



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: April 17, 2014

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

Source Name: K-Z, Inc.

Permit Level: Minor Source Operating Permit (MSOP) Administrative Amendment

Permit Number: 087-33983-00063

Source Location: 0985 North 900 West, Shipshewana, Indiana

Type of Action Taken: Changes that are administrative in nature

Notice of Decision: Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 33983.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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



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Michael R. Pence
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Mr. Delbert Miller
K-Z, Inc.
0985 North 900 West
Shipshewana, IN 46565

April 17, 2014

Re: 087-33983-00063
Administrative Amendment to
M087-30957-00063

Dear Mr. Miller:

K-Z, Inc. was issued a Minor Source Operating Permit (MSOP) Renewal No. M087-30957-00063 on December 30, 2011 for a stationary manufacturing recreational vehicles, which includes travel trailers, fifth wheels and campers source located at 0985 North 900 West, Shipshewana, IN 46565. On December 12, 2013, the Office of Air Quality (OAQ) received an application from the source requesting to add emission units of the same type that are already permitted.

Pursuant to the provisions of 326 IAC 2-6.1-6(d), the permit is hereby administratively amended as described in the attached Technical Support Document.

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. 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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Doug Logan of my staff at 317-234-5328 or 1-800-451-6027, and ask for extension 4-5328

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Updated Permit and Technical Support Document

JLA/dal

cc: File - LaGrange County
LaGrange County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

**New Source Construction and Minor Source Operating
Permit Renewal
OFFICE OF AIR QUALITY**

**K-Z, Inc.
0985 North 900 West
Shipshewana, Indiana 46565**

(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.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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 MSOP under 326 IAC 2-6.1.

Operation Permit No.: M087-30957-00063	
Issued by: Original Signed Iryn Calilung, Section Chief Permits Branch, Office of Air Quality	Issuance Date: December 30, 2011 Expiration Date: December 30, 2021

Administrative Amendment No.: 087-33983-00063	
Issued by:  Jenny Acker, Section Chief, Permits Branch Office of Air Quality	Issuance Date: April 17, 2014 Expiration Date: December 30, 2021

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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 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary manufacturing recreational vehicles, which includes travel trailers, fifth wheels and campers source.

Source Address:	0985 North 900 West, Shipshewana, Indiana 46565
General Source Phone Number:	(260) 768-4016
SIC Code:	3792 (Travel Trailers and Campers)
County Location:	LaGrange
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Source Definition

This source consists of nine (9) plants as issued in the permit number 087-21974-00063, on January 12, 2007. These plants are located on two properties, and these two properties are located adjacent to each others.

A.3 Emission Units and Pollution Control Equipment Summary

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

Plant 1:

- (a) One (1) natural gas-fired boiler, constructed in 1999, identified as EUD-1, rated at 150,000 Btu per hour.

Plant 2:

- (b) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-2, rated at 150,000 Btu per hour.
- (c) Two (2) natural gas-fueled water heaters, identified as EUE-2 and EUF-2, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 3:

- (d) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-3 rated at 150,000 Btu per hour.
- (e) One (1) natural gas-fueled radiant tube heater, identified as EUE-3, approved in 2014 for construction, with a maximum capacity of 0.08 MMBtu.hr, using no control equipment, and exhausting indoors.

Plant 4:

- (f) One (1) small paint repair area, identified as EUPR, constructed in January 2011, with a maximum capacity of less than 1 unit per hour of metal parts, using no control, and exhausting to indoors.
- (g) One (1) RV assembly operation, approved in 2014 for construction, identified as EUB-4, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.
- (h) Two (2) natural gas-fueled thermo cyclers, identified as EUC-4 and EUD-4, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, each, using no control equipment, and exhausting indoors.
- (i) Three (3) natural gas-fueled boilers, identified as EUE-4, EUF-4, and EUG-4 approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 5:

- (j) One (1) RV assembly operation, constructed in February 1999 and approved for modification in 2011, identified as EUB-5, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.25 units per hour, exhausting through general ventilation.
- (k) Woodworking operations, constructed in July 2000, identified as EUA-5, using 7,800 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (l) One (1) natural gas-fired boiler, constructed in 2003, identified as EUD-5, rated at 150,000 Btu per hour.
- (m) One (1) 0.5 MMBtu/hr direct natural gas-fired industrial heater, installed in 2008 identified as EUD-5A.
- (n) One (1) natural gas-fueled boiler, identified as EUE-5, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 6:

- (o) One (1) RV assembly operation, constructed in April 2004 and approved for modification in 2011, identified as EUB-6, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, plastic, assembling 0.75 units per hour, controlled by a baghouse exhausting through general ventilation
- (p) Woodworking operations, constructed in July 2000, identified as EUA-6, using 2,800 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (q) Two (2) natural gas-fired thermo cyclers, constructed in 2004, identified as EUE-6, each rated at 480,000 Btu per hour.

Plant 7A:

- (r) Woodworking operations, constructed in July 2000, identified as EUA-7A, using 4,900 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (s) Two (2) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7A, each rated at 480,000 Btu per hour.
- (t) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7A, rated at 150,000 Btu per hour.
- (u) One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting indoors.
- (v) Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.
- (w) Two (2) natural gas-fueled thermo cyclers, identified as EUF-7A and EUG-7A, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, using no control equipment, and exhausting indoors.
- (x) Two (2) natural gas-fueled boilers, identified as EUH-7A and EUI-7A, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 7B:

- (y) One (1) RV assembly operation, constructed in March 2005, identified as EUB-7B, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.
- (z) Woodworking operations, constructed in July 2000, identified as EUA-7B, using 6,300 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (aa) One (1) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7B, rated at 480,000 Btu per hour.
- (bb) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7B, rated at 150,000 Btu per hour.
- (cc) One (1) natural gas-fired thermo cyclers, approved in 2014 for construction, identified as EUF-7B, rated at 480,000 Btu per hour.
- (dd) One (1) natural gas-fired boiler, approved in 2014 for construction, identified as EUG-7B, rated at 150,000 Btu per hour.

Plant 19:

- (ee) Woodworking operations, identified as EUA-19, using 4,200 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.

Note: Each woodworking operation is equipped with an integral baghouse for particulate.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M087-30957-00063, is issued for a fixed term of ten (10) 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.3 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.4 Enforceability

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.5 Severability

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.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

- (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. 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.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms

and conditions contained in this permit.

- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

- (c) The notification 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.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (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.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Permittee shall implement the PMPs.

- (c) 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.
- (d) 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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M087-30957-00063 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.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete 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
Permit Administration and Support Section, 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 one hundred twenty (120) days 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 2-6.1 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, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][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 permitted 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.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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
Permit Administration and Support Section, 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 an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) 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.18 Credible Evidence [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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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.

- (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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
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Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (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.9 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 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11]

- (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. The analog instrument shall be capable of measuring values outside of the normal range.
- (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

C.12 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (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 record the reasonable response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) 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.
- (c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant 1:

- (a) One (1) natural gas-fired boiler, constructed in 1999, identified as EUD-1, rated at 150,000 Btu per hour.

Plant 2:

- (b) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-2, rated at 150,000 Btu per hour.
- (c) Two (2) natural gas-fueled water heaters, identified as EUE-2 and EUF-2, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 3:

- (d) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-3 rated at 150,000 Btu per hour.
- (e) One (1) natural gas-fueled radiant tube heater, identified as EUE-3, approved in 2014 for construction, with a maximum capacity of 0.08 MMBtu.hr, using no control equipment, and exhausting indoors.

Plant 4:

- (f) One (1) small paint repair area, identified as EUPR, constructed in January 2011, with a maximum capacity of less than 1 unit per hour of metal parts, using no control, and exhausting to indoors.
- (g) One (1) RV assembly operation, approved in 2014 for construction, identified as EUB-4, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 3 units per hour, exhausting through general ventilation.
- (h) Two (2) natural gas-fueled thermo cyclers, identified as EUC-4 and EUD-4, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting indoors.
- (i) Three (3) natural gas-fueled boilers, identified as EUE-4, EUF-4, and EUG-4 approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 5:

- (j) One (1) RV assembly operation, constructed in February 1999 and approved for modification in 2011, identified as EUB-5, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 3 units per hour, exhausting through general ventilation.

- (k) Woodworking operations, constructed in July 2000, identified as EUA-5, using 7,800 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (l) One (1) natural gas-fired boiler, constructed in 2003, identified as EUD-5, rated at 150,000 Btu per hour.
- (m) One (1) 0.5 MMBtu/hr direct natural gas-fired industrial heater, installed in 2008 identified as EUD-5A.
- (n) One (1) natural gas-fueled boiler, identified as EUE-5, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 6:

- (o) One (1) RV assembly operation, constructed in April 2004 and approved for modification in 2011, identified as EUB-6, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, plastic, assembling 0.75 units per hour, exhausting through general ventilation
- (p) Woodworking operations, constructed in July 2000, identified as EUA-6, using 2,800 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (q) Two (2) natural gas-fired thermo cyclers, constructed in 2004, identified as EUE-6, each rated at 480,000 Btu per hour.

Plant 7A:

- (r) Woodworking operations, constructed in July 2000, identified as EUA-7A, using 4,900 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (s) Two (2) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7A, each rated at 480,000 Btu per hour.
- (t) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7A, rated at 150,000 Btu per hour.
- (u) One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting to indoors.
- (v) Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.
- (w) Two (2) natural gas-fueled thermo cyclers, identified as EUF-7A and EUG-7A, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, using no control equipment, and exhausting indoors.
- (x) Two (2) natural gas-fueled boilers, identified as EUH-7A and EUI-7A, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 7B:

- (y) One (1) RV assembly operation, constructed in March 2005, identified as EUB-7B, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.13 units per hour, exhausting through general ventilation.
- (z) Woodworking operations, constructed in July 2000, identified as EUA-7B, using 6,300 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.
- (aa) One (1) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7B, rated at 480,000 Btu per hour.
- (bb) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7B, rated at 150,000 Btu per hour.

Plant 19:

- (cc) Woodworking operations, identified as EUA-19, using 4,200 pounds of wood per hour, controlled by a baghouse exhausting through general ventilation.

Note: Each woodworking operation is equipped with an integral baghouse for particulate.

