



# 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

TO: Interested Parties / Applicant  
DATE: January 2, 2014  
RE: Vahala Foam, Inc./039-33923-00574  
FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER-MOD.dot 6/13/2013



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Ms. Rebecca L. Stahly  
Vahala Foam, Inc.  
930 Herman Street  
P.O. Box 2602  
Elkhart, IN 46515

January 2, 2014

Re: 039-33923-00574  
First Minor Revision to  
M039-25349-00574

Dear Ms. Stahly:

Vahala Foam, Inc. was issued a Minor Source Operating Permit (MSOP) Renewal No. M039-25349-00574 on March 11, 2008 for a stationary foam part assembly source located at 930 Herman Street, Elkhart, Indiana. On November 25, 2013, the Office of Air Quality (OAQ) received an application from the source requesting to add a second production building located at 160 County Road 15, Elkhart, Indiana. Vahala Foam, Inc. has requested to construct and operate one (1) additional adhesive line and several natural gas-fired heaters at the new production building. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Minor Permit Revision (MPR) procedures of 326 IAC 2-6.1-6(h). Pursuant to the provisions of 326 IAC 2-6.1-6, a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

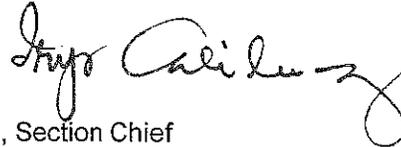


A State that Works

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

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 Brian Williams of my staff at 317-234-5375 or 1-800-451-6027, and ask for extension 4-5375.

Sincerely,



Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/BMW

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



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[www.idem.IN.gov](http://www.idem.IN.gov)

**Minor Source Operating Permit Renewal  
OFFICE OF AIR QUALITY**

**Vahala Foam, Inc.  
930 Herman Street and 160 County Road 15  
Elkhart, Indiana 46516**

(herein known as the Permittee) is hereby authorized to 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 2-6.1 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.: M039-25349-00574  |  |
| Issued by: <i>Original signed by:</i><br>Chrystal A. Wagner, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: March 11, 2008<br><br>Expiration Date: March 11, 2018 |

Significant Permit Revision No. M039-32605-00574, issued March 12, 2013

|  |   |
|--|---|
| Minor Permit Revision No.: 039-33923-00574   |   |
| Issued by:<br><br>Iryn Calilung, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: January 2, 2014<br><br>Expiration Date: March 11, 2018 |

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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 foam part assembly source.

|                              |   |
|------------------------------|---|
| Source Address:              | 930 Herman Street and 160 County Road 15, Elkhart, Indiana 46516  |
| General Source Phone Number: | (574) 293-1287  |
| SIC Code:                    | 3086 (Plastics Foam Products)   |
| County Location:             | Elkhart   |
| Source Location Status:      | Attainment for all criteria pollutants  |
| Source Status:               | Minor Source Operating Permit Program<br>Minor Source, under PSD and Emission Offset Rules<br>Minor Source, Section 112 of the Clean Air Act<br>Not 1 of 28 Source Categories |

### A.2 Source Definition

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This stationary foam part assembly source consists of two (2) plants:

- (a) Plant 1 is located at 930 Herman Street, Elkhart, Indiana 46516, Plant ID: 039-00574; and
- (b) Plant 2 is located at 160 County Road 15, Elkhart, Indiana 46516, Plant ID: 039-00574.

These plants are located on adjacent properties, have the same SIC Code of 3086, and are under common ownership and control; therefore they will be considered one (1) source, as defined by 326 IAC 1-2-73.

### A.2 Emission Units and Pollution Control Equipment Summary

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

#### Plant 1

- (a) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack L.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack M.
- (d) Twelve (12) natural gas-fired radiant tube heaters, identified as R1 through R12, each rated at 0.2 million British thermal units per hour, and constructed in 2002.
- (e) Paved roads and parking lots with public access.

## **Plant 2**

- (f) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (g) Four (4) natural gas-fired radiant tube heaters, identified as R13 through R16, approved for construction in 2013, each rated at 0.395 million British thermal units per hour, and exhausting to stacks HSV13 through HSV16.
- (h) One (1) natural gas-fired thermocycle heater, identified as R17, approved for construction in 2013, rated at 0.40 million British thermal units per hour, and exhausting to stack HSV17.
- (i) Paved roads and parking lots with public access.

## **SECTION B GENERAL CONDITIONS**

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

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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, M 039-25349-00574, 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]**

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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**

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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**

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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**

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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]**

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- (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]**

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- (a) All terms and conditions of permits established prior to M 039-25349-00574 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)]**

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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]**

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- (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]**

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- (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**

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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]**

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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]**

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- (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]**

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- (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]**

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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 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]**

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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]**

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- (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]**

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- (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  
MC 61-53 IGCN 1003  
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]**

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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]**

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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]**

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- (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**

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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**

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- (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) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack L.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack M.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (d) Twelve (12) natural gas-fired radiant tube heaters, identified as R1 through R12, each rated at 0.2 million British thermal units per hour, and constructed in 2002.

#### Plant 2

- (f) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (g) Four (4) natural gas-fired radiant tube heaters, identified as R13 through R16, approved for construction in 2013, each rated at 0.395 million British thermal units per hour, and exhausting to stacks HSV13 through HSV16.

- (h) One (1) natural gas-fired thermocycle heater, identified as R17, approved for construction in 2013, rated at 0.40 million British thermal units per hour, and exhausting to stack HSV17.

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

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The total amount of VOCs delivered to the applicators at the one (1) surface coating adhesive line, identified as EU-1, 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.

Compliance with this limit will render the requirements of 326 IAC 8-1-6 (New facilities; general reduction requirements) not applicable.

### **D.1.2 Particulate Matter [326 IAC 6-3-2(d)]**

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- (a) Particulate from the surface coating adhesive lines, identified as EU-1, EU-2, EU-3, and EU-4 shall be controlled by dry particulate filters, and the Permittee shall operate these control devices in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

### **D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]**

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A Preventive Maintenance Plan, is required for these facilities and their 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.1.4 Volatile Organic Compounds (VOCs)**

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Compliance with the VOC content limitation contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

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

### **D.1.5 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.1.1.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

- (2) The cleanup solvent usage for each month;
  - (3) The total VOC usage for each month; and
  - (4) The weight of VOCs emitted for each compliance period.
- (b) To document the compliance status with Condition D.1.2, if overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition, of this permit.

#### D.1.6 Reporting Requirements

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A quarterly summary of the information necessary to document the compliance status with Condition D.1.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, 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.

## SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

#### Plant 1

- (a) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack L.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack M.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

#### Plant 2

- (f) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

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

### National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements

#### E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.11174, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR Part 63, Subpart OOOOOO.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.1.2 National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam  
Production and Fabrication Area Sources [40 CFR Part 63, Subpart OOOOOO]

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The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart OOOOOO  
(included as Attachment A) for the flexible polyurethane foam fabrication facility:

- (a) 40 CFR Part 63.11414(a)(2), (b)(4), and (c)
- (b) 40 CFR Part 63.11415(b)
- (c) 40 CFR Part 63.11416(a), (e), and (f)
- (d) 40 CFR Part 63.11418
- (e) 40 CFR Part 63.11419
- (f) 40 CFR Part 63.11420
- (g) Table 1

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

## MSOP Quarterly Report

Source Name: Vahala Foam, Inc.  
Source Address: 930 Herman Street and 160 County Road 15, Elkhart, Indiana 46516  
MSOP Permit No.: M 039-25349-00574  
Facility: one (1) surface coating line, identified as EU-1  
Pollutant: total amount of VOCs delivered to the applicators  
Limit: less than twenty-five (25) tons per twelve (12) consecutive month period

Year: \_\_\_\_\_

| Month   | Column 1   | Column 2   | Column 1 + Column 2                                    |
|---------|--|--|--|
|         | Amount of VOCs Delivered to Applicators This Month | Amount of VOCs Delivered to Applicators Previous 11 Months | Amount of VOCs Delivered to Applicators 12 Month Total |
| Month 1 |  |  |  |
| Month 2 |  |  |  |
| Month 3 |  |  |  |

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

**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).

|                      |  |
|----------------------|--|
| <b>Company Name:</b> | Vahala Foam, Inc.                        |
| <b>Address:</b>      | 930 Herman Street and 160 County Road 15 |
| <b>City:</b>         | Elkhart, Indiana 46516                   |
| <b>Phone #:</b>      | (574) 293-1287                           |
| <b>MSOP #:</b>       | M 039-25349-00574                        |

I hereby certify that Vahala Foam, Inc. is:

still in operation.

no longer in operation.

I hereby certify that Vahala Foam, Inc. is:

in compliance with the requirements of MSOP M 039-25349-00574.

not in compliance with the requirements of MSOP M 039-25349-00574.

|                                       |
|---------------------------------------|
| <b>Authorized Individual (typed):</b> |
| <b>Title:</b>                         |
| <b>Signature:</b>                     |
| <b>Date:</b>                          |

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.

|                       |
|-----------------------|
| <b>Noncompliance:</b> |
|                       |
|                       |
|                       |
|                       |

**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:

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

**Attachment A**

**Title 40: Protection of Environment**

**Subpart OOOOOO—National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources**

Source: 72 FR 38910, July 16, 2007, unless otherwise noted.

**Applicability and Compliance Dates**

**§ 63.11414 Am I subject to this subpart?**

(a) You are subject to this subpart if you own or operate an area source of hazardous air pollutant (HAP) emissions that meets the criteria in paragraph (a)(1) or (2) of this section.

(1) You own or operate a plant that produces flexible polyurethane foam or rebond foam as defined in § 63.1292 of subpart III.

(2) You own or operate a flexible polyurethane foam fabrication facility, as defined in § 63.11419.

(b) The provisions of this subpart apply to each new and existing affected source that meets the criteria listed in paragraphs (b)(1) through (4) of this section.

(1) A slabstock flexible polyurethane foam production affected source is the collection of all equipment and activities necessary to produce slabstock flexible polyurethane foam.

(2) A molded flexible polyurethane foam production affected source is the collection of all equipment and activities necessary to produce molded foam.

(3) A rebond foam production affected source is the collection of all equipment and activities necessary to produce rebond foam.

(4) A flexible polyurethane foam fabrication affected source is the collection of all equipment and activities at a flexible polyurethane foam fabrication facility where adhesives are used to bond foam to foam or other substrates. Equipment and activities at flexible polyurethane foam fabrication facilities which do not use adhesives to bond foam to foam or other substrates are not flexible polyurethane foam fabrication affected sources.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source on or before April 4, 2007.

(d) An affected source is new if you commenced construction or reconstruction of the affected source after April 4, 2007.

(e) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(f) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR

71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

**§ 63.11415 What are my compliance dates?**

(a) If you own or operate an existing slabstock flexible polyurethane foam production affected source, you must achieve compliance with the applicable provisions in this subpart by July 16, 2008.

(b) If you own or operate an existing molded flexible polyurethane foam affected source, an existing rebond foam production affected sources, or an existing flexible polyurethane foam fabrication affected source, you must achieve compliance with the applicable provisions in this subpart by July 16, 2007.

(c) If you startup a new affected source on or before July 16, 2007, you must achieve compliance with the applicable provisions in this subpart not later than July 16, 2007.

(d) If you startup a new affected source after July 16, 2007, you must achieve compliance with the provisions in this subpart upon startup of your affected source.

**Standards and Compliance Requirements**

**§ 63.11416 What are the standards for new and existing sources?**

(a) If you own or operate a slabstock flexible polyurethane foam production affected source, you must meet the requirements in paragraph (b) of this section. If you own or operate a molded foam affected source, you must meet the requirements in paragraph (c) of this section. If you own or operate a rebond foam affected source, you must meet the requirements in paragraph (d) of this section. If you own or operate a flexible polyurethane foam fabrication affected source, you must meet the requirements in paragraph (e) of this section.

(b) If you own or operate a new or existing slabstock polyurethane foam production affected source, you must comply with the requirements in either paragraph (b)(1) or (2) of this section.

(1) Comply with § 63.1293(a) or (b) of subpart III, except that you must use Equation 1 of this section to determine the HAP auxiliary blowing agent (ABA) formulation limit for each foam grade instead of Equation 3 of § 63.1297 of subpart III. You must use zero as the formulation limitation for any grade of foam where the result of the formulation equation (using Equation 1 of this section) is negative (i.e., less than zero):

$$ABA_{\text{limit}} = -0.2 (\text{IFD}) - 19.1 \left( \frac{1}{\text{IFD}} \right) - 15.3 (\text{DEN}) - 6.8 \left( \frac{1}{\text{DEN}} \right) + 36.5 \quad (\text{Equation 1})$$

Where:

$ABA_{\text{limit}}$  = HAP ABA formulation limitation, parts methylene chloride ABA allowed per hundred parts polyol (pph).

IFD = Indentation force deflection, pounds.

DEN = Density, pounds per cubic foot.

(2) Use no material containing methylene chloride for any purpose in any slabstock flexible foam production process.

(c) If you own or operate a new or existing molded foam affected source, you must comply with the requirements in paragraphs (c)(1) and (2) of this section.

(1) You must not use a material containing methylene chloride as an equipment cleaner to flush the mixhead or use a material containing methylene chloride elsewhere as an equipment cleaner in a molded flexible polyurethane foam process.

(2) You must not use a mold release agent containing methylene chloride in a molded flexible polyurethane foam process.

(d) If you own or operate a new or existing rebond foam affected source, you must comply with the requirements in paragraphs (d)(1) and (2) of this section.

(1) You must not use a material containing methylene chloride as an equipment cleaner in a rebond foam process.

(2) You must not use a mold release agent containing methylene chloride in a rebond foam process.

(e) If you own or operate a new or existing flexible polyurethane foam fabrication affected source, you must not use any adhesive containing methylene chloride in a flexible polyurethane foam fabrication process.

(f) You may demonstrate compliance with the requirements in paragraphs (b)(2) and (c) through (e) of this section using adhesive usage records, Material Safety Data Sheets, and engineering calculations.

[72 FR 38910, July 16, 2007, as amended at 73 FR 15928, Mar. 23, 2008]

**§ 63.11417 What are the compliance requirements for new and existing sources?**

(a) If you own or operate a slabstock flexible polyurethane foam production affected source, you must comply with the requirements in paragraph (b) of this section. If you own or operate a molded foam affected source, rebond foam affected source, or a loop splitter at a flexible polyurethane foam fabrication affected source you must comply with the requirements in paragraphs (c) and (d) of this section.

