750	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions								**1.82**	**0.21**	**0.21**	**2.24**

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

Emissions Calculations
Welding and Thermal Cutting (WC 20)

Company Name: Keystone RV Company - Plant 20
Address: 2769 Elders Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG) (carbon steel)	28	1.71	47.88	0.00550	0.00050	0.00001	0.00001	0.00001	0.26334	0.02394	0.00048	0.00048	0.00048	0.02538
		Total Electrodes	47.88											
EMISSION TOTALS														
Potential Emissions lbs/hr									0.26	0.02	0.0005	0.00048	0.0005	0.03
Potential Emissions lbs/day									6.32	0.57	0.011	0.011	0.01	0.61
Potential Emissions tons/year									1.15	0.10	2.10E-03	2.10E-03	2.10E-03	0.11

METHODOLOGY

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 20)

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Company Name: **Keystone RV Company - Plant 20**
Address: **2769 Elders Drive, Goshen, Indiana 46526**
FESOP: **039-23645-00620**
Reviewer: **ERG/TDP**
Date: **October 10, 2008**

Two (2) Wood Chop Saws MPE1

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr
5.63	in3 loss/hr	/	1,728	in3/ft3	x	45.00	lb/ft3	=	0.146	lb loss/hr			

Total Loss Estimate =	0.15	lb loss/hr
Total Loss Estimate =	0.64	tons/year

Natural Gas Combustion (NGC 20)

Company Name: Keystone RV Company - Plant 20
Address: 2769 Elders Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Radiant Space Heaters	26	R1-28-20	0.150	34.2
Forced Air Furnaces	2	SH1-2-20	0.250	4.4
TOTALS	**28**		**4.40**	**38.5**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
R1-28-20	0.03	0.13	0.01	1.71	1.43	0.09	1.5E-03
SH1-2-20	0.00	0.02	0.00	0.22	0.18	0.01	1.9E-04
TOTALS	**0.037**	**0.146**	**0.012**	**1.927**	**1.619**	**0.106**	**1.7E-03**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 20
Address: 2769 Elders Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Laminators (L1 through L3)	0.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
Laminators (L4 and L5)	5.03	5.03	0.00	0.00	22.02	0.00	1.82	2.24
Welding/Cutting/Brazing (WC 20)	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.11
Miscellaneous Particulate Emissions (MPE 20)	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 20)	0.037	0.146	0.012	1.927	0.106	1.619	0.00	1.68E-03
TOTALS	**6.86**	**6.97**	**0.012**	**1.927**	**55.13**	**1.619**	**1.82**	**2.36**

***Methylene Chloride as Determined Below**

Emission Units	Methylene Chloride Emissions (ton/yr)	Tetrachloroethylene Emissions (ton/yr)	Trichloroethene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Laminators (L1 through L3)	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.96
Laminators (L4 and L5)	1.82	0.21	0.21	0.00	0.00	0.00	0.00	2.24
Welding/Cutting/Brazing (WC 20)	0.00	0.00	0.00	1.05E-01	2.10E-03	2.10E-03	2.10E-03	0.11
Miscellaneous Particulate Emissions (MPE 20)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 20)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68E-03
Total Emissions (TPY) by HAP	**2.14**	**0.53**	**0.53**	**0.10**	**0.00**	**0.00**	**0.00**	**3.32**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 30)

Company Name: Keystone RV Company - Plant 23
Address: 2694 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
S1-S4	National Starch & Chemical	34-4243	Sealant	hot melt adhesive	8.10	0.00%	0.00%	0.00%	0.00%	100.00%	0.0160	40.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
S1-S4	National Starch & Chemical	34-913A	Sealant	urethane reactive hot melt	8.90	0.00%	0.00%	0.00%	0.00%	100.00%	3.4300	40.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
S1-S4	National Starch & Chemical	34-785	Sealant	adhesive cleaner	9.50	0.00%	0.00%	0.00%	0.00%	100.00%	0.0800	40.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
S1-S4	National Starch & Chemical	34-3182	Sealant	hot melt adhesive	8.10	0.00%	0.00%	0.00%	0.00%	100.00%	0.0500	40.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
S1-S4	Forbo Adhesives	Everlock-2u3086	Sealant	hot melt adhesive	8.42	0.00%	0.00%	0.00%	0.00%	0.00%	1.2300	40.000	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Metal
Potential to Emit															**0.00**	**0.00**	**0.00**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
S1-S4	National Starch & Chemical	34-4243	Sealant	hot melt adhesive	8.10	1.60E-02	40.000	0.00%	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	4.54	0.00	0.00	0.00	0.00	0.00	4.54
S1-S4	Forbo Adhesives	Everlock-2u3086	Sealant	hot melt adhesive	8.42	1.23E+00	40.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	181.45	0.00	181.45
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**4.54**	**0.00**	**0.00**	**0.00**	**181.45**	**0.00**	**185.99**

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

Emissions Calculations
Welding and Thermal Cutting (WC 30)

Company Name: Keystone RV Company - Plant 23
Address: 2694 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)	70	1.20	84.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.43680	0.26712	0.00084	0.00084	0.00084	0.26964
		Total Electrodes	84.00											
EMISSION TOTALS														
Potential Emissions lbs/hr									0.44	0.27	0.0008	0.00084	0.0008	0.27
Potential Emissions lbs/day									10.48	6.41	0.020	0.020	0.02	6.47
Potential Emissions tons/year									1.91	1.17	3.68E-03	3.68E-03	3.68E-03	1.18

METHODOLOGY

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

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

Natural Gas Combustion (NGC 30)

Company Name: Keystone RV Company - Plant 23
Address: 2694 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Radiant Space Heaters	1	R1	1.50	13.1

Emission Factor (lbs/MMCF)						
PM*	PM10*	SO2	NOX**	CO	VOC	HAPs
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	PM	PM10	SO2	NOX	CO	VOC	HAPs
R1	0.01	0.05	0.00	0.66	0.55	0.04	5.72E-04

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
Emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 23
Address: 2694 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Laminators (S1 through S4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welding/Cutting/Brazing (WC 1)	1.91	1.91	0.00	0.00	0.00	0.00	0.00	1.18
Natural Gas Combustion (NGC 1)	0.012	0.050	0.004	0.657	0.036	0.552	0.00	5.72E-04
TOTALS	**1.93**	**1.96**	**0.004**	**0.657**	**0.04**	**0.552**	**0.00**	**1.18**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Laminators (S1 through S4)	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
Welding/Cutting/Brazing (WC 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17E+00	3.68E-03	3.68E-03	3.68E-03	1.18
Natural Gas Combustion (NGC 1)	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	5.72E-04
Total Emissions (TPY) by HAP	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.17**	**0.00**	**0.00**	**0.00**	**1.18**

Process Particulate Emissions
Woodworking Activities (WW 29)

Company Name: Keystone RV Company - Plant 29
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 0039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	2,025	0.003	4.1	495.00	99.00%	22.81
DC2	1	4,720	0.002	4.1	1,140.00	99.00%	35.44

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **58.25**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **13.30**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	2,025	0.003	4.1	495.00	99.00%	0.23
DC2	1	4,720	0.002	4.1	1,140.00	99.00%	0.35

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.58**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.13**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **8.94**
Material Input Rate (lb/hr) = **6,400.0**

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 29)

.