(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 2-6.1-5(a)(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2, the allowable PM, PM10 and PM2.5 emission rate from woodworking operations shall not exceed the following:

Location	Emissions units ID	PM Limitation (lb/hr)	PM10 Limitation (lb/hr)	PM2.5 Limitation (lb/hr)
Plant 5	EUA-5	10.20	2.8	2.8
Plant 6	EUA-6	5.14	2.8	2.8
Plant 7A	EUA-7A	7.47	2.8	2.8
Plant 7B	EUB-7B	8.84	2.8	2.8
Plant 19	EUB-19	6.74	2.8	2.8

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10 and PM2.5 to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
Boiler	EUD-1	0.6
Boiler	EUD-2	0.6
Boiler	EUD-3	0.6
Boiler	EUD-5	0.6
Boiler	EUD-7A	0.6
Boiler	EUD-7B	0.6
Water Heater	EUE-2	0.6
Water Heater	EUF-2	0.6
Radiant Tube Heater	EUE-3	0.6
Boiler	EUE-4	0.6
Boiler	EUF-4	0.6
Boiler	EUG-4	0.6
Boiler	EUE-5	0.6
Boiler	EUH-7A	0.6
Boiler	EUI-7A	0.6
Boiler	EUG-7B	0.6

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from woodworking operations shall not exceed the following:

Location	Emissions units ID	Weight Rate (lb/hr)	Weight Rate (tons/hr)	PM Limitation (lb/hr)
Plant 5	EUA-5	7,800	3.9	10.20
Plant 6	EUA-6	2,800	1.4	5.14
Plant 7A	EUA-7A	4,900	2.45	7.47
Plant 7B	EUB-7B	6,300	3.15	8.84
Plant 19	EUB-19	4,200	2.1	6.74

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 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 requirements not applicable, the VOC input, including coatings, dilution and cleaning solvents, to the assembly operation, EUB-5, in Plant 5, shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.6 Particulate Control

In order to comply with Conditions D.1.1 and D.1.3, the baghouses for particulate control shall be in operation and control emissions from the woodworking facilities at all times when 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.

D.1.7 Volatile Organic Compounds (VOC)

Compliance with the VOC limitations contained in Condition D.1.4 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" 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.

Compliance Monitoring Requirements

D.1.8 Baghouse Inspections

The Permittee shall perform quarterly inspections of the baghouses controlling particulate from woodworking facilities to verify that they are being operated and maintained in accordance with the manufacturer's specifications. All defective bags shall be replaced. A record shall be kept of the results of each inspection.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirement

- (a) To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.1.4. Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period.
- (1) The VOC content of each assembly material and solvent used.
 - (2) The amount of assembly material and solvent 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 assembly and those used as cleanup solvent.
- (b) To document the compliance status with Condition D.1.8, the Permittee shall maintain records of quarterly inspections of the baghouses controlling particulate from the woodworking facilities.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by the condition.

D.1.10 Reporting Requirements

A quarterly report to document the compliance status with D.1.4 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

Indiana Department of Environmental Management Office of Air Quality Compliance and Enforcement Branch

Quarterly Report

Source Name: K-Z, Inc.
Source Address: 9270 West US 20, Shipshewana, Indiana 46565
MSOP Permit No.: M 087-30957-00063
Facility: Assembly operation, EUB-5, in plant 5
Pollutant: VOC
Limit: Less than twenty-five (25) tons per twelve (12) consecutive month period

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	K-Z, Inc.
Address:	9270 West US 20
City:	Shipshewana, Indiana 46565
Phone #:	(260) 768-4016
MSOP #:	M 087-30957-00063

I hereby certify that K-Z, Inc. is:

still in operation.

no longer in operation.

I hereby certify that K-Z, Inc. is:

in compliance with the requirements of MSOP M 087-30957-00063.

not in compliance with the requirements of MSOP M 087-30957-00063.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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

Technical Support Document (TSD) for an Administrative Amendment to a
Minor Source Operating Permit (MSOP)

Source Description and Location

Source Name: K-Z, Inc.
Source Location: 0985 North 900 West, Shipshewana, Indiana 46565
County: LaGrange
SIC Code: 3792
Operation Permit No.: M087-30957-00063
Operation Permit Issuance Date: December 30, 2011
Administrative Amendment No.: 087-33983-00063
Permit Reviewer: Doug Logan

On December 12, 2013, the Office of Air Quality (OAQ) received an application from K-Z, Inc. related to a modification to an existing stationary manufacturing recreational vehicles, which includes travel trailers, fifth wheels and campers source.

Existing Approvals

The source was issued MSOP Renewal No. 087-30957-00063 on December 30, 2011. There have been no subsequent approvals issued.

Source Definition

This source consists of nine (9) plants as described in MSOP No.M087-21974-00063, issued on January 12, 2007. These plants are located on two properties, and these two properties are adjacent to each other.

County Attainment Status

The source is located in LaGrange County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

- (a) Ozone Standards
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. LaGrange County has

been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 LaGrange County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (e) **Other Criteria Pollutants**
 LaGrange County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

- (a) The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD or Appendix A of M087-30957-00063 issued on December 30, 2011.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)*									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP (toluene)
Woodworking Operations	92.35	92.35	92.35	--	--	--	--	--	--	--
4 Welding Stations	0.15	0.15	0.15	--	--	--	--	--	1.12	--
Assembly Operations	--	--	--	--	--	72.64	--	--	10.69	8.74
Lamination	--	--	--	--	--	--	--	--	2.98	0.01
Painting	0.20	0.20	0.20	--	--	0.96	--	--	0.07	2.05x10 ⁻³
Combustion	0.04	0.15	0.15	0.01	2.00	0.11	1.68	2,432	0.04	6.85x10 ⁻⁵
Total PTE of Entire Source	92.74	92.85	92.85	0.01	2.00	73.71	1.68	2,432	14.89	8.75

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)*									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP (toluene)
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA
negl. = negligible *These emissions are based upon the TSD App A for M087-30957-00063 **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by K-Z, Inc. on December 12, 2013, relating to adding emission units of the same type that are already permitted.

The following is a list of the new emission units:

Plant 2:

- (a) Two (2) natural gas-fueled water heaters, identified as EUE-2 and EUF-2, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 3:

- (b) One (1) natural gas-fueled radiant tube heater, identified as EUE-3, approved in 2014 for construction, with a maximum capacity of 0.08 MMBtu.hr, using no control equipment, and exhausting indoors.

Plant 4:

- (c) One (1) RV assembly operation, approved in 2014 for construction, identified as EUB-4, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.
- (d) Two (2) natural gas-fueled thermo cyclers, identified as EUC-4 and EUD-4, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting indoors.
- (e) Three (3) natural gas-fueled boilers, identified as EUE-4, EUF-4, and EUG-4 approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.

Plant 5:

- (f) One (1) natural gas-fueled boiler, identified as EUE-5, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 7A:

- (g) Two (2) natural gas-fueled thermo cyclers, identified as EUF-7A and EUG-7A, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, using no control equipment, and exhausting indoors.
- (h) Two (2) natural gas-fueled boilers, identified as EUH-7A and EUI-7A, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

The following emission units have been removed:

Plant 1:

- (a) Woodworking operations, constructed in July 2000, identified as EUA-1, using 10,000 pounds of wood per hour, exhausting through general ventilation.

Plant 2:

- (b) Woodworking operations, constructed in July 2000, identified as EUA-2, using 3,000 pounds of wood per hour, exhausting through general ventilation.
- (c) One (1) welding operation, constructed in July 2000, identified as EUC-2, using 0.4 pounds per hour of weld wire, exhausting through general ventilation.

Plant 6:

- (d) One (1) natural gas-fueled boiler, identified as EUD-6, constructed in 2004, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 7A:

- (e) One (1) RV assembly operation, constructed in February 2005, identified as EUB-7A, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.88 units per hour, exhausting through general ventilation.

Plant 19:

- (f) One (1) RV assembly operation, constructed in January 2006, identified as EUB-19, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.75 units per hour, exhausting through general ventilation.

In addition, the source has made internal changes, with the following units relocated from Plant 4 to Plant 7A:

- (a) One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting indoors.
- (b) Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.

The source provided updated information about the operating capacity of the following units:

- (a) One (1) RV assembly operation, constructed in February 1999 and approved for modification in 2011, identified as EUB-5, which assembles RV from primarily pre-manufactured and pre-coated

components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.25 units per hour, exhausting through general ventilation.

Production capacity of assembly process EUB-5 decreased from 3 to 1.25 units per hour. Because of the change in capacity and changes in material formulations, potential-to-emit is reduced, as shown in the table below, and changes to this unit are not considered a modification of the unit.

	VOC (tons/yr)	Single HAP (toluene) (tons/yr)	Total HAPs (tons/yr)
Before this AA	35.27	4.66	1.05
After this AA	5.52	1.05	1.40

- (b) One (1) RV assembly operation, constructed in March 2005, identified as EUB-7B, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.

Production capacity of assembly process EUB-7B increased from 1.13 to 1.625 units per hour. Because of the change in capacity and changes in material formulations, potential-to-emit is reduced, as shown in the table below, and changes to this unit are not considered a modification of the unit.

	VOC (tons/yr)	Single HAP (toluene) (tons/yr)	Total HAPs (tons/yr)
Before this AA	13.29	1.75	2.15
After this AA	5.65	6.79x10 ⁻³	0.66

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Administrative Amendment

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Administrative Amendment (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e (10/30/09 GWP)	GHGs as CO ₂ e (11/29/13 GWP)	Total HAPs
Plant 4 Assembly	--	--	--	--	--	6.06	--	--	--	1.67
Natural Gas Combustion	3.12x10 ⁻²	0.12	0.12	9.87x10 ⁻³	1.64	9.05x10 ⁻²	1.38	1,986	1,985	3.10x10 ⁻³

Process/ Emission Unit	PTE of Proposed Administrative Amendment (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e (10/30/09 GWP)	GHGs as CO ₂ e (11/29/13 GWP)	Total HAPs
Total PTE of Proposed Revision	3.12x10⁻²	0.12	0.13	9.87x10⁻³	1.64	6.15	1.38	1,986	1,985	1.70
negl. = negligible										

Pursuant to 326 IAC 2-6.1-6(d)(8), this change to the permit is considered an administrative amendment because the permit is amended to incorporate a modification that adds an emissions unit or units of the same type that is/are already permitted or replaces an existing unit(s) and that will comply with the same applicable requirements and permit terms and conditions as the existing emission unit(s) and the modification does not result in a potential to emit greater than the thresholds in 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), or 326 IAC 2-7 (Part 70 Operating Permit).