(b) Each owner or operator of a new or existing slabstock flexible polyurethane foam production affected source who chooses to comply with § 63.11416(b)(1) must comply with paragraph (b)(1) of this section. Each owner or operator of a new or existing slabstock flexible polyurethane foam production affected source who chooses to comply with § 63.11416(b)(2) must comply with paragraphs (b)(2) and (3) of this section.

(1) You must comply with paragraphs (b)(1)(i) through (v) of this section.

(i) The monitoring requirements in § 63.1303 of subpart III.

(ii) The testing requirements in § 63.1304 or § 63.1305 of subpart III.

(iii) The reporting requirements in § 63.1306 of subpart III, with the exception of the reporting requirements in § 63.1306(d)(1), (2), (4), and (5) of subpart III.

(iv) The recordkeeping requirements in § 63.1307 of subpart III, with the exception of the recordkeeping requirements in § 63.1307(a)(1), (b)(1)(i), and (b)(2).

(v) The compliance demonstration requirements in § 63.1308(a), (c), and (d) of subpart III.

(2) You must submit a notification of compliance status report no later than 180 days after your compliance date. The report must contain this certification of compliance, signed by a responsible official, for the standards in § 63.11416(b)(2): "This facility uses no material containing methylene chloride for any purpose on any slabstock flexible foam process."

(3) You must maintain records of the information used to demonstrate compliance, as required in § 63.11416(f). You must maintain the records for 5 years, with the last 2 years of data retained on site. The remaining 3 years of data may be maintained off site.

(c) You must have a compliance certification on file by the compliance date. This certification must contain the statements in paragraph (c)(1), (2), or (3) of this section, as applicable, and must be signed by a responsible official.

(1) For a molded foam affected source:

(i) "This facility does not use any equipment cleaner to flush the mixhead which contains methylene chloride, or any other equipment cleaner containing methylene chloride in a molded flexible polyurethane foam process in accordance with § 63.11416(c)(1)."

(ii) "This facility does not use any mold release agent containing methylene chloride in a molded flexible polyurethane foam process in accordance with § 63.11416(c)(2)."

(2) For a rebond foam affected source:

(i) "This facility does not use any equipment cleaner which contains methylene chloride in a rebond flexible polyurethane foam process in accordance with § 63.11416(d)(1)."

(ii) "This facility does not use any mold release agent containing methylene chloride in a rebond flexible polyurethane foam process in accordance with § 63.11416(d)(2)."

(3) For a flexible polyurethane foam fabrication affected source containing a loop slitter: "This facility does not use any adhesive containing methylene chloride on a loop slitter process in accordance with § 63.11416(e)."

(d) For molded foam affected sources, rebond foam affected sources, and flexible polyurethane foam fabrication affected sources containing a loop slitter, you must maintain records of the information used to demonstrate compliance, as required in § 63.11416(f). You must maintain the records for 5 years, with the last 2 years of data retained on site. The remaining 3 years of data may be maintained off site.

[72 FR 38910, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

## **Other Requirements and Information**

### **§ 63.11418 What General Provisions apply to this subpart?**

The provisions in 40 CFR part 63, subpart A, applicable to sources subject to § 63.11416(b)(1) are specified in Table 1 of this subpart.

**§ 63.11419 What definitions apply to this subpart?**

The terms used in this subpart are defined in the CAA; § 63.1292 of subpart III; § 63.8830 of subpart MMMMM; § 63.2 of subpart A; and in this section as follows:

*Flexible polyurethane foam fabrication facility* means a facility where pieces of flexible polyurethane foam are cut, bonded, and/or laminated together or to other substrates.

**§ 63.11420 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as a State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency pursuant to 40 CFR part 63, subpart E, then that Agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency within your State.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the approval authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(1) Approval of an alternative non-opacity emissions standard under § 63.6(g).

(2) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f). A “major change to test method” is defined in § 63.90.

(3) Approval of a major change to monitoring under § 63.8(f). A “major change to monitoring” is defined in § 63.90.

(4) Approval of a major change to recordkeeping/reporting under § 63.10(f). A “major change to recordkeeping/reporting” is defined in § 63.90.

[72 FR 38910, July 16, 2007, as amended at 73 FR 15929, Mar. 26, 2008]

**Table 1 to Subpart OOOOOO of Part 63—Applicability of General Provisions to Subpart OOOOOO**

As required in § 63.11418, sources subject to § 63.11416(b)(1) must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.

| Subpart A reference | Applies to Subpart OOOOOO? | Comment  |
|---------------------|----------------------------|--|
| § 63.1              | Yes                        |  |
| § 63.2              | Yes                        | Definitions are modified and supplemented by § 63.11419. |
| § 63.3              | Yes                        |  |
| § 63.4              | Yes                        |  |
| § 63.5              | Yes                        |  |
| § 63.6(a)-(d)       | Yes                        |  |
| § 63.6(e)(1)-(2)    | Yes                        |  |

| Subpart A reference | Applies to Subpart OOOOOO? | Comment  |
|---------------------|----------------------------|--|
| § 63.6(e)(3)        | No                         | Owners and operators of subpart OOOOOO affected sources are not required to develop and implement a startup, shutdown, and malfunction plan. |
| § 63.6 (f)-(g)      | Yes                        |  |
| § 63.6(h)           | No                         | Subpart OOOOOO does not require opacity and visible emissions standards.   |
| § 63.6 (i)-(j)      | Yes                        |  |
| § 63.7              | No                         | Performance tests not required by subpart OOOOOO.  |
| § 63.8              | No                         | Continuous monitoring, as defined in subpart A, is not required by subpart OOOOOO.   |
| § 63.9(a)-(d)       | Yes                        |  |
| § 63.9(e)-(g)       | No                         |  |
| § 63.9(h)           | No                         | Subpart OOOOOO specifies Notification of Compliance Status requirements.   |
| § 63.9 (i)-(j)      | Yes                        |  |
| § 63.10(a)-(b)      | Yes                        | Except that the records specified in § 63.10(b)(2) are not required.   |
| § 63.10(c)          | No                         |  |
| § 63.10(d)(1)       | Yes                        |  |
| § 63.10(d)(2)-(3)   | No                         |  |
| § 63.10(d)(4)       | Yes                        |  |
| § 63.10(d)(5)       | No                         |  |
| § 63.10(e)          | No                         |  |
| § 63.10(f)          | Yes                        |  |
| § 63.11             | No                         |  |
| § 63.12             | Yes                        |  |
| § 63.13             | Yes                        |  |
| § 63.14             | Yes                        |  |
| § 63.15             | Yes                        |  |
| § 63.16             | Yes                        |  |

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

Technical Support Document (TSD) for a Minor Permit Revision to a Minor  
Source Operating Permit (MSOP)

|  |
|--|
| <b>Source Description and Location</b> |
|--|

|  |  |
|--|--|
| <b>Source Name:</b>                    | <b>Vahala Foam, Inc.</b>                         |
| <b>Source Location:</b>                | <b>930 Herman Street, Elkhart, Indiana 46516</b> |
| <b>County:</b>                         | <b>Elkhart</b>                                   |
| <b>SIC Code:</b>                       | <b>3086 (Plastic Foam Products)</b>              |
| <b>Operation Permit No.:</b>           | <b>039-25349-00574</b>                           |
| <b>Operation Permit Issuance Date:</b> | <b>March 11, 2008</b>                            |
| <b>Minor Permit Revision No.:</b>      | <b>039-33923-00574</b>                           |
| <b>Permit Reviewer:</b>                | <b>Brian Williams</b>                            |

On November 25, 2013, the Office of Air Quality (OAQ) received an application from Vahala Foam, Inc. related to a modification to an existing stationary foam part assembly source.

|                          |
|--------------------------|
| <b>Source Definition</b> |
|--------------------------|

Vahala Foam, Inc. currently has one foam part assembly production building located at 930 Herman Street, Elkhart, Indiana (Plant 1). Vahala Foam, Inc. has requested to add a second production building, which will be located at 160 County Road 15, Elkhart, Indiana (Plant 2).