Company Name: **Keystone RV Company - Plant 29**
Address: **2642 Hackberry Drive, Goshen, Indiana 46526**
FESOP: **0039-23645-00620**
Reviewer: **ERG/TDP**
Date: **October 10, 2008**

One (1) Wood Chop Saws MPE1

10.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	2.813 in3 loss/hr
2.81	in3 loss/hr	/	1,728	in3/ft3	x	45.00	lb/ft3	=	0.073	lb loss/hr		

Four (4) Hand Routers MPE2-5

1,000.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	7.81	in3 loss/hr
7.81	in3 loss/hr	/	1,728	in3/ft3	x	45.00	lb/ft3	=	0.203	lb loss/hr

Total Loss Estimate =	0.28 lb loss/hr
Total Loss Estimate =	1.21 tons/year

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 29
Address: 2642 Hackberry Drive, Goshen, Indiana 46526
FESOP: 0039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Miscellaneous Woodworking (WW 29)	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 29)	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	**1.79**	**1.79**	**0.000**	**0.000**	**0.00**	**0.000**	**0.00**	**0.00**

***Not Determined - Hazardous Air Pollutant Emissions from Fuel Combustion Only**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0451	3.000	5.39	5.39	0.73	17.51	3.20	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0006	3.000	7.40	3.74	0.01	0.15	0.03	0.01	16.85	50%	Metal
Potential to Emit															**0.74**	**17.66**	**3.22**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.51E-02	3.000	0.00%	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	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.60E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.01**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0305	3.000	0.45	0.42	0.04	0.92	0.17	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0477	3.000	3.29	3.29	0.47	11.31	2.06	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0683	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.51**	**12.23**	**2.23**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	3.05E-02	3.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.77E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.74	0.00	1.13
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	6.83E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.74**	**0.00**	**1.13**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0083	3.000	2.78	2.54	0.06	1.52	0.28	0.14	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1938	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1232	3.000	1.12	0.56	0.21	4.96	0.90	1.40	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0336	3.000	4.65	3.48	0.35	8.41	1.53	0.34	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.2432	3.000	1.05	0.56	2.08	50.04	9.13	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0026	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0347	3.000	7.39	6.17	0.64	15.43	2.82	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**3.35**	**80.35**	**14.66**	**1.88**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	8.29E-03	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.12E-04	3.000	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
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.94E-01	3.000	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
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.23E-01	3.000	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
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.36E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.74
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.24E+00	3.000	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
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.12E-04	3.000	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
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.58E-03	3.000	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
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.12E-04	3.000	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
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.47E-02	3.000	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
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.99**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0027	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0004	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0016	3.000	3.37	3.37	0.02	0.38	0.07	0.04	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0106	3.000	3.35	3.35	0.11	2.57	0.47	0.16	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0085	3.000	4.99	4.99	0.13	3.06	0.56	0.02	138.13	50%	Metal
Potential to Emit															**0.25**	**6.07**	**1.11**	**0.22**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.69E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.48E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.57E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.06E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	8.51E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.09	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0403	3.000	4.71	3.59	0.43	10.43	1.90	0.17	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.08	0.01	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0008	3.000	5.50	4.90	0.01	0.28	0.05	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0006	3.000	6.10	6.10	0.01	0.25	0.04	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0018	3.000	6.90	6.90	0.04	0.89	0.16	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0022	3.000	4.89	4.40	0.03	0.71	0.13	0.02	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0004	3.000	2.50	2.50	0.00	0.08	0.01	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.06	0.01	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0027	3.000	6.22	6.10	0.05	1.18	0.22	0.00	152.49	75%	Plastic
Potential to Emit															**0.59**	**14.04**	**2.56**	**0.22**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.36E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	4.03E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.43
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.36E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	7.84E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.60E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.07
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.79E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.01	0.07
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.24E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.48E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.12E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.69E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.50**	**0.06**	**0.63**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.05	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0132	3.000	7.09	6.09	0.24	5.80	1.06	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0022	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0090	3.000	6.59	6.59	0.18	4.25	0.78	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1938	3.000	6.51	6.51	3.78	90.81	16.57	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0129	3.000	4.16	0.98	0.04	0.91	0.17	0.07	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0050	3.000	6.42	1.67	0.03	0.61	0.11	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0112	3.000	6.59	6.59	0.22	5.31	0.97	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0162	3.000	6.53	0.99	0.05	1.16	0.21	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.05	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.54**	**108.95**	**19.88**	**0.09**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.12E-04	3.000	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
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.24E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.32E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.82	0.00	1.05
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.24E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	8.96E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	1.94E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.29E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	5.04E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.12E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.62E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.24E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.12E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.07**	**2.70E-06**	**0.00**	**0.00**	**0.00**	**0.23**	**0.00**	**0.00**	**0.82**	**0.00**	**1.12**

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

Emissions Calculations
Welding and Thermal Cutting (WC 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 31)

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Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **4.29**
Material Input Rate (lb/hr) = **2,139.2**

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 31)