PTE of the Entire Source After Issuance of the Administrative Amendment

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to Accommodate the Proposed AA (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e (10/30/09 GWP)	GHGs as CO ₂ e (11/29/13 GWP)	Total HAPs
Woodworking	92.35 49.23	92.35 49.23	92.35 49.23	--	--	--	--	--	--	--
4 Welding Stations	0.15 2.89x10⁻³			--	--	--	--	--	--	--
Assembly Operations	--	--	--	--	--	72.64 21.12	--	--	--	40.69 4.86
Lamination	--	--	--	--	--	-- 0.89	--	--	--	2.98 0.89
Painting Paint Repair	0.20	0.20	0.20	--	--	0.96	--	--	--	0.07
Combustion	0.04 6.23x10⁻²	0.15 0.25	0.15 0.25	0.01 1.97x10⁻²	2.00 3.28	0.11 0.18	1.68 2.75	2,432 3,956	3,955 3,955	0.04 6.18x10⁻²
Total PTE of Entire Source	92.74 49.50	92.85 49.68	92.85 49.68	0.01 1.97x10⁻²	2.00 3.28	73.71 23.16	1.68 2.75	2,432 3,956	3,955	14.89 5.88
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	100,000	25
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	100,000	NA
negl. = negligible										
*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".										
**The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only

after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of AA (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e (10/30/09 GWP)	GHGs as CO ₂ e (11/29/13 GWP)	Total HAPs
Woodworking	49.23	49.23	49.23	--	--	--	--	--	--	--
Welding	2.89x10 ⁻³			--	--	--	--	--	--	--
Assembly Operations	--	--	--	--	--	21.12	--	--	--	4.86
Lamination	--	--	--	--	--	0.89	--	--	--	0.89
Paint Repair	0.20	0.20	0.20	--	--	0.96	--	--	--	0.07
Combustion	6.23x10 ⁻²	0.25	0.25	1.97x10 ⁻²	3.28	0.18	2.75	3,956	3,955	6.18x10 ⁻²
Total PTE of Entire Source	49.50	49.68	49.68	1.97x10⁻²	3.28	23.16	2.75	3,956	3,955	5.88
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	100,000	25
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	100,000	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant". **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

MSOP Status

- (a) This administrative amendment to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).
- (b) This administrative amendment will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) This administrative amendment will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included for this administrative amendment, since boilers EUE-4, EUF-4, EUG-4, EUE-5, EUH-7A, and EUI-7A have maximum design heat input capacities of less than 2.9 MW (10 MMBtu/hr).
- (b) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63.3880, Subpart Mmmm, are not included for this administrative amendment, since the source is not a major source of HAPs.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63.4480, Subpart Pppp, are not included for this administrative amendment, since the source is not a major source of HAPs.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart Dddd (326 IAC 20-95), are not included for this administrative amendment, since the source is not a major source of HAPs.
- (f) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the Administrative Amendment Section above.
- (b) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – Administrative Amendment section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

- (d) 326 IAC 2-6 (Emission Reporting)
 Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
 Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings 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.
- (f) 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
 Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation.

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
existing units	--	--	0.9	--	--	--
EUE-2	2014	0.15	2.33	0.87	0.6	0.0019
EU-2	2014	0.15	2.33	0.87	0.6	0.0019

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
EUE-3	2014	0.08	2.33	0.87	0.6	0.0019
EUE-4	2014	0.15	2.33	0.87	0.6	0.0019
EUF-4	2014	0.15	2.33	0.87	0.6	0.0019
EUG-4	2014	0.15	2.33	0.87	0.6	0.0019
EUE-5	2014	0.15	2.33	0.87	0.6	0.0019
EUH7A	2014	0.15	2.33	0.87	0.6	0.0019
EUI-7A	2014	0.15	2.33	0.87	0.6	0.0019
EUG-7B	2014	0.15	2.33	0.87	0.6	0.0019

Heat input capacity, Q, of existing units from MSOP Renewal M087-30957-00063, issued on December 30, 2011
 Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 - (1) Pursuant to 326 IAC 6-3-1(b)(15), the application of spray adhesive, undercoat, and primer in the Plant 4 assembly operation is exempt from 326 IAC 6-3 because the operation uses less than five (5) gallons per day of these products.
 - (2) Pursuant to 326 IAC 6-3-1(b)(12), the application of aerosol coating products to repair minor surface damage and imperfections in the Plant 4 assembly operation is exempt from 326 IAC 6-3.
 - (3) Pursuant to 326 IAC 6-3-1(b)(7) and (8), surface coating products using flow and brush coating in the Plant 4 assembly operation is exempt from 326 IAC 6-3
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
 Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
 Pursuant to 326 IAC 8-1-6(1), Plant 4 is not subject to the requirements of 326 IAC 8-1-6, because the Plant 4 assembly operations do not have potential emissions of twenty-two and seven-tenths (22.7) megagrams (twenty-five (25)) tons or more of VOC per year.
- (h) 326 IAC 8-2-9 (VOC Rules: Miscellaneous Metal and Plastic Parts Coating Operations)
 Pursuant to 326 IAC 8-2-9(a)(1) the assembly operations in Plant 4 are not subject to 326 IAC 8-2-9 because the facility does not coat metal parts.
- (i) There are no other 326 IAC 8 Rules that are applicable to this administrative amendment.
- (j) 326 IAC 12 (New Source Performance Standards)
 See Federal Rule Applicability Section of this TSD.
- (k) 326 IAC 20 (Hazardous Air Pollutants)
 See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP No: 087-30957-00063, issued on December 30, 2011.

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

1. IDEM, OAQ has made the following changes to Section A - Source Summary:
 - Source address and general information are updated
 - Emission units and pollution control equipment summary is updated

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary manufacturing recreational vehicles, which includes travel trailers, fifth wheels and campers source.

Source Address:	9270 West US 20 0985 North 900 West , Shipshewana, Indiana 46565
General Source Phone Number:	(260) 768-4016
SIC Code:	3792 (Travel Trailers and Campers)
County Location:	LaGrange
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source 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.3 Emission Units and Pollution Control Equipment Summary

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

Plant 1:

- ~~(a) Woodworking operations, constructed in July 2000, identified as EUA-1, using 10,000 pounds of wood per hour, exhausting through general ventilation.~~
- (ba) One (1) natural gas-fired boiler, constructed in 1999, identified as EUD-1, rated at 150,000 Btu per hour.

Plant 2:

- ~~(a) Woodworking operations, constructed in July 2000, identified as EUA-2, using 3,000 pounds of wood per hour, exhausting through general ventilation.~~
- ~~(b) One (1) welding operation, constructed in July 2000, identified as EUC-2, using 0.4 pounds per hour of weld wire, exhausting through general ventilation.~~
- (eb) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-2, rated at 150,000 Btu per hour.
- (c) **Two (2) natural gas-fueled water heaters, identified as EUE-2 and EUF-2, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using**

no control equipment, and exhausting to a stack.

Plant 3:

- (ad) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-3 rated at 150,000 Btu per hour.
- (e) **One (1) natural gas-fueled radiant tube heater, identified as EUE-3, approved in 2014 for construction, with a maximum capacity of 0.08 MMBtu.hr, using no control equipment, and exhausting indoors.**

Plant 4:

- ~~(a) One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting to indoors.~~
- (bf) One (1) small paint repair area, identified as EUPR, constructed in January 2011, with a maximum capacity of less than 1 unit per hour of metal parts, using no control, and exhausting to indoors.
- ~~(c) Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.~~
- (g) **One (1) RV assembly operation, approved in 2014 for construction, identified as EUB-4, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.**
- (h) **Two (2) natural gas-fueled thermo cyclers, identified as EUC-4 and EUD-4, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, each, using no control equipment, and exhausting indoors.**
- (i) **Three (3) natural gas-fueled boilers, identified as EUE-4, EUF-4, and EUG-4 approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.**

Plant 5:

- (aj) One (1) RV assembly operation, constructed in February 1999 and approved for modification in 2011, identified as EUB-5, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling ~~3~~ **1.25** units per hour, exhausting through general ventilation.
- (bk) Woodworking operations, constructed in July 2000, identified as EUA-5, using 7,800 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (el) One (1) natural gas-fired boiler, constructed in 2003, identified as EUD-5, rated at 150,000 Btu per hour.
- (dm) One (1) 0.5 MMBtu/hr direct natural gas-fired industrial heater, installed in 2008 identified as EUD-5A.
- (n) **One (1) natural gas-fueled boiler, identified as EUE-5, approved in 2014 for**

construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.

Plant 6:

- (ao) One (1) RV assembly operation, constructed in April 2004 and approved for modification in 2011, identified as EUB-6, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, plastic, assembling 0.75 units per hour, exhausting through general ventilation
- (bp) Woodworking operations, constructed in July 2000, identified as EUA-6, using 2,800 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (eq) Two (2) natural gas-fired thermo cyclers, constructed in 2004, identified as EUE-6, each rated at 480,000 Btu per hour.
- ~~(d) One (1) natural gas-fired boiler, constructed in 2004, identified as EUD-6, rated at 150,000 Btu per hour.~~

Plant 7A:

- ~~(a) One (1) RV assembly operation, constructed in February 2005, identified as EUB-7A, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.88 units per hour, exhausting through general ventilation.~~
- (br) Woodworking operations, constructed in July 2000, identified as EUA-7A, using 4,900 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (es) Two (2) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7A, each rated at 480,000 Btu per hour.
- (dt) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7A, rated at 150,000 Btu per hour.
- (u) **One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting indoors.**
- (v) **Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.**
- (w) **Two (2) natural gas-fueled thermo cyclers, identified as EUF-7A and EUG-7A, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, using no control equipment, and exhausting indoors.**
- (x) **Two (2) natural gas-fueled boilers, identified as EUH-7A and EUI-7A, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.**

Plant 7B:

- (ay) One (1) RV assembly operation, constructed in March 2005, identified as EUB-7B, which

assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling ~~4-13~~ **1.625** units per hour, exhausting through general ventilation.