This source consists of the following plants:

- (a) Plant 1 is located at 930 Herman Street, Elkhart, Indiana 46516, Plant ID: 039-00574; and
- (b) Plant 2 is located at 160 County Road 15, Elkhart, Indiana 46516, Plant ID: 039-00574.

IDEM, OAQ has examined whether these two plants are part of the same source. The term "source" is defined at 326 IAC 1-2-73. In order for these plants to be considered one source, they must meet all three of the following criteria:

- (1) the plants must be under common ownership or common control;
- (2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,
- (3) the plants must be located on the same, contiguous or adjacent properties.

The existing plant (Plant 1) and the proposed plant (Plant 2) are owned and operated directly by Vahala Foam, Inc., so common ownership and common control exists. Therefore, the first part of the source definition is met for both plants.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at [http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html) on the Internet. The SIC Code is determined by looking at the principal product or activity of each plant. Each plant will assemble foam parts and has the two-digit SIC Code 30 for the Major Group Rubber and Miscellaneous Plastics Products. This group includes the four-digit SIC Code 3086, which includes plastics foam products.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. Neither plant will send any production output to the other plant. It is possible that Plant 2 may serve as a warehouse for raw material for Plant 1. If that occurs Plant 2's output to Plant 1 may be less than 50% of its total output. Therefore, the plants do not have a support relationship. However, since both plants have the same two-digit SIC Code they meet the second part of the source definition.

The last part of the definition is whether the plants are on the same, contiguous or adjacent properties. The plants are located on separate properties that do not share a common boundary. Since the two plants are not on contiguous properties, IDEM, OAQ has examined whether the two plants are on adjacent properties.

The term "adjacent" is not defined in Indiana's air permitting rules. IDEM, OAQ has located a May 21, 1988 letter from U.S. EPA Region VIII to the Utah Division of Air Quality regarding the term "adjacent". This letter is in no way binding on IDEM, OAQ, but it is persuasive. Region VIII stated that any evaluation of what is "adjacent" must relate to the guiding principal of a common sense notion of "source". The evaluation should look at whether the distance between the plants is sufficiently small that it enables them to operate as a single source. Some sample questions are:

- (1) Are materials routinely transferred between the plants?
- (2) Do managers or other workers frequently shuttle back and forth to be involved actively in the plants?
- (3) Is the production process itself split in any way between the plants?

The existing plant (Plant 1) is approximately 1.0 mile from the new plant (Plant 2). Supervisors and managers from the existing plant will travel daily between the two plants. The human resources, billing, and other office functions for the new plant will be handled by staff at the existing plant. In addition, the new plant is being added because the existing plant is out of room for additional equipment and workers. Each plant will assemble different foam parts, so there will be no split in the production process between the two plants. There are currently no planned shipments of raw materials between the two plants. However, the new plant has a great deal of space and may end up provide warehousing of raw material (uncut foam), which will be sent to the existing plant to be cut and glued. Considering all of these factors, IDEM, OAQ finds that the plants are located on adjacent properties, so the third part of the source definition is met.

These plants are located on adjacent properties, have the same SIC Code of 3086, and are under common ownership and control; therefore they will be considered one (1) source, as defined by 326 IAC 1-2-73.

|                           |
|---------------------------|
| <b>Existing Approvals</b> |
|---------------------------|

The source was issued MSOP Renewal No. 039-25349-00574 on March 11, 2008. The source has since received Significant Permit Revision No. 039-32605-00574, issued on March 12, 2013.

**County Attainment Status**

The source is located in Elkhart County.

| Pollutant   | Designation   |
|---|---|
| SO <sub>2</sub>   | Better than national standards.   |
| CO  | Unclassifiable or attainment effective November 15, 1990.                       |
| O <sub>3</sub>  | Attainment effective July 19, 2007, for the 8-hour ozone standard. <sup>1</sup> |
| PM <sub>10</sub>  | Unclassifiable effective November 15, 1990.                                     |
| NO <sub>2</sub>   | Cannot be classified or better than national standards.                         |
| Pb  | Not designated.   |
| <sup>1</sup> Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.<br>Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> . |   |

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
  
- (b) **PM<sub>2.5</sub>**  
 Elkhart County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> 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<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
  
- (c) **Other Criteria Pollutants**  
 Elkhart 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 of Significant Permit Revision No. 039-32605-00574, issued on March 12, 2013.

| Process/<br>Emission Unit  | Potential To Emit of the Entire Source Prior to Revision (tons/year) <sup>(1)</sup> |              |              |                 |                 |              |             |  |             |                      |
|--|---|--------------|--------------|-----------------|-----------------|--------------|-------------|--|-------------|----------------------|
|  | PM  | PM10         | PM2.5        | SO <sub>2</sub> | NO <sub>x</sub> | VOC          | CO          | GHGs as CO <sub>2</sub> e <sup>(2)</sup> | Total HAPs  | Worst Single HAP     |
| Surface coating adhesive line (EU-1) <sup>(3)(4)</sup>   | 7.95  | 7.95         | 7.95         | 0.00            | 0.00            | 24.0         | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| Surface coating adhesive line (EU-2)   | 5.51  | 5.51         | 5.51         | 0.00            | 0.00            | 24.53        | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| Surface coating adhesive line (EU-3)   | 5.11  | 5.11         | 5.11         | 0.00            | 0.00            | 23.75        | 0.00        | 0.00                                     | 5.64        | 4.23 (Hexane)        |
| Tube Heaters (R1 through R12)  | 0.02  | 0.08         | 0.08         | negl.           | 1.05            | negl.        | 0.88        | 1,269.12                                 | negl.       | negl.                |
| Vehicle Traffic  | 0.11  | 0.02         | 0.02         | 0.00            | 0.00            | 0.00         | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| <b>Total PTE of Entire Source</b>  | <b>18.70</b>  | <b>18.67</b> | <b>18.67</b> | <b>0.01</b>     | <b>1.05</b>     | <b>72.34</b> | <b>0.88</b> | <b>1,269.12</b>                          | <b>5.66</b> | <b>4.25 (Hexane)</b> |
| 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<br><sup>(1)</sup> These emissions are based upon TSD of Significant Permit Revision No. 039-32605-00574, issued on March 12, 2013.<br><sup>(2)</sup> The 100,000 CO <sub>2</sub> 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.<br><sup>(3)</sup> PM, PM10 and PM2.5 limits are not required for this unit.<br><sup>(4)</sup> Limited to less than 25 tons per twelve (12) consecutive month period so that the requirements of 326 IAC 8-1-6 do not apply. |   |              |              |                 |                 |              |             |  |             |                      |

**Description of Proposed Revision**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Vahala Foam, Inc. on November 25, 2013, relating to the addition of a second production building located at 160 County Road 15, Elkhart, Indiana. Vahala Foam, Inc. has requested to construct and operate one (1) additional adhesive line and several natural gas-fired heaters at the new production building.