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-31	0.580	15.2
Forced Air Furnace	2	SH1-2-31	0.500	8.8
TOTALS	**5**		**2.74**	**24.0**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-31	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-2-31	0.01	0.03	0.00	0.44	0.37	0.02	3.8E-04
TOTALS	**0.023**	**0.091**	**0.007**	**1.200**	**1.008**	**0.066**	**1.0E-03**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 31
Address: 2462 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 31)	0.01	0.01	0.00	0.00	3.22	0.00	0.01	1.01
Subfloor Installation (SF 31)	0.00	0.00	0.00	0.00	2.23	0.00	0.74	1.13
Assembly Line Operations (ALO 31)	1.88	1.88	0.00	0.00	14.66	0.00	0.00	0.99
Repair Operations (RO 31)	0.22	0.22	0.00	0.00	1.11	0.00	0.00	0.01
Touchup Paint Operation (TP 31)	0.22	0.22	0.00	0.00	2.56	0.00	0.50	0.63
Final Finish (FF 31)	0.09	0.09	0.00	0.00	19.88	0.00	0.82	1.12
Welding/Cutting/Brazing (WC 31)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 31)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 31)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 31)	0.023	0.091	0.007	1.200	0.066	1.008	0.00	1.04E-03
TOTALS	**5.60**	**5.67**	**0.007**	**1.200**	**43.74**	**1.008**	**2.06**	**4.90**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 31)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.01
Subfloor Installation (SF 31)	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	1.13
Assembly Line Operations (ALO 31)	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
Repair Operations (RO 31)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 31)	0.02	0.01	0.00	0.00	5.25E-04	0.00	0.00	0.04	0.00	0.50	0.06	0.00	0.00	0.00	0.00	0.63
Final Finish (FF 31)	0.00	0.07	2.70E-06	0.00	0.00	0.00	0.23	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	1.12
Welding/Cutting/Brazing (WC 31)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 31)	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
Miscellaneous Fugitive PM Equipment (MPE 31)	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
Natural Gas Combustion (NGC 31)	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	1.04E-03
Total Emissions (TPY) by HAP	**0.02**	**0.08**	**2.70E-06**	**1.38**	**5.25E-04**	**1.00**	**0.23**	**0.04**	**0.01**	**2.06**	**0.06**	**0.02**	**0.00**	**0.00**	**0.00**	**4.90**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0095	4.000	2.78	2.54	0.10	2.31	0.42	0.22	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	4.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.2214	4.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1408	4.000	1.12	0.56	0.31	7.56	1.38	2.14	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0384	4.000	4.65	3.48	0.53	12.82	2.34	0.51	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.4208	4.000	1.05	0.56	3.18	76.25	13.91	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	4.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0029	4.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	4.000	0.41	0.41	0.00	0.01	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0397	4.000	7.39	6.17	0.98	23.51	4.29	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**5.10**	**122.44**	**22.35**	**2.87**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % examethylene-1, diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	9.47E-03	4.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.28E-04	4.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	2.21E-01	4.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.41E-01	4.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.84E-02	4.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.42E+00	4.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.28E-04	4.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.94E-03	4.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.28E-04	4.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.97E-02	4.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.50**

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
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatiles (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0516	4.000	5.39	5.39	1.11	26.69	4.87	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0006	4.000	7.40	3.74	0.01	0.23	0.04	0.01	16.85	50%	Metal
Potential to Emit															**1.12**	**26.92**	**4.91**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	5.16E-02	4.000	0.00%	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	1.52	0.00	0.00	0.00	0.00	0.00	1.52
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	6.40E-04	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.52**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.53**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0348	4.000	0.45	0.42	0.06	1.39	0.25	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0545	4.000	3.29	3.29	0.72	17.24	3.15	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0781	4.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.78**	**18.63**	**3.40**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6- diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	3.48E-02	4.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	5.45E-02	4.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	1.12	0.00	1.73
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	7.81E-02	4.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.12**	**0.00**	**1.73**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0031	4.000	0.26	0.26	0.00	0.08	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0005	4.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0018	4.000	3.37	3.37	0.02	0.58	0.11	0.05	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0122	4.000	3.35	3.35	0.16	3.92	0.71	0.24	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0097	4.000	4.99	4.99	0.19	4.66	0.85	0.04	138.13	50%	Metal
Potential to Emit															**0.39**	**9.25**	**1.69**	**0.33**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	3.07E-03	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	5.12E-04	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.79E-03	4.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.22E-02	4.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	9.73E-03	4.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0004	4.000	4.76	3.78	0.01	0.14	0.03	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0461	4.000	4.71	3.59	0.66	15.89	2.90	0.26	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0004	4.000	4.47	3.35	0.01	0.12	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0009	4.000	5.50	4.90	0.02	0.42	0.08	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0006	4.000	6.10	6.10	0.02	0.37	0.07	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0020	4.000	6.90	6.90	0.06	1.36	0.25	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0026	4.000	4.89	4.40	0.05	1.08	0.20	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0005	4.000	2.50	2.50	0.01	0.12	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	4.000	7.50	7.50	0.00	0.09	0.02	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0031	4.000	6.22	6.10	0.07	1.80	0.33	0.01	152.49	75%	Plastic
Potential to Emit															**0.89**	**21.40**	**3.91**	**0.33**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.84E-04	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	4.61E-02	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.66
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.84E-04	4.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	8.96E-04	4.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	6.40E-04	4.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.10
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.05E-03	4.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.11
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.56E-03	4.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.04
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	5.12E-04	4.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.28E-04	4.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	3.07E-03	4.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.02**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.00**	**0.76**	**0.09**	**0.96**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	4.000	2.92	0.76	0.0004	0.01	0.002	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0003	4.000	4.83	3.09	0.003	0.08	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0151	4.000	7.09	6.09	0.37	8.84	1.61	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0026	4.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0102	4.000	6.59	6.59	0.27	6.48	1.18	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.2214	4.000	6.51	6.51	5.77	138.38	25.25	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0147	4.000	4.16	0.98	0.06	1.39	0.25	0.11	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0058	4.000	6.42	1.67	0.04	0.92	0.17	0.03	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0128	4.000	6.59	6.59	0.34	8.10	1.48	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0186	4.000	6.53	0.99	0.07	1.76	0.32	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0003	4.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	4.000	5.94	5.94	0.00	0.07	0.01	0.00	51.29	100%	Wood
Potential to Emit															**6.92**	**166.02**	**30.30**	**0.13**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6- diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.28E-04	4.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.56E-04	4.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.51E-02	4.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	1.24	0.00	1.60
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.56E-03	4.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.02E-02	4.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	2.21E-01	4.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.47E-02	4.000	0.00%	5.00%	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	0.00	0.00	0.11
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	5.76E-03	4.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.28E-02	4.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.86E-02	4.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.56E-04	4.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.28E-04	4.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.11**	**4.12E-06**	**0.00**	**0.00**	**0.00**	**0.35**	**0.00**	**0.00**	**1.24**	**0.00**	**1.70**

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

Emissions Calculations
Welding and Thermal Cutting (WC 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	2	1.00	2.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.01040	0.00636	0.00002	0.00002	0.00002	0.00642
Stick (E5154 electrode)	2	0.50	1.00	0.02410	0.00034	-	-	0.00010	0.02410	0.00034	-	-	0.00010	0.00044
		Total Electrodes	3.00											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	2	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.17518	0.00054	0.00011	-	0.00032	0.00097
EMISSION TOTALS														
Potential Emissions lbs/hr									0.21	0.01	0.0001	0.00002	0.0004	0.01
Potential Emissions lbs/day									5.03	0.17	0.003	0.000	0.01	0.19
Potential Emissions tons/year									0.92	3.17E-02	5.61E-04	8.76E-05	1.94E-03	0.03

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 50)

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Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Six (6) PVC Chop Saws MPE1 - 6

40.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	7.85	in3 loss/hr
7.85	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.40	lb loss/hr						

Eight (8) Aluminum Chop Saws MPE7-14

40.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	2.5	in3 loss/hr			
2.50	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.24	lb loss/hr						

Four (4) Wood Chop Saws MPE15-18

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE19-20

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Twelve (12) Hand Routers MPE21-32

240.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	1.88	in3 loss/hr						
1.88	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.04	lb loss/hr						