- (bz) Woodworking operations, constructed in July 2000, identified as EUA-7B, using 6,300 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (eaa) One (1) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7B, rated at 480,000 Btu per hour.
- (ebb) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7B, rated at 150,000 Btu per hour.
- (cc) **One (1) natural gas-fired thermo cyclers, approved in 2014 for construction, identified as EUF-7B, rated at 480,000 Btu per hour.**
- (dd) **One (1) natural gas-fired boiler, approved in 2014 for construction, identified as EUG-7B, rated at 150,000 Btu per hour.**

Plant 19:

- ~~(a) One (1) RV assembly operation, constructed in January 2006, identified as EUB-19, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.75 units per hour, exhausting through general ventilation.~~
- (bee) Woodworking operations, identified as EUA-19, using 4,200 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.

Note: ~~The particulate emissions from woodworking operations from each plant are controlled by a baghouse, except Plant 2 is controlled by a cyclone~~ **Each woodworking operation is equipped with an integral baghouse for particulate.**

- 2. IDEM clarified the Section C - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range:

C.11 Instrument Specifications [326 IAC 2-1.1-11]

- (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. **The analog instrument shall be capable of measuring values outside of the normal range.**
 - (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.
- 3. IDEM, OAQ has made the following changes to Section D.1 - Emissions Unit Operation Conditions:
 - Descriptive information is updated
 - Emissions units that were removed have been deleted from the Section D.1 - PSD Minor Limit condition.

- The Section D.1 - Particulate Matter (PM) [326 IAC 6-2-4] condition is revised to include new emissions units.
- Emissions units that were removed have been deleted from the Section D.1 - Particulate Matter (PM) [326 IAC 6-3-2] condition.
- The Section D.1 - Preventive Maintenance Plan condition has been updated to match the current model.
- The Section D.1 - Particulate Control condition has been updated to match the current model.
- The Section D.1 - Baghouse Inspections condition has been updated to match the current model.
- The Section D.1 - Record Keeping Requirements condition has been updated to match the current model.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant 1:

- ~~(a) Woodworking operations, constructed in July 2000, identified as EUA-1, using 10,000 pounds of wood per hour, exhausting through general ventilation.~~
- (ba) One (1) natural gas-fired boiler, constructed in 1999, identified as EUD-1, rated at 150,000 Btu per hour.**

Plant 2:

- ~~(a) Woodworking operations, constructed in July 2000, identified as EUA-2, using 3,000 pounds of wood per hour, exhausting through general ventilation.~~
- ~~(b) One (1) welding operation, constructed in July 2000, identified as EUC-2, using 0.4 pounds per hour of weld wire, exhausting through general ventilation.~~
- (eb) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-2, rated at 150,000 Btu per hour.**
- (c) Two (2) natural gas-fueled water heaters, identified as EUE-2 and EUF-2, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.**

Plant 3:

- (ad) One (1) natural gas-fired boiler, constructed in 2000, identified as EUD-3 rated at 150,000 Btu per hour.**
- (e) One (1) natural gas-fueled radiant tube heater, identified as EUE-3, approved in 2014 for construction, with a maximum capacity of 0.08 MMBtu.hr, using no control equipment, and exhausting indoors.**

Plant 4:

- ~~(a) One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting to indoors.~~

- (bf) One (1) small paint repair area, identified as EUPR, constructed in January 2011, with a maximum capacity of less than 1 unit per hour of metal parts, using no control, and exhausting to indoors.
- ~~(c) Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.~~
- (g) One (1) RV assembly operation, approved in 2014 for construction, identified as EUB-4, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 1.625 units per hour, exhausting through general ventilation.**
- (h) Two (2) natural gas-fueled thermo cyclers, identified as EUC-4 and EUD-4, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, each, using no control equipment, and exhausting indoors.**
- (i) Three (3) natural gas-fueled boilers, identified as EUE-4, EUF-4, and EUG-4 approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, each, using no control equipment, and exhausting to a stack.**

Plant 5:

- (aj) One (1) RV assembly operation, constructed in February 1999 and approved for modification in 2011, identified as EUB-5, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling ≥ 1.25 units per hour, exhausting through general ventilation.
- (bk) Woodworking operations, constructed in July 2000, identified as EUA-5, using 7,800 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (el) One (1) natural gas-fired boiler, constructed in 2003, identified as EUD-5, rated at 150,000 Btu per hour.
- (em) One (1) 0.5 MMBtu/hr direct natural gas-fired industrial heater, installed in 2008 identified as EUD-5A.
- (n) One (1) natural gas-fueled boiler, identified as EUE-5, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.**

Plant 6:

- (ao) One (1) RV assembly operation, constructed in April 2004 and approved for modification in 2011, identified as EUB-6, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, plastic, assembling 0.75 units per hour, exhausting through general ventilation
- (bp) Woodworking operations, constructed in July 2000, identified as EUA-6, using 2,800 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (eq) Two (2) natural gas-fired thermo cyclers, constructed in 2004, identified as EUE-6,

each rated at 480,000 Btu per hour.

- ~~(d) One (1) natural gas-fired boiler, constructed in 2004, identified as EUD-6, rated at 150,000 Btu per hour.~~

Plant 7A:

- ~~(a) One (1) RV assembly operation, constructed in February 2005, identified as EUB-7A, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.88 units per hour, exhausting through general ventilation.~~
- (br) Woodworking operations, constructed in July 2000, identified as EUA-7A, using 4,900 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (es) Two (2) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7A, each rated at 480,000 Btu per hour.
- (dt) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7A, rated at 150,000 Btu per hour.
- (u) **One (1) flow coating laminator, identified as EUL-7A, constructed in January 2011, with a maximum capacity of 24 units per hour, using no control, and exhausting indoors.**
- (v) **Three (3) welding stations, constructed in 2011, identified as EUC-7A, EUC-7B and EUC-7C, exhausting through general ventilation.**
- (w) **Two (2) natural gas-fueled thermo cyclers, identified as EUF-7A and EUG-7A, approved in 2014 for construction, with a maximum capacity of 0.48 MMBtu/hr, using no control equipment, and exhausting indoors.**
- (x) **Two (2) natural gas-fueled boilers, identified as EUH-7A and EUI-7A, approved in 2014 for construction, with a maximum capacity of 0.15 MMBtu/hr, using no control equipment, and exhausting to a stack.**

Plant 7B:

- (ay) One (1) RV assembly operation, constructed in March 2005, identified as EUB-7B, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 4-13 **1.625** units per hour, exhausting through general ventilation.
- (bz) Woodworking operations, constructed in July 2000, identified as EUA-7B, using 6,300 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.
- (eaa) One (1) natural gas-fired thermo cyclers, constructed in 2005, identified as EUE-7B, rated at 480,000 Btu per hour.
- (ebb) One (1) natural gas-fired boiler, constructed in 2005, identified as EUD-7B, rated at 150,000 Btu per hour.
- (cc) One (1) natural gas-fired thermo cyclers, approved in 2014 for construction,**

identified as EUF-7B, rated at 480,000 Btu per hour.

(dd) One (1) natural gas-fired boiler, approved in 2014 for construction, identified as EUG-7B, rated at 150,000 Btu per hour.

Plant 19:

(a) ~~One (1) RV assembly operation, constructed in January 2006, identified as EUB-19, which assembles RV from primarily pre-manufactured and pre-coated components using sealants, adhesives and caulks, coating wood, and plastic, assembling 0.75 units per hour, exhausting through general ventilation.~~

(bee) Woodworking operations, identified as EUA-19, using 4,200 pounds of wood per hour, **controlled by a baghouse** exhausting through general ventilation.

Note: ~~The particulate emissions from woodworking operations from each plant are controlled by a baghouse, except Plant 2 is controlled by a cyclone~~ **Each woodworking operation is equipped with an integral baghouse for particulate.**

(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 2-6.1-5(a)(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2, the allowable PM, PM10 and PM2.5 emission rate from woodworking operations shall not exceed the following:

Location	Emissions units ID	PM Limitation (lb/hr)	PM10 Limitation (lb/hr)	PM2.5 Limitation (lb/hr)
Plant 1	EUA-1	12.05	7.0	7.0
Plant 2	EUA-2	5.38	2.8	2.8
Plant 5	EUA-5	10.20	2.8	2.8
Plant 6	EUA-6	5.14	2.8	2.8
Plant 7A	EUA-7A	7.47	2.8	2.8
Plant 7B	EUB-7B	8.84	2.8	2.8
Plant 19	EUB-19	6.74	2.8	2.8

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10 and PM2.5 to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-2-4]

~~Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating) the PM emissions from the seven (7) natural gas-fired boilers, identified as EUD-1, EUD-2, EUD-3, EUD-5, EUD-6, EUD-7A, EUD-7B, each rated at 150,000 Btu/hr, each shall not exceed six-tenths (0.6) pounds per million British thermal units (MMBtu).~~

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
---------------	---------	---------------

Boiler	EUD-1	0.6
Boiler	EUD-2	0.6
Boiler	EUD-3	0.6
Boiler	EUD-5	0.6
Boiler	EUD-7A	0.6
Boiler	EUD-7B	0.6
Water Heater	EUE-2	0.6
Water Heater	EU-2	0.6
Radiant Tube Heater	EUE-3	0.6
Boiler	EUE-4	0.6
Boiler	EU-4	0.6
Boiler	EUG-4	0.6
Boiler	EUE-5	0.6
Boiler	EUH-7A	0.6
Boiler	EUI-7A	0.6
Boiler	EUG-7B	0.6

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from woodworking operations shall not exceed the following:

Location	Emissions units ID	Weight Rate (lb/hr)	Weight Rate (tons/hr)	PM Limitation (lb/hr)
Plant 1	EUA-1	40,000	5	12.05
Plant 2	EUA-2	3,000	4.5	5.38
Plant 5	EUA-5	7,800	3.9	10.20
Plant 6	EUA-6	2,800	1.4	5.14
Plant 7A	EUA-7A	4,900	2.45	7.47
Plant 7B	EUB-7B	6,300	3.15	8.84
Plant 19	EUB-19	4,200	2.1	6.74

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 1-6-3]

A Preventive Maintenance Plan is required for ~~the~~ **these** facilities and ~~their~~ **any** control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.6 Particulate Control

In order to comply with Conditions D.1.1 and D.1.3, the baghouses ~~and cyclone~~ for particulate control shall be in operation and control emissions from the woodworking at all times when the woodworking is in operation.