The following is a list of the new emission units and pollution control devices:

**Plant 2**

- (a) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.
- (b) Four (4) natural gas-fired radiant tube heaters, identified as R13 through R16, approved for construction in 2013, each rated at 0.395 million British thermal units per hour, and exhausting to stacks HSV13 through HSV16.
- (c) One (1) natural gas-fired thermocycle heater, identified as R17, approved for construction in 2013, rated at 0.40 million British thermal units per hour, and exhausting to stack HSV17.
- (d) Paved roads and parking lots with public access.

**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 – MSOP Revision**

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/<br>Emission Unit                      | PTE of Proposed Revision (tons/year) |             |             |                 |                 |              |             |                           |             |                    |
|--|--------------------------------------|-------------|-------------|-----------------|-----------------|--------------|-------------|---------------------------|-------------|--------------------|
|  | PM                                   | PM10        | PM2.5       | SO <sub>2</sub> | NO <sub>x</sub> | VOC          | CO          | GHGs as CO <sub>2</sub> e | Total HAPs  | Worst Single HAP   |
| Surface coating adhesive line (EU-4) - Plant 2 | 3.08                                 | 3.08        | 3.08        | 0               | 0               | 14.16        | 0           | 0                         | 0           | 0                  |
| Natural Gas - Plant 2                          | 0.02                                 | 0.06        | 0.06        | 0.01            | 0.85            | 0.05         | 0.71        | 1,026                     | 0.02        | 0.02 Hexane        |
| Vehicular Traffic - Plant 2                    | 0.10                                 | 0.02        | 0.01        | 0               | 0               | 0            | 0           | 0                         | 0           | 0                  |
| <b>Total PTE of Proposed Revision</b>          | <b>3.20</b>                          | <b>3.17</b> | <b>3.15</b> | <b>0.01</b>     | <b>0.85</b>     | <b>14.20</b> | <b>0.71</b> | <b>1,026</b>              | <b>0.02</b> | <b>0.02 Hexane</b> |

Pursuant to 326 IAC 2-6.1-6(g)(3), this MSOP is revised through Minor Permit Revision because the proposed revision involves the construction of new emission units with the potential to emit of less than twenty-five (25) tons per year and equal to or greater than ten (10) tons per year of VOC.

Pursuant to 326 IAC 2-6.1-6(g)(5), this MSOP is also revised through Minor Permit Revision because the proposed revision:

- (a) is not described under 326 IAC 2-6.1-6(g)(d)(12) or 2-6.1-6(g)(d)(13) and
- (b) is subject to a RACT, a NSPS, or a NESHAP, and the RACT, NSPS, or NESHAP is the most stringent applicable requirement, except for those modifications that would be subject to the provisions of 40 CFR 63, Subpart B Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources

|   |
|---|
| <b>PTE of the Entire Source After Issuance of the MSOP Revision</b> |
|---|

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

| Process/<br>Emission Unit   | Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year) |                                  |                                  |                       |                     |                                  |                     |  |                      |                                 |
|---|---|----------------------------------|----------------------------------|-----------------------|---------------------|----------------------------------|---------------------|--|----------------------|---------------------------------|
|   | PM  | PM10 <sup>(1)</sup>              | PM2.5 <sup>(1)</sup>             | SO <sub>2</sub>       | NO <sub>x</sub>     | VOC                              | CO                  | GHGs as CO <sub>2</sub> e <sup>(2)</sup> | Total HAPs           | Worst Single HAP                |
| Surface coating adhesive line (EU-1) - <b>Plant 1</b> <sup>(3)(4)</sup> | 7.95  | 7.95                             | 7.95                             | 0.00                  | 0.00                | <del>24.0</del><br><b>24.99</b>  | 0.00                | 0.00                                     | 0.00                 | 0.00                            |
| Surface coating adhesive line (EU-2) - <b>Plant 1</b>                   | 5.51  | 5.51                             | 5.51                             | 0.00                  | 0.00                | 24.53                            | 0.00                | 0.00                                     | 0.00                 | 0.00                            |
| Surface coating adhesive line (EU-3) - <b>Plant 1</b>                   | 5.11  | 5.11                             | 5.11                             | 0.00                  | 0.00                | 23.75                            | 0.00                | 0.00                                     | 5.64                 | 4.23 (Hexane)                   |
| <b>Surface coating adhesive line (EU-4) - Plant 2</b>                   | <b>3.08</b>   | <b>3.08</b>                      | <b>3.08</b>                      | <b>0</b>              | <b>0</b>            | <b>14.16</b>                     | <b>0</b>            | <b>0</b>                                 | <b>0</b>             | <b>0</b>                        |
| Tube Heaters (R1 through R12) - <b>Plant 1</b>                          | 0.02  | 0.08                             | 0.08                             | negl.<br><b>0.006</b> | 1.05<br><b>1.03</b> | negl.<br><b>0.06</b>             | 0.88<br><b>0.87</b> | 1,269.12<br><b>1,244</b>                 | negl.<br><b>0.02</b> | negl.<br><b>0.02 Hexane</b>     |
| <b>Natural Gas - Plant 2</b>  | <b>0.02</b>   | <b>0.06</b>                      | <b>0.06</b>                      | <b>0.01</b>           | <b>0.85</b>         | <b>0.05</b>                      | <b>0.71</b>         | <b>1,026</b>                             | <b>0.02</b>          | <b>0.02 Hexane</b>              |
| Vehicle Traffic - <b>Plant 1</b>  | <del>0.11</del><br><b>0.10</b>  | 0.02                             | <del>0.02</del><br><b>0.01</b>   | 0.00                  | 0.00                | 0.00                             | 0.00                | 0.00                                     | 0.00                 | 0.00                            |
| <b>Vehicle Traffic - Plant 2</b>  | <b>0.10</b>   | <b>0.02</b>                      | <b>0.01</b>                      | <b>0</b>              | <b>0</b>            | <b>0</b>                         | <b>0</b>            | <b>0</b>                                 | <b>0</b>             | <b>0</b>                        |
| Total PTE of Entire Source  | <del>18.70</del><br><b>21.89</b>  | <del>18.67</del><br><b>21.83</b> | <del>18.67</del><br><b>21.80</b> | 0.01                  | 1.05<br><b>1.08</b> | <del>72.34</del><br><b>87.54</b> | 0.88<br><b>1.58</b> | 1,269.12<br><b>2,271</b>                 | 5.66<br><b>5.68</b>  | 4.25<br><b>4.27</b><br>(Hexane) |
| 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

<sup>(1)</sup>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".

<sup>(2)</sup>The 100,000 CO<sub>2</sub>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.

<sup>(3)</sup>PM, PM10 and PM2.5 limits are not required for this unit.