Total Loss Estimate =	0.87 lb loss/hr
Total Loss Estimate =	3.80 tons/year

Process Particulate Emissions
Woodworking Activities (WW 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	3,500	0.002	4.9	720.00	99.00%	26.28
DC2 - DC4	3	105	0.007	4.8	22.00	99.00%	8.28
DC5 - DC6	2	700	0.005	38.9	18.00	99.00%	26.28
DC7 - DC8	2	450	0.005	36.0	12.50	99.00%	16.89

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **77.73**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **17.75**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	3,500	0.002	4.9	720.00	99.00%	0.26
DC2 - DC4	3	105	0.007	4.8	22.00	99.00%	0.08
DC5 - DC6	2	700	0.005	38.9	18.00	99.00%	0.26
DC7 - DC8	2	450	0.005	36.0	12.50	99.00%	0.17

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.78**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.18**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = 5.71
Material Input Rate (lb/hr) = 3,278.5

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 50)

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-50	0.580	15.2
Forced Air Furnace	1	SH1-50	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-50	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-50	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All Emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 50
Address: 2420 Davis Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 50)	0.01	0.01	0.00	0.00	4.91	0.00	0.01	1.53
Subfloor Installation (SF 50)	0.00	0.00	0.00	0.00	3.40	0.00	1.12	1.73
Assembly Line Operations (ALO 50)	2.87	2.87	0.00	0.00	22.35	0.00	0.00	1.50
Repair Operations (RO 50)	0.33	0.33	0.00	0.00	1.69	0.00	0.00	0.02
Touchup Paint Operation (TP 50)	0.33	0.33	0.00	0.00	3.91	0.00	0.76	0.96
Final Finish (FF 50)	0.13	0.13	0.00	0.00	30.30	0.00	1.24	1.70
Welding/Cutting/Brazing (WC 50)	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.03
Miscellaneous Woodworking (WW 50)	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 50)	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 50)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**9.18**	**9.23**	**0.005**	**0.872**	**66.60**	**0.732**	**3.14**	**7.47**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 50)	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.53
Subfloor Installation (SF 50)	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	0.00	0.00	0.00	1.73
Assembly Line Operations (ALO 50)	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
Repair Operations (RO 50)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 50)	0.02	0.02	0.00	0.00	8.00E-04	0.00	0.00	0.06	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.96
Final Finish (FF 50)	0.00	0.11	4.12E-06	0.00	0.00	0.00	0.35	0.00	0.00	1.24	0.00	0.00	0.00	0.00	0.00	1.70
Welding/Cutting/Brazing (WC 50)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.17E-02	5.61E-04	8.76E-05	1.94E-03	0.03
Miscellaneous Woodworking (WW 50)	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
Miscellaneous Fugitive PM Equipment (MPE 50)	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
Natural Gas Combustion (NGC 50)	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	1.68E-03
Total Emissions (TPY) by HAP	**0.02**	**0.12**	**4.12E-06**	**2.11**	**8.00E-04**	**1.52**	**0.35**	**0.06**	**0.02**	**3.14**	**0.09**	**0.03**	**0.00**	**0.00**	**0.00**	**7.47**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0443	3.000	5.39	5.39	0.72	17.20	3.14	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0006	3.000	7.40	3.74	0.01	0.15	0.03	0.01	16.85	50%	Metal
Potential to Emit															**0.72**	**17.35**	**3.17**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % examethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	4.43E-02	3.000	0.00%	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	0.98	0.00	0.00	0.00	0.00	0.00	0.98
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	5.50E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.98**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.99**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0299	3.000	0.45	0.42	0.04	0.90	0.16	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0469	3.000	3.29	3.29	0.46	11.11	2.03	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.0671	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.50**	**12.01**	**2.19**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % amethylene-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	2.99E-02	3.000	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
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	4.69E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.72	0.00	1.11
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	6.71E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.39**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.72**	**0.00**	**1.11**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0081	3.000	2.78	2.54	0.06	1.49	0.27	0.14	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.1903	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1210	3.000	1.12	0.56	0.20	4.87	0.89	1.38	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0330	3.000	4.65	3.48	0.34	8.26	1.51	0.33	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.2210	3.000	1.05	0.56	2.05	49.14	8.97	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0001	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0025	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0001	3.000	0.41	0.41	0.00	0.00	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0341	3.000	7.39	6.17	0.63	15.15	2.77	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**3.29**	**78.92**	**14.40**	**1.85**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	8.14E-03	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.10E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	1.90E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.21E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	3.30E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.22E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.10E-04	3.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	2.53E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.10E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	3.41E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.97**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.97**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0026	3.000	0.26	0.26	0.00	0.05	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0004	3.000	0.38	0.38	0.00	0.01	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0015	3.000	3.37	3.37	0.02	0.37	0.07	0.03	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0105	3.000	3.35	3.35	0.11	2.52	0.46	0.15	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0084	3.000	4.99	4.99	0.13	3.00	0.55	0.02	138.13	50%	Metal
Potential to Emit															**0.25**	**5.96**	**1.09**	**0.21**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-2 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.64E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	4.40E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	1.54E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.05E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	8.36E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0003	3.000	4.76	3.78	0.00	0.09	0.02	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0396	3.000	4.71	3.59	0.43	10.24	1.87	0.17	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0003	3.000	4.47	3.35	0.00	0.08	0.01	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0008	3.000	5.50	4.90	0.01	0.27	0.05	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0006	3.000	6.10	6.10	0.01	0.24	0.04	0.00	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0018	3.000	6.90	6.90	0.04	0.87	0.16	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0022	3.000	4.89	4.40	0.03	0.70	0.13	0.02	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0004	3.000	2.50	2.50	0.00	0.08	0.01	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0001	3.000	7.50	7.50	0.00	0.06	0.01	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0026	3.000	6.22	6.10	0.05	1.16	0.21	0.00	152.49	75%	Plastic
Potential to Emit															**0.57**	**13.79**	**2.52**	**0.22**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	3.30E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	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
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	3.96E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.42
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	3.30E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	7.70E-04	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	5.50E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.07
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	1.76E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.07
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	2.20E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.03
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	4.40E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.10E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	2.64E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.01**	**0.01**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.49**	**0.06**	**0.62**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0001	3.000	2.92	0.76	0.0003	0.01	0.001	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0002	3.000	4.83	3.09	0.002	0.05	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0130	3.000	7.09	6.09	0.24	5.69	1.04	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0022	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0088	3.000	6.59	6.59	0.17	4.18	0.76	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.1903	3.000	6.51	6.51	3.72	89.19	16.28	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0127	3.000	4.16	0.98	0.04	0.89	0.16	0.07	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0050	3.000	6.42	1.67	0.02	0.59	0.11	0.02	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0110	3.000	6.59	6.59	0.22	5.22	0.95	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0160	3.000	6.53	0.99	0.05	1.14	0.21	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0002	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0001	3.000	5.94	5.94	0.00	0.05	0.01	0.00	51.29	100%	Wood
Potential to Emit															**4.46**	**107.00**	**19.53**	**0.08**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % kamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.10E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	2.20E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	1.30E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.80	0.00	1.03
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	2.20E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	8.80E-03	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	1.90E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	1.27E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	4.95E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.10E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	1.60E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	2.20E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.10E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.07**	**2.66E-06**	**0.00**	**0.00**	**0.00**	**0.23**	**0.00**	**0.00**	**0.80**	**0.00**	**1.10**

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

Emissions Calculations
Welding and Thermal Cutting (WC 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 304)

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Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 304)
039-23645-00620

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = 4.26
Material Input Rate (lb/hr) = 2,114.6

Methodology:
Potential Emission (uncontrolled):
Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):
Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 304)

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-304	0.580	15.2
Forced Air Furnace	1	SH1-304	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-304	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-304	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.