D.1.6 Particulate Control

In order to comply with Conditions D.1.1 and D.1.3, the baghouses ~~and cyclone~~ for particulate control shall be in operation and control emissions from the woodworking **facilities** at all times when the woodworking **facilities** ~~is~~ **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.

...

Compliance Monitoring Requirements

D.1.8 Baghouse Inspections

~~An inspection shall be performed each calendar quarter of the baghouse and cyclone controlling the woodworking operations when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.~~
The Permittee shall perform quarterly inspections of the baghouses controlling particulate from woodworking facilities to verify that they are being operated and maintained in accordance with the manufacturer's specifications. All defective bags shall be replaced. A record shall be kept of the results of each inspection.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.1.4. Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period.
- (1) The VOC content of each assembly material and solvent used.
 - (2) The amount of assembly material and solvent 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 assembly and those used as cleanup solvent.
- (b) To document the compliance status with Condition D.1.8, the Permittee shall maintain records of quarterly inspections of the baghouses controlling particulate from the woodworking facilities.**
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by the condition.

Conclusion and Recommendation

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 December 12, 2013.

The operation of this proposed revision shall be subject to the conditions of the attached proposed Administrative Amendment No. 087-33983-00063. The staff recommends to the Commissioner that this Administrative Amendment be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Doug Logan 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) 234-5328 or toll free at 1-800-451-6027 extension 4-5328.
- (b) A copy of the findings 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.in.gov/idem

**Appendix A: Emissions Calculations
PTE Summary**

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-33983-00063
Reviewer: Doug Logan
Date: 4/2/2014

Uncontrolled Potential to Emit (tons/yr) - Part 70 Determination										
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	CO _{2e} 10/30/09 GWP	CO _{2e} 11/29/13 GWP	Total HAPs
Natural Gas Combustion	6.23E-02	2.49E-01	2.49E-01	1.97E-02	3.28	0.18	2.75	3,956	3,955	6.18E-02
Welding	2.89E-03	2.89E-03	2.89E-03	--	--	--	--	--	--	2.63E-04
Assembly						21.12				4.86
Laminator						0.89				0.89
Paint Repair	0.20	0.20	0.20			0.96				0.07
Sub-Total (Excludes Emission Units with Integral Devices)	0.27	0.46	0.46	1.97E-02	3.28	23.16	2.75	3,956	3,955	5.88
Emission Units with Integral Devices										
Woodworking	49.23	49.23	49.23	--	--	--	--	--	--	--
Total	49.50	49.68	49.68	0.02	3.28	23.16	2.75	3,956	3,955	5.88

Notes: * PM2.5 listed is direct PM2.5

PM/PM10/PM2.5 emissions from the Woodworking operations were calculated after consideration of the controls based on the integral to the process determination.

Uncontrolled Potential to Emit (tons/yr) - PSD Determinations										
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	CO _{2e} 10/30/09 GWP	CO _{2e} 11/29/13 GWP	Total HAPs
Sub-Total (Excludes Emission Units with Integral Devices)	0.27	0.46	0.46	1.97E-02	3.28	23.16	2.75	3,956	3,955	5.88
Emission Units with Integral Devices										
Woodworking	14760.82	14760.82	14760.82	--	--	--	--	--	--	--
Total	14761.09	14761.28	14761.28	0.02	3.28	23.16	2.75	3,956	3,955	5.88

Notes: * PM2.5 listed is direct PM2.5

Controls that are integral to the process are not considered for purposes of PSD/EO/NaNSR or CAM

Potential to Emit after Issuance (tons/yr) - Part 70 Determination										
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	CO _{2e} 10/30/09 GWP	CO _{2e} 11/29/13 GWP	Total HAPs
Natural Gas Combustion	6.23E-02	2.49E-01	2.49E-01	1.97E-02	3.28	0.18	2.75	3,956	3,955	6.18E-02
Welding	2.89E-03	2.89E-03	2.89E-03	--	--	--	--	--	--	2.63E-04
Assembly						21.12				4.86
Laminator						0.89				0.89
Paint Repair	0.20	0.20	0.20			0.96				0.07
Sub-Total (Excludes Emission Units with Integral Devices)	0.27	0.46	0.46	1.97E-02	3.28	23.16	2.75	3,956	3,955	5.88
Emission Units with Integral Devices										
Woodworking	49.23	49.23	49.23							
Total	49.50	49.68	49.68	0.02	3.28	23.16	2.75	3,956	3,955	5.88

Notes: * PM2.5 listed is direct PM2.5

The shaded cells indicate where limits are included.

PM/PM10/PM2.5 emissions from the Woodworking operations were calculated after consideration of the controls based on the integral to the process determination.

Potential to Emit after Issuance (tons/yr) - PSD										
Emission Unit	PM	PM10	PM2.5 *	SO ₂	NOx	VOC	CO	CO _{2e} 10/30/09 GWP	CO _{2e} 11/29/13 GWP	Total HAPs
Sub-Total (Excludes Emission Units with Integral Devices)	0.27	0.46	0.46	1.97E-02	3.28	23.16	2.75	3,956	3,955	5.88
Emission Units with Integral Devices										
Woodworking	168.15	61.32	61.32							
Total	168.42	61.78	61.78	0.02	3.28	23.16	2.75	3,956	3,955	5.88

Notes: * PM2.5 listed is direct PM2.5

The shaded cells indicate where limits are included.

Controls that are integral to the process are not considered for purposes of PSD/EO/NaNSR or CAM

**Appendix A: Emission Calculations
Revision Summary**

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shpshewana, IN 46565
FESOP SPR No.: 087-33983-00063
Reviewer: Doug Logan
Date: 4/2/2014

Uncontrolled Potential of New Emissions Units (tons/year)										
Emission Unit	PM	PM10	PM2.5 *	SO₂	NOx	VOC	CO	CO₂e (10/30/09 GWP)	CO₂e (11/29/13 GWP)	Total HAPs
Plant 4 Assembly	--	--	--	--	--	6.06	--	--	--	1.67
New Natural Gas Combustion Units	3.12E-02	0.12	0.12	9.87E-03	1.64	9.05E-02	1.38	1,986	1,985	3.10E-02
Total PTE of New Units	3.12E-02	0.12	0.12	9.87E-03	1.64	6.15	1.38	1,986	1,985	1.70

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

Company Name: K-Z, Inc.
 Address City IN Zip: 0695 North 900 West, Shipshewana, IN 46565
 Permit Number: 087-33983-0063
 Reviewer: Doug Logan
 Date: 4/2/2014

Includes:	Unit ID	Date	Description	Number	Rating	Input MMBtu/hr	
	EUD-1	1999	Boiler	1	0.15	0.15	
	EUD-2	2000	Water heater	1	0.15	0.15	
	EUD-3	2000	Boiler	1	0.15	0.15	
	EUD-5	2003	Boiler	1	0.15	0.15	
	EUD-5A	2008	Direct fired heater	1	0.50	0.50	
	EUE-6	2004	Thermo cycler	2	0.48	0.96	
	EUE-7A	2005	Thermo cycler	2	0.48	0.96	
	EUD-7A	2005	Boiler	1	0.15	0.15	
	EUE-7B	2005	Thermo cycler	1	0.48	0.48	
	EUD-7B	2005	Boiler	1	0.15	0.15	
	Total named in M087-30957-00063						3.80
	EUE-2, EUF-2	2014	Water heater	2	0.15	0.30	
	EUE-3	2014	Tube heater	1	0.08	0.08	
	EUC-4, EUD-4	2014	Thermo cycler	2	0.48	0.96	
	EUE-4, EUF-4, EUG-4	2014	Boiler	3	0.15	0.45	
	EUE-5	2014	Boiler	1	0.15	0.15	
	EUF-7A, EUG-7A	2014	Thermo cycler	2	0.48	0.96	
	EUH-7A, EUJ-7A	2014	Boiler	2	0.15	0.30	
	EUF-7B	2014	Thermo cycler	1	0.48	0.48	
	EUG-7B	2014	Boiler	1	0.15	0.15	
	Total added						3.83

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu	MMCF/yr
	mmscf	
3.80 existing	1020	32.6
3.83 added		32.9
7.63 all		65.5

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr, existing	3.10E-02	0.12	0.12	9.79E-03	1.63	8.97E-02	1.37
Potential Emission in tons/yr, added	3.12E-02	0.12	0.12	9.87E-03	1.64	9.05E-02	1.38
Potential Emission in tons/yr, total	6.23E-02	0.25	0.25	1.97E-02	3.28	0.18	2.75

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

Emission Factor in lb/MMcf	HAPs - Organics					
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics
Potential Emission in tons/yr, existing	3.43E-05	1.96E-05	1.22E-03	2.94E-02	5.55E-05	3.07E-02
Potential Emission in tons/yr, added	3.45E-05	1.97E-05	1.23E-03	2.96E-02	5.59E-05	3.09E-02
Potential Emission in tons/yr, total	6.88E-05	3.93E-05	2.46E-03	5.90E-02	1.11E-04	6.17E-02

Emission Factor in lb/MMcf	HAPs - Metals					
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals
Potential Emission in tons/yr, existing	8.16E-06	1.79E-05	2.28E-05	6.20E-06	3.43E-05	8.94E-05
Potential Emission in tons/yr, added	8.22E-06	1.81E-05	2.30E-05	6.25E-06	3.45E-05	9.01E-05
Potential Emission in tons/yr, total	1.64E-05	3.60E-05	4.59E-05	1.25E-05	6.88E-05	1.80E-04

Methodology is the same as above.