<sup>(4)</sup>Limited to less than 25 tons per twelve (12) consecutive month period so that the requirements of 326 IAC 8-1-6 do not apply. **The source-wide unlimited potential to emit VOC is 99.07 tons per year and is the value used for permit level determination.**

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/<br>Emission Unit  | Potential To Emit of the Entire Source After Issuance of Revision (tons/year) |                     |                      |                 |                 |              |             |  |             |                      |
|--|---|---------------------|----------------------|-----------------|-----------------|--------------|-------------|--|-------------|----------------------|
|  | PM  | PM10 <sup>(1)</sup> | PM2.5 <sup>(1)</sup> | SO <sub>2</sub> | NO <sub>x</sub> | VOC          | CO          | GHGs as CO <sub>2</sub> e <sup>(2)</sup> | Total HAPs  | Worst Single HAP     |
| Surface coating adhesive line (EU-1) - Plant 1 <sup>(3)(4)</sup>   | 7.95  | 7.95                | 7.95                 | 0.00            | 0.00            | 24.99        | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| Surface coating adhesive line (EU-2) - Plant 1   | 5.51  | 5.51                | 5.51                 | 0.00            | 0.00            | 24.53        | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| Surface coating adhesive line (EU-3) - Plant 1   | 5.11  | 5.11                | 5.11                 | 0.00            | 0.00            | 23.75        | 0.00        | 0.00                                     | 5.64        | 4.23 (Hexane)        |
| Surface coating adhesive line (EU-4) - Plant 2   | 3.08  | 3.08                | 3.08                 | 0               | 0               | 14.16        | 0           | 0  | 0           | 0                    |
| Tube Heaters (R1 through R12) - Plant 1  | 0.02  | 0.08                | 0.08                 | 0.006           | 1.03            | 0.06         | 0.87        | 1,244                                    | 0.02        | 0.02 Hexane          |
| Natural Gas - Plant 2  | 0.02  | 0.06                | 0.06                 | 0.01            | 0.85            | 0.05         | 0.71        | 1,026                                    | 0.02        | 0.02 Hexane          |
| Vehicle Traffic - Plant 1  | 0.10  | 0.02                | 0.01                 | 0.00            | 0.00            | 0.00         | 0.00        | 0.00                                     | 0.00        | 0.00                 |
| Vehicle Traffic - Plant 2  | 0.10  | 0.02                | 0.01                 | 0               | 0               | 0            | 0           | 0  | 0           | 0                    |
| <b>Total PTE of Entire Source</b>  | <b>21.89</b>  | <b>21.83</b>        | <b>21.80</b>         | <b>0.01</b>     | <b>1.08</b>     | <b>87.54</b> | <b>1.58</b> | <b>2,271</b>                             | <b>5.68</b> | <b>4.27 (Hexane)</b> |
| 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                   |
| <p><sup>(1)</sup>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".</p> <p><sup>(2)</sup>The 100,000 CO<sub>2</sub>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.</p> <p><sup>(3)</sup>PM, PM10 and PM2.5 limits are not required for this unit.</p> <p><sup>(4)</sup>Limited to less than 25 tons per twelve (12) consecutive month period so that the requirements of 326 IAC 8-1-6 do not apply. The source-wide unlimited potential to emit VOC is 99.07 tons per year and is the value used for permit level determination.</p> |   |                     |                      |                 |                 |              |             |  |             |                      |

MSOP Status

- (a) This revision 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 revision 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 revision 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 CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

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| <b>Federal Rule Applicability Determination</b> |
|---|

New Source Performance Standards (NSPS)

- (a) There are no 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)

- (b) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources (40 CFR 63, Subpart OOOOOO) (326 IAC 20), because this source is a flexible polyurethane foam fabrication facility as defined in 40 CFR 63.11419 and uses adhesives to bond foam to foam and other substrates.

The units subject to this rule include the following:

- (1) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.
- (2) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack L.
- (3) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack M.
- (4) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR Part 63.11414(a)(2), (b)(4), and (c)
- (2) 40 CFR Part 63.11415(b)
- (3) 40 CFR Part 63.11416(a), (e), and (f)
- (4) 40 CFR Part 63.11418
- (5) 40 CFR Part 63.11419
- (6) 40 CFR Part 63.11420

(7) Table 1

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart OOOOOO.

This is a new applicable requirement to the source.

- (c) 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)

- (d) 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.

|   |
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| <b>State Rule Applicability Determination</b> |
|---|

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))  
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 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 MSOP Revision 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 6-4 (Fugitive Dust Emissions Limitations)  
Due to this revision, the source is subject to the requirements of 326 IAC 6-4, because the paved roads have the potential to emit fugitive particulate emissions. 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.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
Due to this revision, the source is not subject to the requirements of 326 IAC 6-5, because the paved roads do not have potential fugitive particulate emissions greater than 25 tons per year.
- (h) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (i) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

#### Surface Coating Adhesive Line (EU4) - Plant 2

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Particulate from the surface coating adhesive line (EU4) shall be controlled by particulate filters, waterwash, or an equivalent control device, and the source shall operate each control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after such observation:

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

If overspray is visibly detected, the source shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (b) The proposed revision is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from the new adhesive line is less than twenty-five (25) tons per year.
- (c) There are no other 326 IAC 8 Rules that are applicable to the new adhesive line.
- (d) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

#### Natural Gas Combustion Units

- (a) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)  
The natural gas-fired heaters are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.
- (b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
The natural gas-fired combustion units are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not

considered as part of the process weight.

- (c) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)  
This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from each natural gas-fired combustion unit is less than twenty-five (25) tons per year and ten (10) pounds per hour.
- (d) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)  
The natural gas-fired combustion units are not subject to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), because they each have the potential to emit VOC of less than twenty-five (25) tons per year.
- (e) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)  
The natural gas-fired combustion units are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there is no applicable emission limits for the source under 326 IAC 9-1-2.
- (f) 326 IAC 10-1-1 (Nitrogen Oxides Control)  
The natural gas-fired combustion units are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd counties.

#### 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 Renewal No. 039-25349-00574, issued on March 11, 2008.

#### Proposed Changes

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

1. IDEM has updated the source address throughout the permit to reflect the addition of the second facility. In addition, IDEM has updated the zip code to match the physical locations of the plants.
2. Section A has been revised to include Section A.2 - Source Definition.
3. The emission unit descriptions in Sections A and D have been revised to reflect the addition of the new plant and emission units. The descriptions have also been revised to identify the affected facilities under 40 CFR 63, Subpart OOOOOO.
4. Condition D.1.2 has been revised to include the new surface coating adhesive line.
5. The existing and new surface coating adhesive lines are subject to the requirements of 40 CFR 63, Subpart OOOOOO. Therefore, the requirements of the subpart have been included in a new Section E.

...

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 foam part assembly source.

Source Address: 930 Herman Street **and 160 County Road 15**, Elkhart,  
Indiana 4651**56**

...

## A.2 Source Definition

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This stationary foam part assembly source consists of two (2) plants:

- (a) Plant 1 is located at 930 Herman Street, Elkhart, Indiana 46516, Plant ID: 039-00574; and
- (b) Plant 2 is located at 160 County Road 15, Elkhart, Indiana 46516, Plant ID: 039-00574.

**These plants are located on adjacent properties, have the same SIC Code of 3086, and are under common ownership and control; therefore they will be considered one (1) source, as defined by 326 IAC 1-2-73.**

## A.23 Emission Units and Pollution Control Equipment Summary

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

### Plant 1

- (a) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters for overspray control, ~~approved for construction~~ **constructed** in 2013, and exhausting to Stack L.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters for overspray control, ~~approved for construction~~ **constructed** in 2013, and exhausting to Stack M.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

...

- (e) **Paved roads and parking lots with public access.**

### Plant 2

- (f) **One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.**

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (g) **Four (4) natural gas-fired radiant tube heaters, identified as R13 through R16, approved for construction in 2013, each rated at 0.395 million British thermal units per hour, and exhausting to stacks HSV13 through HSV16.**
- (h) **One (1) natural gas-fired thermocycle heater, identified as R17, approved for construction in 2013, rated at 0.40 million British thermal units per hour, and exhausting to stack HSV17.**
- (i) **Paved roads and parking lots with public access.**

...  
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

**Plant 1**

- (a) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters for overspray control, ~~approved for construction~~ **constructed** in 2013, and exhausting to Stack L.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, **using adhesives to bond foam to foam and other substrates**, using dry filters for overspray control, ~~approved for construction~~ **constructed** in 2013, and exhausting to Stack M.