**Emission factor for NOx: Uncontrolled = 100 lb/MMCF

Emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)

1 MMBtu = 1,000,000 Btu

1 MMCF = 1,000,000 cubic feet of gas

All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu

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

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 304
Address: 2775 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 304)	0.01	0.01	0.00	0.00	3.17	0.00	0.01	0.99
Subfloor Installation (SF 304)	0.00	0.00	0.00	0.00	2.19	0.00	0.72	1.11
Assembly Line Operations (ALO 304)	1.85	1.85	0.00	0.00	14.40	0.00	0.00	0.97
Repair Operations (RO 304)	0.21	0.21	0.00	0.00	1.09	0.00	0.00	0.01
Touchup Paint Operation (TP 304)	0.22	0.22	0.00	0.00	2.52	0.00	0.49	0.62
Final Finish (FF 304)	0.08	0.08	0.00	0.00	19.53	0.00	0.80	1.10
Welding/Cutting/Brazing (WC 304)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 304)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 304)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 304)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**5.55**	**5.60**	**0.005**	**0.872**	**42.94**	**0.732**	**2.02**	**4.81**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 304)	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.99
Subfloor Installation (SF 304)	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.00	1.11
Assembly Line Operations (ALO 304)	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
Repair Operations (RO 304)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Touchup Paint Operation (TP 304)	0.01	0.01	0.00	0.00	5.16E-04	0.00	0.00	0.04	0.00	0.49	0.06	0.00	0.00	0.00	0.00	0.62
Final Finish (FF 304)	0.00	0.07	2.66E-06	0.00	0.00	0.00	0.23	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	1.10
Welding/Cutting/Brazing (WC 304)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 304)	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
Miscellaneous Fugitive PM Equipment (MPE 304)	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
Natural Gas Combustion (NGC 304)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.01**	**0.08**	**2.66E-06**	**1.36**	**5.16E-04**	**0.98**	**0.23**	**0.04**	**0.01**	**2.02**	**0.06**	**0.02**	**0.00**	**0.00**	**0.00**	**4.81**

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Chassis Preparation (CP 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	64.00%	0.00%	64.00%	0.00%	40.12%	0.0701	3.000	5.39	5.39	1.13	27.21	4.97	0.00	13.43	100%	Metal
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	75.00%	35.00%	40.00%	49.53%	22.17%	0.0009	3.000	7.40	3.74	0.01	0.23	0.04	0.01	16.85	50%	Metal
Potential to Emit															**1.14**	**27.44**	**5.01**	**0.01**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chassis Prep	Convenience Products	CP-100	Sealant	Foam - Black - Gun	8.42	7.01E-02	3.000	0.00%	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	1.55	0.00	0.00	0.00	0.00	0.00	1.55
Chassis Prep	Cyclo	C-35	Sealant	Undercoating - Rubberized	9.34	8.70E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**1.55**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**1.56**

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
VOC and Particulate
From Surface Coating Operations
Subfloor Installation (SF 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	8.79%	5.00%	3.79%	6.60%	63.31%	0.0473	3.000	0.45	0.42	0.06	1.42	0.26	0.00	0.66	100%	Wood
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	36.47%	0.00%	36.47%	0.00%	45.11%	0.0741	3.000	3.29	3.29	0.73	17.58	3.21	0.00	7.30	100%	Wood/Metal
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	50.00%	50.00%	0.00%	54.02%	45.98%	0.1061	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood
Potential to Emit															**0.79**	**19.00**	**3.47**	**0.00**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Sub Floors	DAP	DAP 4000	Adhesive	Sub Floor Const	11.01	4.73E-02	3.000	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	0.00
Sub Floors	ITW TACC	T202	Adhesive	Sub Floor Const	9.03	7.41E-02	3.000	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	1.14	0.00	1.76
Sub Floors	D & L Industrial Finishes	2218-7342	Sealant	Low VOC Hardener - Blk Wood Coating	9.01	1.06E-01	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.14**	**0.00**	**1.76**

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
VOC and Particulate
From Surface Coating Operations
Assembly Line Operations (ALO 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	54.20%	10.00%	44.20%	8.74%	8.63%	0.0129	3.000	2.78	2.54	0.10	2.36	0.43	0.22	29.45	50%	Metal
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.91%	0.00%	1.91%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	0.00%	0.00%	0.00%	0.00%	100.00%	0.3010	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Wood/Fabric
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	69.00%	59.00%	10.00%	49.97%	35.72%	0.1914	3.000	1.12	0.56	0.32	7.70	1.41	2.18	1.56	50%	Wood/Fabric
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	77.20%	25.00%	52.20%	25.23%	14.31%	0.0522	3.000	4.65	3.48	0.54	13.07	2.38	0.52	24.29	50%	Wood/Fabric
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	65.00%	55.00%	10.00%	46.58%	39.44%	1.9314	3.000	1.05	0.56	3.24	77.73	14.19	0.00	1.42	100%	Wood/Fabric
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.82%	0.00%	1.82%	0.00%	98.12%	0.0002	3.000	0.17	0.17	0.00	0.00	0.00	0.00	0.17	100%	Metal
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	0.00%	0.00%	0.00%	0.00%	100.00%	0.0040	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Plastic
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	4.48%	0.00%	4.48%	0.00%	94.73%	0.0002	3.000	0.41	0.41	0.00	0.01	0.00	0.00	0.43	100%	Plastic
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	100.00%	15.00%	85.00%	16.50%	0.00%	0.0539	3.000	7.39	6.17	1.00	23.97	4.37	0.00	#DIV/0!	100%	Plastic
Potential to Emit															**5.20**	**124.84**	**22.78**	**2.92**			