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

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas					
	All Units			New Units		
	CO2 120,000	CH4 2.3	N2O 2.2	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	3,932	7.54E-02	7.21E-02	1,974	3.78E-02	3.62E-02
Summed Potential Emissions in tons/yr	3,932			1,974		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	3,955			1,985		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	3,956			1,986		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) based on 11/29/2013 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25)
 + N2O Potential Emission ton/yr x N2O GWP (298)
 CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21)
 + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Woodworking**

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-33983-00063
Reviewer: Doug Logan
Date: 4/2/2014

Plant	Emissions Unit ID	Outlet Grain Loading (gr/dscf)	Air Flow Rate (dcfm)	Dust Collector Type	Control Efficiency	Controlled Potential Emissions		Uncontrolled Potential Emissions	
						PM/PM10/PM2.5 Emissions (lb/hr)	PM Emissions tons/year (tons/yr)	PM/PM10/PM2.5 Emissions (lb/hr)	PM Emissions tons/year (tons/yr)
5	EUA-5	0.042	7800	Baghouse	99.9%	2.8	12.3	2808.0	12299.0
6	EUA-6	0.066	4968	Baghouse	98.5%	2.8	12.3	187.4	820.7
7A & 7B	EUA-7A & EUA-7B	0.083	3950	Baghouse	98.5%	2.8	12.3	187.3	820.6
19	EUA-19	0.083	3950	Baghouse	98.5%	2.8	12.3	187.3	820.6
Total							49.23	3370.1	14760.82

- Notes:
- The above table is from permit M087-27076-00063 issued on January 12, 2007, except for the emissions from Plant 4, which was removed previously and woodworking in Plants 1 and 2, which are removed in the present action.
 - Plants 7A and 7B are served by a single baghouse
 - PTE of Plant 19 is assumed to have the same grain loading and air flow rate as the unit for Plants 7A & 7B since it has similar capacity.

Methodology

Controlled PTE PM emissions (lb/hr) = (outlet grain loading gr/dscf) x (air flow dscf/min) x (60 min/hr) / (7000 gr/lb)

Controlled PTE PM emissions (tons/yr) = (PTE controlled emissions lb/hr) * (8760 hr/yr)/(2000 lb/ton)

Uncontrolled PTE PM emissions (lb/hr) = (PTE Controlled emission rate lb/hr)/(1- control efficiency)

Uncontrolled PTE PM emissions (ton/yr) = PTE controlled emission rate lb/hr x (8760 hr/yr) / (2000 lb/ton)

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

**Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-33983-00063
Reviewer: Doug Logan
Date: 4/2/2014**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
MIG welding, EUC-7A	1	0.04	0.0055	0.0005			2.20E-04	2.00E-05	0	0	2.00E-05
MIG welding, EUC-7B	1	0.04	0.0055	0.0005			2.20E-04	2.00E-05	0	0	2.00E-05
MIG welding, EUC-7C	1	0.04	0.0055	0.0005			2.20E-04	2.00E-05	0	0	2.00E-05
EMISSION TOTALS											
Potential Emissions lbs/hr							6.60E-04	6.00E-05	0	0	6.00E-05
Potential Emissions lbs/day							1.58E-02	1.44E-03	0	0	1.44E-03
Potential Emissions tons/year							2.89E-03	2.63E-04	0	0	2.63E-04

Note PM=PM10=PM2.5

Methodology:

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

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the

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

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

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

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

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

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

Appendix A: Emissions Calculations
Assembly Operations

Company Name: K-Z, Inc.
Address City IN Zip: 0685 North 900 West, Shipshewana, IN 46555
Permit Number: 087-33983-00053
Reviewer: Doug Logan
Date: 4/2/2014

Plant Name	Maximum Production Rate
Plant 4	1.625
Plant 5	1.25
Plant 6	0.75
Plant 7B	1.625
Total	5.25

METHODOLOGY

Potential to Emit VOC (tons/yr) = [VOC content (lb/gal) * Usage (gal/unit) * Maximum Production Rate (units/hr)] * 8760 hrs/yr * 1 ton/2000 lbs
PTE HAPs (tons/yr) = [Usage (lb/unit) * Maximum Production Rate (units/hr) * Weight % HAP] * 8760 hrs/yr * 1 ton/2000 lbs

Plant 4

Vendor	Product Code	Product Name	Material Used On	Density lbs/gal	Usage gal/unit	Usage lb/unit	Max Prdn Rate units/hr	VOC content lbs/gal	Toluene wt %	TCE wt %	Xylene wt %	Hexane wt %	DBP wt %	Cumene wt %	Ethylbenzene wt %	VOC emissions lbs/hr	Toluene lbs/hr	TCE lbs/hr	Xylene lbs/hr	Hexane lbs/hr	DBP lbs/hr	Cumene lbs/hr	Ethylbenzene lbs/hr	HAPs Total lbs/hr	
Premier	9500	Xtrobond	wood and plastic	10.84	0.35	3.79	1.625	0.08	0%	0%	0%	0%	0%	0%	0%	0.05	0	0	0	0	0	0	0	0	
Alpha	8010	Acrylic	wood and plastic	10.50	0.17	1.79	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Tremco	645	Semi Translucent	wood and plastic	8.50	0.02	0.14	1.625	0.17	0%	0.00%	0%	0%	0%	0%	0%	4.70E-03	0	0	0	0	0	0	0	0	
Geocel	2300	Geocel Sealent Colors	wood and plastic	9.84	0.07	0.69	1.625	0.38	0%	4.00%	0.04%	0%	0%	0.04%	0%	4.32E-02	0	4.48E-02	4.48E-04	0	0	0	4.48E-04	0	
Apex Int'l	B-00091	Bts Spray Adhesive	wood and plastic	5.25	0.03	0.16	1.625	3.94	0%	0%	0%	25.00%	0%	0%	0%	0.19	0	0	0	6.40E-02	0	0	0	0	
1st Avd	NA	Rubberized Undercoat	wood and plastic	7.99	0	0	1.625	3.96	20.00%	0%	0.10%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
DAP Inc.	Paint	Spray and go Enamel	wood and plastic	6.26	0.01	0.06	1.625	4.06	5.15%	0%	10.20%	0%	0%	0.05%	3.15%	5.94E-02	4.72E-03	0	9.34E-03	0	0	4.58E-05	2.88E-03	0	
Henkel	1507600	Loctite Polyseamseal	wood and plastic	14.10	0.00	0.00	1.625	0.25	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Alpha	NS113	Alphathane	wood and plastic	12.61	0.32	4.00	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Armstrong	S-254	Flooring Adhesive	wood and plastic	9.26	0.06	0.46	1.625	0.03	0%	0%	0%	0%	0%	0%	0%	2.19E-03	0	0	0	0	0	0	0	0	
Selena USA		Titan RV Black Foam	wood and plastic	10.80	0.02	0.19	1.625	1.49	0%	0%	0%	0%	0%	0%	0%	4.36E-02	0	0	0	0	0	0	0	0	
RectorSeal		Rectorseal T plus 2	wood and plastic	11.01	0.00	0.00	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Whitlam	555	Thread Seal	wood and plastic	11.76	0.01	0.12	1.625	2.97	0%	0%	0%	0%	0%	0%	0%	0.05	0	0	0	0	0	0	0	0	
IPS Corp	711	PVC cement	wood and plastic	8.06	0.01	0.10	1.625	4.26	0%	0%	0%	0%	0%	0%	0%	8.65E-02	0	0	0	0	0	0	0	0	
Alpha	3015	Anti Wracking	wood and plastic	8.50	0.17	1.41	1.625	0.26	0%	0%	0%	0%	3.00%	0%	0%	7.01E-02	0	0	0	0	6.88E-02	0	0	0	
Alpha	NI1010	N 1010 HS Low VOC	wood and plastic	11.89	0.02	0.20	1.625	2.02	0.51%	0%	0.51%	0%	0%	0%	0%	5.58E-02	1.67E-03	0	1.67E-03	0	0	0	0	0	
Chem Link		Quick Set Construction	wood and plastic	11.75	0.00	0.00	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Alpha	4110	Primer	wood and plastic	7.51	0.03	0.19	1.625	7.13	60%	0%	0%	0%	0%	0%	0%	0.03%	0.29	1.83E-01	0	0	0	0	0	9.15E-05	
Alpha	1021	1021 Low VOC Sealant	wood and plastic	11.18	0.04	0.44	1.625	2.45	0%	0%	0%	0%	0%	0%	0%	0.17	0	0	0	0	0	0	0	0	
IPS Corp	773/771	Pipe Cement	wood and plastic	7.42	0.06	0.46	1.625	2.71	0%	0%	0%	0%	0%	0%	0%	0.28	0	0	0	0	0	0	0	0	
Plant 4 Total																1b/hr	1.26	0.19	4.48E-02	1.15E-02	6.40E-02	6.88E-02	4.93E-04	2.98E-03	0.38