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

...  
**Plant 2**

- (f) **One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.**

**This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.**

- (g) **Four (4) natural gas-fired radiant tube heaters, identified as R13 through R16, approved for construction in 2013, each rated at 0.395 million British thermal units per hour, and exhausting to stacks HSV13 through HSV16.**
  - (h) **One (1) natural gas-fired thermocycle heater, identified as R17, approved for construction in 2013, rated at 0.40 million British thermal units per hour, and exhausting to stack HSV17.**
- ...

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

...

D.1.2 Particulate Matter [326 IAC 6-3-2(d)]

- (a) Particulate from the surface coating adhesive lines, identified as EU-1, EU-2, and EU-3, and EU-4 shall be controlled by dry particulate filters, and the Permittee shall operate these control devices in accordance with manufacturer's specifications.

...

## SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

#### Plant 1

- (a) One (1) surface coating adhesive line, consisting of twenty-four (24) glue stations (twelve (12) booths) and twenty-four (24) spray guns, identified as EU-1, with a maximum capacity of 77.4 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters as control, constructed in 2002, and exhausting to Stack 1 A-K.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (b) One (1) surface coating adhesive line, identified as EU-2, consisting of three (3) glue stations and six (6) spray guns, with a maximum capacity of 30 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack L.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

- (c) One (1) surface coating adhesive line, identified as EU-3, consisting of four (4) glue stations and eight (8) spray guns, with a maximum capacity of 50 fabricated foam parts per hour, using adhesives to bond foam to foam and other substrates, using dry filters for overspray control, constructed in 2013, and exhausting to Stack M.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

#### Plant 2

- (f) One (1) surface coating adhesive line, identified as EU-4, approved for construction in 2013, consisting of eight (8) glue stations containing two (2) spray guns per station, with a maximum capacity of 5.42 pounds of adhesive per hour to bond foam to foam and other substrates, using dry filters for overspray control, and exhausting to stacks N through U.

This unit is an affected unit under 40 CFR Part 63, Subpart OOOOOO.

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements**

**E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]**

(a) Pursuant to 40 CFR 63.11174, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR Part 63, Subpart OOOOOO.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

**E.1.2 National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Production and Fabrication Area Sources [40 CFR Part 63, Subpart OOOOOO]**

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart OOOOOO (included as Attachment A) for the flexible polyurethane foam fabrication facility:

- (a) 40 CFR Part 63.11414(a)(2), (b)(4), and (c)
- (b) 40 CFR Part 63.11415(b)
- (c) 40 CFR Part 63.11416(a), (e), and (f)
- (d) 40 CFR Part 63.11418
- (e) 40 CFR Part 63.11419
- (f) 40 CFR Part 63.11420
- (g) Table 1

...

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

MSOP Quarterly Report

Source Name: Vahala Foam, Inc.  
Source Address: 930 Herman Street and 160 County Road 15, Elkhart, Indiana 465156

...

MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION

|               |  |
|---------------|--|
| Company Name: | Vahala Foam, Inc.                        |
| Address:      | 930 Herman Street and 160 County Road 15 |
| City:         | Elkhart, Indiana 465156                  |
| Phone #:      | (574) 293-1287                           |
| MSOP #:       | M 039-25349-00574                        |

...

Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

1. IDEM clarified the following condition to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.
2. Significant Permit Revision No. 039-32605-00574, issued on March 12, 2013 contained numerous updates to the permit language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions. However, the MSOP Certification Form was inadvertently left in the permit. Therefore, IDEM has removed the form from the permit since IDEM has determined that rather than having a certification condition and various references throughout the permit as to whether a particular report, notice, or correspondence needs to include a certification, the specific conditions that require an affirmation of truth and completeness shall state so. The certification condition has been removed. All statements to whether a certification, pursuant to the former Section B - Certification, is needed or not have been removed. Section B - Credible Evidence and Section C - Asbestos Abatement Projects still require certification as the underlying rules also require certifications.

...  
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.**

...  
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY

MINOR SOURCE OPERATING PERMIT (MSOP)  
CERTIFICATION

Source Name: ~~\_\_\_\_\_ Vahala Foam, Inc. \_\_\_\_\_~~  
Source Address: ~~\_\_\_\_\_ 930 Herman Street, Elkhart, Indiana 46515 \_\_\_\_\_~~  
MSOP No.: ~~\_\_\_\_\_ M039-25349-00574 \_\_\_\_\_~~

~~This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.~~

~~\_\_\_\_\_ Please check what document is being certified:~~

~~Annual Compliance Notification~~

~~Test Result (specify) \_\_\_\_\_~~

~~Report (specify) \_\_\_\_\_~~

~~Notification (specify) \_\_\_\_\_~~

~~Affidavit (specify) \_\_\_\_\_~~

~~Other (specify) \_\_\_\_\_~~

~~I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.~~

Signature:

Printed Name:

Title/Position:

Date:

### 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 November 25, 2013. Additional information was provided to IDEM on December 9, 2013 and December 18, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Minor Permit Revision No. 039-33923-00574. The staff recommends to the Commissioner that this MSOP Minor Permit Revision be approved.

### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (b) A copy of the 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](http://www.in.gov/idem)

**Appendix A: Emissions Calculations  
Summary Emissions**

Company Name: Vahala Foam, Inc.  
Address City IN Zip: 930 Herman Street, Elkhart, Indiana 46515  
Address City IN Zip: 160 County Road 15, Elkhart, Indiana 46515  
Permit Number: 039-33923-00574  
Reviewer: Brian Williams

| Unlimited Potential to Emit (tons per year) |              |              |              |                 |             |              |             |              |             |                    |        |
|---|--------------|--------------|--------------|-----------------|-------------|--------------|-------------|--------------|-------------|--------------------|--------|
| Emission Units                              | PM           | PM10         | PM2.5        | SO <sub>2</sub> | NOx         | VOC          | CO          | GHGs as CO2e | Total HAPs  | Highest Single HAP |        |
| Adhesive Application (EU-1) - Plant 1       | 7.95         | 7.95         | 7.95         | 0               | 0           | 36.52        | 0           | 0            | 0           | 0                  |        |
| Adhesive Application (EU-2) - Plant 1       | 5.51         | 5.51         | 5.51         | 0               | 0           | 24.53        | 0           | 0            | 0           | 0                  |        |
| Adhesive Application (EU-3) - Plant 1       | 5.11         | 5.11         | 5.11         | 0               | 0           | 23.75        | 0           | 0            | 5.64        | 4.23               | Hexane |
| Adhesive Application (EU-4) - Plant 2       | 3.08         | 3.08         | 3.08         | 0               | 0           | 14.16        | 0           | 0            | 0           | 0                  |        |
| Natural Gas Combustion - Plant 1            | 0.02         | 0.08         | 0.08         | 0.006           | 1.03        | 0.06         | 0.87        | 1,244        | 0.02        | 0.02               | Hexane |
| Natural Gas Combustion - Plant 2            | 0.02         | 0.06         | 0.06         | 0.005           | 0.85        | 0.05         | 0.71        | 1,026        | 0.02        | 0.02               | Hexane |
| Vehicular Traffic (VT) - Plant 1            | 0.10         | 0.02         | 0.01         | 0               | 0           | 0            | 0           | 0            | 0           | 0                  |        |
| Vehicular Traffic (VT) - Plant 2            | 0.10         | 0.02         | 0.01         | 0               | 0           | 0            | 0           | 0            | 0           | 0                  |        |
| <b>TOTALS</b>                               | <b>21.89</b> | <b>21.83</b> | <b>21.80</b> | <b>0.01</b>     | <b>1.88</b> | <b>99.07</b> | <b>1.58</b> | <b>2,271</b> | <b>5.68</b> | <b>4.27</b>        | Hexane |