Transfer Efficiency - Hand or Manual Application/Non-Atomized Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Assembly	Bostik	K150724	Adhesive	Aerosol - SuperTak - Gen Purpose	5.75	1.29E-02	3.000	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
Assembly	Loctite	81366	Adhesive	Glue - Super - 2Pk - SUP-28	8.76	1.74E-04	3.000	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	0.00
Assembly	Bostik	H771460	Adhesive	Hot Melt - 1"x3" Stick (EVA Hotmelt)	7.92	3.01E-01	3.000	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	0.00
Assembly	Northstar Chemicals	2002	Adhesive	Spray - 2002 -Fast Dry - General Purpose - Clear	5.59	1.91E-01	3.000	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	0.00
Assembly	Russel Products	RPI-676	Adhesive	Spray - Hi-Performance	6.66	5.22E-02	3.000	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
Assembly	Northstar Chemicals	VT32	Adhesive	Spray - Valu-Tac -Clear	5.59	1.93E+00	3.000	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	0.00
Assembly	Loctite	49502	Adhesive	Super Glue	9.17	1.74E-04	3.000	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	0.00
Assembly	Oatey	60E5	Plumbing	Pipe Joint Compound	16.68	4.00E-03	3.000	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	0.00
Assembly	Loctite	40100	Plumbing	Thread Locker - Blue	9.17	1.74E-04	3.000	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	0.00
Assembly	IPS Corporation	771, 773	Plumbing	Weld-On Pipe Cement	7.26	5.39E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**1.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.53**

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
VOC and Particulate
From Surface Coating Operations
Repair Operations (RO 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	2.52%	0.00%	2.52%	0.00%	96.64%	0.0042	3.000	0.26	0.26	0.00	0.08	0.01	0.00	0.27	100%	Plastic
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	2.52%	0.00%	2.52%	0.00%	95.19%	0.0007	3.000	0.38	0.38	0.00	0.02	0.00	0.00	0.39	100%	Plastic
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	49.50%	0.00%	49.50%	0.00%	26.00%	0.0024	3.000	3.37	3.37	0.02	0.59	0.11	0.06	12.97	50%	Metal
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	60.00%	0.00%	60.00%	0.00%	16.30%	0.0165	3.000	3.35	3.35	0.17	3.99	0.73	0.24	20.58	50%	Metal
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	92.00%	0.00%	92.00%	0.00%	3.61%	0.0132	3.000	4.99	4.99	0.20	4.75	0.87	0.04	138.13	50%	Metal
Potential to Emit															**0.39**	**9.43**	**1.72**	**0.34**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Repair	Fibre Glass Evercoat	156	Filler	Filler - Body - Non Clog - Lite Weight (0.126 x Wt% Styrene = Emissions)	10.40	4.18E-03	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Repair	Fibre Glass Evercoat	407	Filler	Filler - Body -Polyester Glazing Putty (0.126 x Wt% Styrene = Emissions)	14.90	6.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.52%	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
Repair	WD-40	10011	Lubricant	MultiPurpose -Aerosol	6.81	2.44E-03	3.000	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	0.00
Repair	Cyclo	C-33	Lubricant	Silicone - Aerosol	5.59	1.65E-02	3.000	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	0.00
Repair	Cyclo	C-33V	Lubricant	Silicone - Aerosol	5.42	1.32E-02	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.00**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.02**

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
VOC and Particulate
From Surface Coating Operations
Touchup Painting Station (TP 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	88.00%	23.23%	64.77%	20.56%	7.00%	0.0005	3.000	4.76	3.78	0.01	0.14	0.03	0.00	54.04	50%	Plastic
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	89.00%	27.08%	61.92%	23.80%	6.00%	0.0626	3.000	4.71	3.59	0.67	16.20	2.96	0.26	59.86	50%	Plastic
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	82.10%	27.06%	55.04%	24.97%	7.00%	0.0005	3.000	4.47	3.35	0.01	0.13	0.02	0.00	47.88	50%	Plastic
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	79.71%	8.70%	71.01%	10.91%	9.00%	0.0012	3.000	5.50	4.90	0.02	0.43	0.08	0.01	54.44	50%	Plastic
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	69.08%	0.00%	69.08%	0.00%	21.00%	0.0009	3.000	6.10	6.10	0.02	0.38	0.07	0.01	29.05	75%	Plastic
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	96.10%	0.00%	96.10%	0.00%	2.84%	0.0028	3.000	6.90	6.90	0.06	1.38	0.25	0.00	242.96	75%	Plastic
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	64.64%	6.60%	58.04%	10.01%	23.00%	0.0035	3.000	4.89	4.40	0.05	1.10	0.20	0.03	19.13	75%	Plastic
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	28.03%	0.00%	28.03%	0.00%	66.00%	0.0007	3.000	2.50	2.50	0.01	0.13	0.02	0.01	3.79	75%	Plastic
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	98.68%	0.00%	98.68%	0.00%	1.00%	0.0002	3.000	7.50	7.50	0.00	0.09	0.02	0.00	749.97	75%	Plastic
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	94.10%	1.52%	92.58%	2.00%	4.00%	0.0042	3.000	6.22	6.10	0.08	1.83	0.33	0.01	152.49	75%	Plastic
Potential to Emit															**0.91**	**21.82**	**3.98**	**0.34**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, HVLP = 75%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % xamethylene-1 diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Touchup Paint	Sherwin Williams	10001	Paint	Aerosol - Enamel - Royal Blue - ColorTouch	5.84	5.22E-04	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	Sherwin Williams	4402	Paint	Aerosol - Gen Purpose - Gloss Black - Work Day	5.80	6.26E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.67
Touchup Paint	Sherwin Williams	10010	Paint	Aerosol - Primer - Gray - ColorTouch	6.09	5.22E-04	3.000	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	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
Touchup Paint	BASF	AM800	Paint	Aerosol - Primer - Spot Prime - Aero-Max	6.90	1.22E-03	3.000	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	NLR Bases	Paint	Basecoats	8.83	8.70E-04	3.000	10.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.00%	0.00%	0.00%	35.00%	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.04	0.11
Touchup Paint	DuPont	7601S	Paint	Blender - Chromaclear	7.18	2.78E-03	3.000	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.00%	13.00%	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.12
Touchup Paint	BASF	DC76NR	Paint	Clearcoat - Diamont - Turbo Clear	7.58	3.48E-03	3.000	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00%	6.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.05
Touchup Paint	BASF	LH200	Paint	Hardener - Acrylic -Repair Limco 1-2-3-4	8.92	6.96E-04	3.000	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	13.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Touchup Paint	BASF	352-500	Paint	Primer - Spot Blender Reducer - Glasruit	7.60	1.74E-04	3.000	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touchup Paint	BASF	UR50	Paint	Reducer - Medium Temp - Universal - Diamont	6.59	4.18E-03	3.000	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	0.00
Uncontrolled Potential Emissions																			**0.02**	**0.02**	**0.00E+00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.00**	**0.77**	**0.09**	**0.97**

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
VOC and Particulate
From Surface Coating Operations
Final Finish Operations (FF 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