Plant 5

Vendor	Product Code	Product Name	Material Used On	Density lbs/gal	Usage gal/unit	Usage lb/unit	Max Prdn Rate units/hr	VOC content lbs/gal	Toluene wt %	TCE wt %	Xylene wt %	Hexane wt %	DBP wt %	Cumene wt %	Ethylbenzene wt %	VOC emissions lbs/hr	Toluene lbs/hr	TCE lbs/hr	Xylene lbs/hr	Hexane lbs/hr	DBP lbs/hr	Cumene lbs/hr	Ethylbenzene lbs/hr	HAPs Total lbs/hr	
Premier	9500	Xtrobond	wood and plastic	10.84	0.39	4.23	1.25	0.08	0%	0%	0%	0%	0%	0%	0%	3.95E-02	0	0	0	0	0	0	0	0	
Alpha	8010	Acrylic	wood and plastic	10.50	2.30	24.15	1.25	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Tremco	645	Semi Translucent	wood and plastic	8.50	0.10	0.85	1.25	0.17	0%	0.00%	0%	0%	0%	0%	0%	2.13E-02	0	0	0	0	0	0	0	0	
Geocel	2300	Geocel Sealent Colors	wood and plastic	9.84	0.00	0.00	1.25	0.39	0%	4.00%	0.04%	0%	0%	0.04%	0%	0	0	0	0	0	0	0	0	0	
Apex Int'l	B-00091	Bts Spray Adhesive	wood and plastic	5.25	0.03	0.16	1.25	3.94	0%	0%	0%	25.00%	0%	0%	0%	1.53E-01	0	0	0	5.09E-02	0	0	0	0	
1st Avd	NA	Rubberized Undercoat	wood and plastic	7.99	0.01	0.08	1.25	3.96	20.00%	0%	0.10%	0%	0%	0%	0%	4.95E-02	2.00E-02	0	9.99E-05	0	0	0	0	0	
DAP Inc.	Paint	Spray and go Enamel	wood and plastic	6.26	0.02	0.13	1.25	4.06	5.15%	0%	10.20%	0%	0%	0.05%	3.15%	1.02E-01	8.06E-03	0	1.60E-02	0	0	7.83E-06	4.93E-03	0	
Henkel	1507600	Loctite Polyseamseal	wood and plastic	14.10	0.18	2.54	1.25	0.25	0%	0%	0%	0%	0%	0%	0%	5.63E-02	0	0	0	0	0	0	0	0	
Alpha	NS113	Alphathane	wood and plastic	10.80	0.77	8.31	1.25	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Armstrong	S-254	Flooring Adhesive	wood and plastic	9.17	0.15	1.38	1.25	0.03	0%	0%	0%	0%	0%	0%	0%	5.06E-03	0	0	0	0	0	0	0	0	
Selena USA		Titan RV Black Foam	wood and plastic	10.80	0.04	0.44	1.25	1.49	0%	0%	0%	0%	0%	0%	0%	8.05E-02	0	0	0	0	0	0	0	0	
RectorSeal		Rectorseal T plus 2	wood and plastic	11.00	0.00	0.00	1.25	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Whitlam	555	Thread Seal	wood and plastic	11.68	0.00	0.02	1.25	2.97	0%	0%	0%	0%	0%	0%	0%	6.68E-03	0	0	0	0	0	0	0	0	
IPS Corp	711	PVC cement	wood and plastic	8.06	0.01	0.10	1.25	4.26	0%	0%	0%	0%	0%	0%	0%	6.66E-02	0	0	0	0	0	0	0	0	
Alpha	3015	Anti Wracking	wood and plastic	8.50	0.00	0.04	1.25	0.26	0%	0%	0%	0%	3.00%	0%	0%	1.53E-03	0	0	0	0	1.85E-03	0	0	0	
Alpha	NI1010	N 1010 HS Low VOC	wood and plastic	11.89	0.02	0.25	1.25	2.02	0.51%	0%	0.51%	0%	0%	0%	0%	5.30E-02	1.59E-03	0	1.59E-03	0	0	0	0	0	
Chem Link		Quick Set Construction	wood and plastic	11.75	0.39	4.58	1.25	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
Alpha	4110	Primer	wood and plastic	7.51	0.04	0.29	1.25	7.13	60%	0%	0%	0%	0%	0%	0%	0.03%	3.39E-01	2.14E-01	0	0	0	0	0	1.07E-04	
Alpha	1021	1021 Low VOC Sealant	wood and plastic	11.18	0.04	0.44	1.25	2.45	0%	0%	0%	0%	0%	0%	0%	1.19E-01	0	0	0	0	0	0	0	0	
IPS Corp	773/771	Pipe Cement	wood and plastic	7.42	0.06	0.38	1.25	2.71	0%	0%	0%	0%	0%	0%	0%	1.72E-01	0	0	0	0	0	0	0	0	
Plant 5 Total																1b/hr	1.26	0.24	0.00	0.02	0.05	1.50E-03	7.83E-05	5.04E-03	0.32

Appendix A: Emissions Calculations
Assembly Operations

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-3393-00063
PI ID: 087-00063
Reviewer: Doug Logan
Date: 4/2/2014

Plant 6

Vendor	Product Code	Product Name	Material Used On	Density lbs/gal	Usage gal/unit	Usage lb/unit	Max Prdn Rate units/hr	VOC content lbs/gal	Toluene wt %	TCE wt %	Xylene wt %	Hexane wt %	DBP wt %	Cumene wt %	Ethylbenzene wt %	VOC emissions lbs/hr	Toluene lbs/hr	TCE lbs/hr	Xylene lbs/hr	Hexane lbs/hr	DBP lbs/hr	Cumene lbs/hr	Ethylbenzene lbs/hr	HAPs Total lbs/hr
Premier	9500	Xtrobond	wood and plastic	10.84	0.39	4.23	0.75	0.08	0%	0%	0%	0%	0%	0%	0%	2.34E-02	0	0	0	0	0	0	0	0
Alpha	8010	Acrylic	wood and plastic	10.50	2.30	24.15	0	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Tremco	645	Semi Translucent	wood and plastic	8.50	0.02	0.14	0.75	0.17	0%	0.00%	0%	0%	0%	0%	0%	2.17E-03	0	0	0	0	0	0	0	0
Geocal	2300	Geocal Sealant Colors	wood and plastic	9.84	0.07	0.69	0.75	0.39	0%	4.00%	0.04%	0%	0%	0.04%	0%	2.05E-02	0	2.07E-02	2.07E-04	0	0	0	2.07E-04	0
Apex Int'l	B-00091	Bis Spray Adhesive	wood and plastic	5.25	0.03	0.16	0.75	3.94	0%	0%	0%	25.00%	0%	0%	0%	9.16E-02	0	0	0	3.06E-02	0	0	0	0
1st Avd	NA	Rubberized Undercoat	wood and plastic	7.99	0.01	0.08	0.75	3.96	20.00%	0%	0.10%	0%	0%	0%	0%	2.97E-02	1.20E-02	0	5.99E-05	0	0	0	0	0
DAP Inc.	Paint	Spray and go Enamel	wood and plastic	6.26	0.03	0.19	0.75	4.06	5.15%	0%	10.20%	0%	0%	0.05%	3.15%	9.14E-02	7.26E-03	0	1.44E-02	0	0	0	7.04E-05	4.44E-03
Henkel	1507600	Loctite Polyseamseal	wood and plastic	14.10	0.18	2.54	0.75	0.25	0%	0%	0%	0%	0%	0%	0%	3.38E-02	0	0	0	0	0	0	0	0
Alpha	NS113	Alphathane	wood and plastic	10.80	0.77	8.32	0.75	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Armstrong	S-254	Flooring Adhesive	wood and plastic	9.17	0.05	0.46	0.75	0.03	0%	0%	0%	0%	0%	0%	0%	1.01E-03	0	0	0	0	0	0	0	0
Selena USA		Titan RV Black Foam	wood and plastic	10.80	0.04	0.47	0.75	1.49	0%	0%	0%	0%	0%	0%	0%	4.83E-02	0	0	0	0	0	0	0	0
RectorSeal		Rectorseal T plus 2	wood and plastic	11.00	0.00	0.02	0.75	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Whitlam	555	Thread Seal	wood and plastic	11.68	0.01	0.07	0.75	2.97	0%	0%	0%	0%	0%	0%	0%	1.34E-02	0	0	0	0	0	0	0	0
IPS Corp	711	PVC cement	wood and plastic	8.06	0.01	0.10	0.75	4.26	0%	0%	0%	0%	0%	0%	0%	3.99E-02	0	0	0	0	0	0	0	0
Alpha	3015	Anti Wickling	wood and plastic	8.50	0.78	6.63	0.75	0.26	0%	0%	0%	0%	3.00%	0%	0%	1.52E-01	0	0	0	0	0	1.49E-01	0	0
Alpha	N1010	N 1010 HS Low VOC	wood and plastic	11.89	0.05	0.55	0.75	2.02	0.51%	0%	0.51%	0%	0%	0%	0%	6.97E-02	2.09E-03	0	2.09E-03	0	0	0	0	0
Chem Link		Quick Set Construction	wood and plastic	11.75	1.00	11.75	0	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Alpha	4110	Primer	wood and plastic	7.51	0.01	0.04	0.75	7.13	60%	0%	0%	0%	0%	0%	0.03%	2.67E-02	1.69E-02	0	0	0	0	0	0	8.45E-06
Alpha	1021	1021 Low VOC Sealant	wood and plastic	11.18	0.08	0.89	0.75	2.45	0%	0%	0%	0%	0%	0%	0%	1.47E-01	0	0	0	0	0	0	0	0
IPS Corp	773/771	Pipe Cement	wood and plastic	7.42	0.05	0.37	0.75	2.71	0%	0%	0%	0%	0%	0%	0%	1.02E-01	0	0	0	0	0	0	0	0
Plant 6 Total																6.89	0.04	0.02	0.02	0.03	0.15	2.77E-04	4.45E-03	0.26

Plant 7B

Vendor	Product Code	Product Name	Material Used On	Density lbs/gal	Usage gal/unit	Usage lb/unit	Max Prdn Rate units/hr	VOC content lbs/gal	Toluene wt %	TCE wt %	Xylene wt %	Hexane wt %	DBP wt %	Cumene wt %	Ethylbenzene wt %	VOC emissions lbs/hr	Toluene lbs/hr	TCE lbs/hr	Xylene lbs/hr	Hexane lbs/hr	DBP lbs/hr	Cumene lbs/hr	Ethylbenzene lbs/hr	HAPs Total lbs/hr
Premier	9500	Xtrobond	wood and plastic	10.84	0.00	0.00	1.625	0.08	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Alpha	8010	Acrylic	wood and plastic	10.50	2.50	26.25	0	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Tremco	645	Semi Translucent	wood and plastic	8.50	0.00	0.02	1.625	0.17	0%	0.00%	0%	0%	0%	0%	0%	5.53E-04	0	0	0	0	0	0	0	0
Geocal	2300	Geocal Sealant Colors	wood and plastic	9.84	0.07	0.69	1.625	0.39	0%	4.00%	0.04%	0%	0%	0.04%	0%	4.44E-02	0	4.48E-02	4.48E-04	0	0	0	4.48E-04	0
Apex Int'l	B-00091	Bis Spray Adhesive	wood and plastic	5.25	0.00	0.02	1.625	3.94	0%	0%	0%	25.00%	0%	0%	0%	1.92E-02	0	0	0	6.46E-03	0	0	0	0
1st Avd	NA	Rubberized Undercoat	wood and plastic	7.99	0.00	0.01	1.625	3.96	20.00%	0%	0.10%	0%	0%	0%	0%	5.79E-03	2.34E-03	0	1.17E-05	0	0	0	0	0
DAP Inc.	Paint	Spray and go Enamel	wood and plastic	6.26	0.01	0.06	1.625	4.06	5.15%	0%	10.20%	0%	0%	0.05%	3.15%	6.60E-02	5.24E-03	0	1.04E-02	0	0	5.09E-05	3.20E-03	0
Henkel	1507600	Loctite Polyseamseal	wood and plastic	14.10	0.07	0.99	1.625	0.25	0%	0%	0%	0%	0%	0%	0%	2.84E-02	0	0	0	0	0	0	0	0
Alpha	NS113	Alphathane	wood and plastic	10.80	1.03	11.12	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Armstrong	S-254	Flooring Adhesive	wood and plastic	9.17	0.01	0.11	1.625	0.03	0%	0%	0%	0%	0%	0%	0%	5.27E-04	0	0	0	0	0	0	0	0
Selena USA		Titan RV Black Foam	wood and plastic	10.80	0.04	0.43	1.625	1.49	0%	0%	0%	0%	0%	0%	0%	9.69E-02	0	0	0	0	0	0	0	0
RectorSeal		Rectorseal T plus 2	wood and plastic	11.00	0.00	0.00	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Whitlam	555	Thread Seal	wood and plastic	11.68	0.02	0.23	1.625	2.97	0%	0%	0%	0%	0%	0%	0%	9.65E-02	0	0	0	0	0	0	0	0
IPS Corp	711	PVC cement	wood and plastic	8.06	0.00	0.00	1.625	4.26	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Alpha	3015	Anti Wickling	wood and plastic	8.50	0.06	0.51	1.625	0.26	0%	0%	0%	0%	3.00%	0%	0%	2.54E-02	0	0	0	0	0	2.49E-02	0	0
Alpha	N1010	N 1010 HS Low VOC	wood and plastic	11.89	0.01	0.07	1.625	2.02	0.51%	0%	0.51%	0%	0%	0%	0%	1.97E-02	5.91E-04	0	5.91E-04	0	0	0	0	0
Chem Link		Quick Set Construction	wood and plastic	11.75	0.63	7.34	1.625	0	0%	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
Alpha	4110	Primer	wood and plastic	7.51	0.00	0.01	1.625	7.13	60%	0%	0%	0%	0%	0%	0.03%	1.16E-02	7.32E-03	0	0	0	0	0	0	3.66E-06
OSI Sealants		Quick Sealant	wood and plastic	7.73	0.01	0.07	1.625	2.71	0%	0%	30.30%	0%	0%	0%	10%	3.96E-02	0	0	3.43E-02	0	0	0	0	1.13E-02
Alpha	1021	1021 Low VOC Sealant	wood and plastic	11.18	0.17	1.90	1.625	2.45	0%	0%	0%	0%	0%	0%	0%	6.77E-01	0	0	0	0	0	0	0	0
IPS Corp	773/771	Pipe Cement	wood and plastic	7.42	0.04	0.27	1.625	2.71	0%	0%	0%	0%	0%	0%	0%	1.63E-01	0	0	0	0	0	0	0	0
Plant 7B Total																1.29	0.02	0.04	0.05	0.01	0.02	4.99E-04	1.45E-02	0.15