CRITERIA POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	PTE VOC (lbs/hr)	PTE VOC (lbs/day)	PTE VOC (tons/yr)	PTE PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	83.40%	74.24%	9.16%	73.94%	16.53%	0.0002	3.000	2.92	0.76	0.0004	0.01	0.002	0.00	4.60	100%	Metal/Plastic
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	63.00%	31.00%	32.00%	35.94%	18.77%	0.0003	3.000	4.83	3.09	0.003	0.08	0.01	0.00	16.49	100%	Metal/Plastic
Final Finish	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	100.00%	13.20%	86.80%	14.04%	0.00%	0.0205	3.000	7.09	6.09	0.38	9.01	1.64	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	100.00%	100.00%	0.00%	100.00%	0.00%	0.0035	3.000	#DIV/0!	0.00	0.00	0.00	0.00	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0139	3.000	6.59	6.59	0.28	6.60	1.21	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	69.47%	0.00%	69.47%	0.00%	0.00%	0.3010	3.000	6.51	6.51	5.88	141.08	25.75	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	90.00%	78.00%	12.00%	76.41%	0.09%	0.0200	3.000	4.16	0.98	0.06	1.41	0.26	0.11	1,089.33	50%	Solvent/Cleaner
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	94.00%	74.00%	20.00%	74.00%	2.00%	0.0078	3.000	6.42	1.67	0.04	0.94	0.17	0.03	83.40	50%	Solvent/Cleaner
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	100.00%	0.00%	100.00%	0.00%	0.00%	0.0174	3.000	6.59	6.59	0.34	8.26	1.51	0.00	#DIV/0!	100%	Solvent/Cleaner
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	100.00%	85.00%	15.00%	84.87%	0.00%	0.0252	3.000	6.53	0.99	0.07	1.80	0.33	0.00	#DIV/0!	50%	Metal
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	0.00%	0.00%	0.00%	0.00%	100.00%	0.0003	3.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	Metal
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	81.48%	0.00%	81.48%	0.00%	11.58%	0.0002	3.000	5.94	5.94	0.00	0.07	0.01	0.00	51.29	100%	Wood
Potential to Emit															**7.05**	**169.26**	**30.89**	**0.13**			

Transfer Efficiency - Hand or Manual Application = 100%, Aerosol = 50%, Airless = 65%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
PTE VOC (lbs/hr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
PTE VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
PTE VOC (tons/yr) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (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

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Formaldehyde	Weight % Hexane	Weight % Hexamethylene-1,6-diisocyanate	Weight % MDI	Weight % Methanol	Weight % MIBK	Weight % Styrene	Weight % Toluene	Weight % Xylene	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hexamethylene-1,6-diisocyanate (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Final Finish	3M	5990	Polish	Imperial Hand Glaze	8.31	1.74E-04	3.000	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	0.00
Final Finish	3M	5936	Polish	Perfect-It III X Cut Rubbing Compound	9.67	3.48E-04	3.000	0.10%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	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	TCI	DT-10	Cleaner	# 10 Lacquer Thinner - Acrylic -Fast Dry	7.02	2.05E-02	3.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.00%	0.00%	0.00%	67.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	1.27	0.00	1.63
Final Finish	TCI	Acetone	Cleaner	Acetone	6.59	3.48E-03	3.000	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	0.00
Final Finish	TCI	Isopropanol	Cleaner	Alcohol - Isopropyl	6.59	1.39E-02	3.000	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	0.00
Final Finish	Camie-Cambell	CC-911	Cleaner	Citrus Cleaner	9.37	3.01E-01	3.000	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	0.00
Final Finish	Cyclo	C-31	Cleaner	Glass Clean - Foam Aerosol	8.17	2.00E-02	3.000	0.00%	5.00%	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	0.00	0.00	0.11
Final Finish	Cyclo	C-192	Cleaner	Max Clean - All Purpose	8.34	7.83E-03	3.000	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	0.00
Final Finish	TCI	Mineral Spirits	Cleaner	Mineral Spirits	6.59	1.74E-02	3.000	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	0.00
Final Finish	Convenience Products	CP-200	Cleaner	Poly Clean Foam	6.59	2.52E-02	3.000	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	0.00
Final Finish	Markal	Various	Marker	Livestock - Paint Markers	11.18	3.48E-04	3.000	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	0.00
Final Finish	RPM Wood Finishes	M280-0014	Marker	Touch Up - Oak Light - Ultra Mark II	7.29	1.74E-04	3.000	1.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uncontrolled Potential Emissions																			**0.00**	**0.11**	**4.20E-06**	**0.00**	**0.00**	**0.00**	**0.36**	**0.00**	**0.00**	**1.27**	**0.00**	**1.74**

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

Emissions Calculations
Welding and Thermal Cutting (WC 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Metal Inert Gas (MIG)(E70S)	1	1.00	1.00	0.00520	0.00318	0.00001	0.00001	0.00001	0.00520	0.00318	0.00001	0.00001	0.00001	0.00321
Stick (E5154 electrode)	1	0.50	0.50	0.02410	0.00034	-	-	0.00010	0.01205	0.00017	-	-	0.00005	0.00022
		Total Electrodes	1.50											
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr	
Oxyacetylene/Electric Arc	1	0.75	12.00	0.1622	0.0005	0.0001	-	0.0003	0.08759	0.00027	0.00005	-	0.00016	0.00049
EMISSION TOTALS														
Potential Emissions lbs/hr									0.10	0.00	0.0001	0.00001	0.0002	0.00
Potential Emissions lbs/day									2.52	0.09	0.002	0.000	0.01	0.09
Potential Emissions tons/year									0.46	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02

METHODOLOGY

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

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

Process Particulate Emissions
Miscellaneous Particulate Emissions (MPE 311)

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Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Three (3) PVC Chop Saws MPE1 - 3

20.00	cuts/hr	x	4.000	in diameter pipe	x	3.14	pi	x	0.1250	in thick pipe wall	x	0.125	in thick blade	=	3.93	in3 loss/hr
3.93	in3 loss/hr	/	1,728	in3/ft3	x	87.71	lb/ft3	=	0.20	lb loss/hr						

Two (2) Aluminum Chop Saws MPE4-5

10.00	cuts/hr	x	4.00	in long	x	0.125	in thick	x	0.125	in wide	=	0.625	in3 loss/hr			
0.63	in3 loss/hr	/	1,728	in3/ft3	x	168.43	lb/ft3	=	0.06	lb loss/hr						

Four (4) Wood Chop Saws MPE6-9

20.00	cuts/hr	x	1.50	in long	x	1.50	in thick	x	0.125	in wide	=	5.625	in3 loss/hr			
5.63	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.13	lb loss/hr						

Two (2) Drill Presses MPE10-11

20.00	BF/hr	/	4	BF/piece	=	5	pieces/hr									
5.00	pieces/hr	x	6.00	holes/piece	x	3.14	pi	x	0.0156	r^2*	x	1.5	in depth	=	2.21	in3 loss/hr
*1/4 in diameter bit																
2.21	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.05	lb loss/hr						

Six (6) Hand Routers MPE12-17

120.00	feet/hr	x	0.125	in wide bit	x	0.06	in depth (edge trimming)	=	0.94	in3 loss/hr						
0.94	in3 loss/hr	/	1,728	in3/ft3	x	40.00	lb/ft3	=	0.02	lb loss/hr						

Total Loss Estimate =	0.46	lb loss/hr
Total Loss Estimate =	2.03	tons/year

Process Particulate Emissions
Woodworking Activities (WW 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Uncontrolled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	35.44
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	11.04
DC6	1	700	0.005	38.9	18.00	99.00%	13.14
DC7	1	450	0.005	36.0	12.50	99.00%	8.45

Total Emissions Based on Rated Capacity at 8,760 Hours/Year (tons/year) - Equipment Connected to Control Devices **68.07**
Total Emissions Based on Rated Capacity (lb/hr) - Equipment Connected to Control Devices **15.54**

Controlled Potential Emissions (tons/year)

DUST COLLECTOR

Process	No. of Units	Airflow (acfm)	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft²)	Total Filter Area (ft²)	Control Efficiency	Total (tons/yr)
DC1	1	4,720	0.002	4.1	1,140.00	99.00%	0.35
DC2 - DC5	4	105	0.007	4.8	22.00	99.00%	0.11
DC6	1	700	0.005	38.9	18.00	99.00%	0.13
DC7	1	450	0.005	36.0	12.50	99.00%	0.08

Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (tons/year) **0.68**
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls (lb/hr) **0.16**

Allowable Emission (lb/hr) = 4.10 X [Process Weight Rate]$^{0.67}$ = **5.79**
Material Input Rate (lb/hr) = **3,344.1**

Methodology:

Potential Emission (uncontrolled):

Potential Emission(tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)]

Potential Emission (controlled):

Potential Emission (tons/yr) = [No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs]

Natural Gas Combustion (NGC 311)

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

Description	Number of Emission Units	Emission Unit ID	Heat Input Capacity Per Unit (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Forced Air Furnaces	3	TC1-3-311	0.580	15.2
Forced Air Furnace	1	SH1-311	0.250	2.2
TOTALS	**4**		**1.99**	**17.4**

Emission Factor (lbs/MMCF)						
PM*	**PM10***	**SO2**	**NOX****	**CO**	**VOC**	**HAPs**
1.9	7.6	0.6	100	84.0	5.5	0.09

Potential To Emit (tons/yr)							
Emission Unit ID	**PM**	**PM10**	**SO2**	**NOX**	**CO**	**VOC**	**HAPs**
TC1-3-311	0.01	0.06	0.00	0.76	0.64	0.04	6.6E-04
SH1-311	0.00	0.01	0.00	0.11	0.09	0.01	9.5E-05
TOTALS	**0.017**	**0.066**	**0.005**	**0.872**	**0.732**	**0.048**	**7.6E-04**

* PM and PM10 emission factor are for condensible and filterable PM and PM10 combined.
**Emission factor for NOx: Uncontrolled = 100 lb/MMCF
006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
1 MMBtu = 1,000,000 Btu
1 MMCF = 1,000,000 cubic feet of gas
All emission factors are based on normal firing.

METHODOLOGY

Max. Potential Throughput (MMCF/yr) = Number of Units x Heat Input Capacity/Unit (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu
PTE (tons/yr) = Max. Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Total HAP emissions are negligible.

Emissions Calculations
Summary Emissions

Company Name: Keystone RV Company - Plant 311
Address: 2860 Hackberry Drive, Goshen, Indiana 46526
FESOP: 039-23645-00620
Reviewer: ERG/TDP
Date: October 10, 2008

POTENTIAL TO EMIT IN TONS PER YEAR

Emission Units	PM	PM10	SO2	NOx	VOC	CO	* Highest Single HAP	Combined HAP
Chasis Preparation (CP 311)	0.01	0.01	0.00	0.00	5.01	0.00	0.01	1.56
Subfloor Installation (SF 311)	0.00	0.00	0.00	0.00	3.47	0.00	1.14	1.76
Assembly Line Operations (ALO 311)	2.92	2.92	0.00	0.00	22.78	0.00	0.00	1.53
Repair Operations (RO 311)	0.34	0.34	0.00	0.00	1.72	0.00	0.00	0.02
Touchup Paint Operation (TP 311)	0.34	0.34	0.00	0.00	3.98	0.00	0.77	0.97
Final Finish (FF 311)	0.13	0.13	0.00	0.00	30.89	0.00	1.27	1.74
Welding/Cutting/Brazing (WC 311)	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.02
Miscellaneous Woodworking (WW 311)	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous Fugitive PM Equipment (MPE 311)	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (NGC 311)	0.017	0.066	0.005	0.872	0.048	0.732	0.00	7.58E-04
TOTALS	**6.93**	**6.98**	**0.005**	**0.872**	**67.90**	**0.732**	**3.20**	**7.60**

***Toluene as Determined Below**

Emission Units	Ethyl Benzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Hexane Emissions (ton/yr)	Hex 16 Iso Emissions (ton/yr)	MDI Emissions (ton/yr)	Methanol Emissions (ton/yr)	MIBK Emissions (ton/yr)	Styrene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylene Emissions (ton/yr)	Manganese Emissions (ton/yr)	Nickel Emissions (ton/yr)	Cobalt Emissions (ton/yr)	Chromium Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Chasis Preparation (CP 311)	0.00	0.00	0.00	0.00	0.00	1.55	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.56
Subfloor Installation (SF 311)	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.00	1.76
Assembly Line Operations (ALO 311)	0.00	0.00	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53
Repair Operations (RO 311)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Touchup Paint Operation (TP 311)	0.02	0.02	0.00	0.00	8.16E-04	0.00	0.00	0.07	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.97
Final Finish (FF 311)	0.00	0.11	4.20E-06	0.00	0.00	0.00	0.36	0.00	0.00	1.27	0.00	0.00	0.00	0.00	0.00	1.74
Welding/Cutting/Brazing (WC 311)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59E-02	2.80E-04	4.38E-05	9.72E-04	0.02
Miscellaneous Woodworking (WW 311)	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
Miscellaneous Fugitive PM Equipment (MPE 311)	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
Natural Gas Combustion (NGC 311)	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	7.58E-04
Total Emissions (TPY) by HAP	**0.02**	**0.12**	**4.20E-06**	**2.15**	**8.16E-04**	**1.55**	**0.36**	**0.07**	**0.02**	**3.20**	**0.09**	**0.02**	**0.00**	**0.00**	**0.00**	**7.60**