Note: Solvent blends named in MSDS's, such as Stoddard solvent, include default HAP concentrations from Tables 3 and 4, 40 CFR 63, Subpart MMMM

Total for all Assembly Processes

	VOC	Toluene	TCE	Xylene	Hexane	DBP	Cumene	Ethylbenzene	HAPs Total
lb/hr	4.83	0.49	0.11	9.15E-02	0.15	0.24	1.35E-03	2.70E-02	1.11
ton/yr	21.12	2.13	0.48	0.40	0.66	1.07	5.99E-03	0.12	4.86

Appendix A: Emissions Calculations
Assembly Operations

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-33983-00683
Reviewer: Doug Logan
Date: 4/2/2014

Emission Unit EUL-7A

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Weight % 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 PMP10/PM2.5 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Lamination	HB Fuller	Swift lock 9053	Adhesive	Side Wall Lamination Adhesive	10.01	0.60%	0%	0.60%	0%	95.00%	1.1289	3.000	0.06	6.01E-02	2.03E-01	4.88E+00	8.91E-01	0	6.32E-02	100%	Plastic/Wood
Lamination	Benzoflex	352	Cleaner	Lamination Equipment Cleaning	11.23	0%	0%	0.00%	0%	100.00%	0.0002	3.000	0.00	0.00	0	0	0	0	0.00	100%	Plastic/Wood
Potential to Emit															0.20	4.88	0.89	0			

HAZARDOUS AIR POLLUTANTS

Process	Manufacturer	Product Number	Use	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MDI ¹	MDI Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Lamination	HB Fuller	Swift lock 9053	Adhesive	Side Wall Lamination Adhesive	10.01	1.13E+00	3.000	0.60%	0.89	0.89
Lamination	Benzoflex	352	Cleaner	Lamination Equipment Cleaning	11.23	2.49E-04	3.000	0%	0	0
Potential to Emit									0.89	0.89

Notes

1. Worst-case PTE for MDI is based on par. 1.1, App A to 40 CFR 63, Subpart PPPP, which estimates that at least 70% of the weight of reactive adhesives reacts. PTE represents 30% of the worst-case concentration of MDI reported on the MSDS.
2. Lamination is a flow coating process that does not generate particulate
3. Cleaner is a low melting point solid that contains no VOC or HAPs

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 (lbs/gal) * Weight % organics) / (Volume % solids)

Appendix A: Emissions Calculations
Paint Repair Operations

Company Name: K-Z, Inc.
Address City IN Zip: 0895 North 900 West, Shipshewana, IN 46565
Permit Number: 087-33983-00063
Reviewer: Doug Logan
Date: 4/2/2014

Plant 4 -Repairing Operation

Process	Manufacturer	Product Number	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 (lb/hr)	PTE VOC (lb/day)	PTE VOC (ton/yr)	PTE PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency (See Notes Below)	Substrate
Paint Repair	US Chemicals	58020	Resin hardener	9.59	35.00%	0.0%	35.0%	0.00%	54.40%	0.3750	0.018	3.36	3.36	8.00	0.54	0.10	0.05	6.17	75%	Metal
Paint Repair	SEM	39542	Carbo Fill	12.48	0.00%	0.0%	0.0%	0.00%	100.00%	0.2500	0.018	0.00	0.00	0.00	0.00	0.00	0.06	0.00	75%	Metal
Paint Repair	Evercoat	100636	Slick sand	10.86	19.34%	0.0%	19.3%	0.00%	71.46%	0.2500	0.018	2.10	2.10	0.01	0.23	0.04	0.04	2.94	75%	Metal
Paint Repair	SEM	39492	Panel Filler	13.86	0.00%	0.0%	0.0%	0.00%	100.00%	0.1252	0.018	0.00	0.00	0.00	0.00	0.00	0.03	0.00	75%	Metal
Paint Repair	BASF	D403ZZ	Basecoat	7.51	75.00%	0.0%	75.0%	0.00%	23.47%	0.2500	0.018	5.63	5.63	0.03	0.61	0.11	0.01	1.84	75%	Metal
Paint Repair	BASF	UR30	Reducer	6.93	100.00%	0.0%	100.0%	0.00%	5.84%	0.0250	0.018	6.93	6.93	0.00	0.07	0.01	0.00	1.23	75%	Metal
Paint Repair	BASF	DC5135	Clear	8.51	68.20%	0.0%	68.2%	0.00%	21.14%	0.1250	0.018	5.80	5.80	0.01	0.31	0.06	0.01	3.25	75%	Metal
Paint Repair	BASF	UBR200	Spot blender	7.59	99.00%	0.0%	99.0%	0.00%	-2.09%	0.1250	0.018	7.51	7.51	0.02	0.41	0.07	0.00	6.01	75%	Metal
Paint Repair	3M	6086	buffing compound	8.76	84.00%	0.0%	84.0%	8.00%	0.02%	0.1250	0.018	8.00	7.36	0.02	0.40	0.07	0.00	5.42	75%	Metal
Paint Repair	Danco	NA	De-Solv	6.29	100.00%	0.0%	100.0%	0.00%	14.54%	1.0000	0.018	6.29	6.29	0.11	2.72	0.50	0.00	3.84	75%	Metal
Potential to Emit														8.20	5.29	0.96	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 hrs/yr) * (1 ton/2000 lbs)
PTE PM/PM10 (tons/yr) = (units/hour) * (gal/unit) * (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	Description	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight %	Weight %	Weight %	Weight %	Weight %	Ethylbenzene Emissions (ton/yr)	Glycol Ether Emissions (ton/yr)	MIBK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Xylenes Emissions (ton/yr)	Total HAP Emissions (ton/yr)
							Ethyl Benzene	Glycol Ethers	MIBK	Toluene	Xylene						
Paint Repair	US Chemicals	58020	Resin hardener	9.59	0.375	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	SEM	39542	Carbo Fill	12.48	0.25	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	Evercoat	100636	Slick sand	10.86	0.25	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	SEM	39492	Panel Filler	13.86	0.1252	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	BASF	D403ZZ	Basecoat	7.51	0.25	0.018	0.00%	10.00%	0.00%	0.00%	15.00%	0.00	0.01	0.00	0.00	0.02	0.04
Paint Repair	BASF	UR30	Reducer	6.93	0.025	0.018	0.00%	0.00%	0.00%	15.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	BASF	DC5135	Clear	8.51	0.125	0.018	0.00%	0.00%	5.00%	0.00%	5.00%	0.00	0.00	4.19E-03	0.00	0.00	0.01
Paint Repair	BASF	UBR200	Spot blender	7.59	0.125	0.018	5.00%	0.00%	0.00%	0.00%	20.00%	3.74E-03	0.00	0.00	0.00	0.01	0.02
Paint Repair	3M	6086	buffing compound	8.76	0.125	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Paint Repair	Danco	NA	De-Solv	6.29	1	0.018	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
Potential to Emit												3.74E-03	1.48E-02	4.19E-03	2.05E-03	0.04	0.07

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)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Delbert Miller
K-Z, Inc.
0985 North 900 West
Shipshewana, IN 46565

DATE: April 17, 2014

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

SUBJECT: Final Decision
Minor Source Operating Permit (MSOP) Administrative Amendment
087-33983-00063

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Nate Black, D & B Environmental Services, Inc.
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 4/17/2014 K-Z, Inc. 087-33983-00063 FINAL		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Delbert Miller K-Z, Inc. 0985 N 900 W Shipshewana IN 46565 (Source CAATS)	CONFIRMED DELIVERY									
2		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 (Affected Party)										
3		LaGrange County Health Dept. 304 B Townline Road Lagrange IN 46761 (Health Department)										
4		LaGrange Town Council 1201 N Townline Road LaGrange IN 46761 (Local Official)										
5		LaGrange County Commissioners 114 W. Michigan St. LaGrange IN 46761 (Local Official)										
6		Nate Black D & B Environmental Services, Inc. 401 Lincoln Way West Osceola IN 46561 (Consultant)										
7												
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12												
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14												
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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