| Limited Potential to Emit (tons per year) |              |              |              |                 |             |              |             |              |             |                    |        |
|---|--------------|--------------|--------------|-----------------|-------------|--------------|-------------|--------------|-------------|--------------------|--------|
| Emission Units                            | PM           | PM10         | PM2.5        | SO <sub>2</sub> | NOx         | VOC          | CO          | GHGs as CO2e | Total HAPs  | Highest Single HAP |        |
| Adhesive Application (EU-1) - Plant 1*    | 7.95         | 7.95         | 7.95         | 0               | 0           | 24.99        | 0           | 0            | 0           | 0                  |        |
| Adhesive Application (EU-2) - Plant 1     | 5.51         | 5.51         | 5.51         | 0               | 0           | 24.53        | 0           | 0            | 0           | 0                  |        |
| Adhesive Application (EU-3) - Plant 1     | 5.11         | 5.11         | 5.11         | 0               | 0           | 23.75        | 0           | 0            | 5.64        | 4.23               | Hexane |
| Adhesive Application (EU-4) - Plant 2     | 3.08         | 3.08         | 3.08         | 0               | 0           | 14.16        | 0           | 0            | 0           | 0                  |        |
| Natural Gas Combustion - Plant 1          | 0.02         | 0.08         | 0.08         | 0.006           | 1.03        | 0.06         | 0.87        | 1,244        | 0.02        | 0.02               | Hexane |
| Natural Gas Combustion - Plant 2          | 0.02         | 0.06         | 0.06         | 0.005           | 0.85        | 0.05         | 0.71        | 1,026        | 0.02        | 0.02               | Hexane |
| Vehicular Traffic (VT) - Plant 1          | 0.10         | 0.02         | 0.01         | 0               | 0           | 0            | 0           | 0            | 0           | 0                  |        |
| Vehicular Traffic (VT) - Plant 2          | 0.10         | 0.02         | 0.01         | 0               | 0           | 0            | 0           | 0            | 0           | 0                  |        |
| <b>TOTALS</b>                             | <b>21.89</b> | <b>21.83</b> | <b>21.80</b> | <b>0.01</b>     | <b>1.88</b> | <b>87.54</b> | <b>1.58</b> | <b>2,271</b> | <b>5.68</b> | <b>4.27</b>        | Hexane |

\*VOC of EU-1 is limited so that the requirements of 326 IAC 8-1-6 do not apply

**Appendix A: Emissions Calculations  
VOC/HAP and PM/PM10 Emissions  
Adhesive Coating Process (EU-1) - Plant 1**

**Company Name: Vahala Foam, Inc.  
Address City IN Zip: 930 Herman Street, Elkhart, Indiana 46515  
Address City IN Zip: 160 County Road 15, Elkhart, Indiana 46515  
Permit Number: 039-33923-00574  
Reviewer: Brian Williams**

| Material   | Density (lb/gal) | Weight % Volatile (H <sub>2</sub> O & Organics) | Weight % Water & Exempt | Weight % Organics | Volume % Water & Exempt | Weight % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Material Usage (Lb/Hr) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | PTE VOC (lbs/hour)       | PTE VOC (lbs/day) | PTE VOC (tons/year) | PTE PM/PM10 (tons/year) | **Transfer Efficiency | Pounds VOC/gal Solids | PTE PM/PM10 (lbs/hour) |  |              |  |
|--|------------------|---|-------------------------|-------------------|-------------------------|---------------------------------|------------------------|---------------------|------------------------|---|----------------------------------|--------------------------|-------------------|---------------------|-------------------------|-----------------------|-----------------------|------------------------|--|--------------|--|
| <b>Adhesive Application - EU-1</b>   |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  |                          |                   |                     |                         |                       |                       |                        |  |              |  |
| Premium Adhesive 7870  | 6.81             | 71.00%  | 40.00%                  | 31.00%            | 38.69%                  | 29.00%                          | 0.04710                | 77.40               | 24.83                  | 3.44  | 2.11                             | 7.70                     | 184.71            | 33.71               | 7.88                    | 75%                   | 7.28                  | 1.80                   |  |              |  |
| Aerosol Silicone Spray SILHF   | 5.01             | 93.50%  | 25.00%                  | 68.50%            | 18.95%                  | 6.50%                           | 0.00242                | 77.40               | 0.94                   | 4.23  | 3.43                             | 0.64                     | 15.43             | 2.82                | 0.07                    | 75%                   | 52.80                 | 0.02                   |  |              |  |
| <b>Cleaning Solvent</b>  |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>Totals for Step 1</b> |                   |                     | <b>8.34</b>             | <b>200.13</b>         | <b>36.52</b>          | <b>7.95</b>            |  |              |  |
| Cleaning Solvent 9800  | 7.01             | 100.00%   | 100.00%                 | 0.00%             | 84.26%                  | 1.00%                           | 0.00410                | 77.40               | 2.22                   | 0.00  | 0.00                             | 0.00                     | 0.00              | 0.00                | 0.00                    | 100%                  | 0.00                  | 0.00                   |  |              |  |
| <b>Potential to Emit - Worst Case Coating Stage and Cleaning Materials (Coatings are Mutually Exclusive)</b> |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>8.34</b>              | <b>200.13</b>     | <b>36.52</b>        | <b>7.950</b>            |                       |                       |                        |  | <b>1.815</b> |  |

Note: The above adhesive application information is from M039-039-25349-00574-0057, issued on March 11, 2008, but cleaning solvent has been revised since this source uses 100% exempt solution for cleaning.

**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)  
Pounds VOC per Gallon of Solids = [Density (lb/gal) \* Weight % Organics] / (Volume % Solids)  
PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency) \*8760 hours/year \*1ton/2000 lbs  
PTE PM/PM10 (lbs/hour) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency)  
Add Worst Case Coating to Cleanup Solvents = Adhesive for VOC and for Particulate Matter

**HAZARDOUS AIR POLLUTANTS**

| Material  | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Ethyl Benzene | Weight % Isocyanate Compounds | Weight % Methanol | Weight % MIBK | Weight % Toluene | Weight % Xylene | Ethyl Benzene Emissions (ton/yr) | Isocyanate Compounds Emissions (ton/yr) | Methanol Emissions (ton/yr) | MIBK Emissions (ton/yr) | Toluene Emissions (ton/yr) | Xylene Emissions (ton/yr) | Total HAP Emissions (ton/yr) |             |             |
|---|------------------|--------------------------------|---------------------|------------------------|-------------------------------|-------------------|---------------|------------------|-----------------|----------------------------------|---|-----------------------------|-------------------------|----------------------------|---------------------------|------------------------------|-------------|-------------|
| <b>Adhesive Application - EU-1</b>  |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  |   |                             |                         |                            |                           |                              |             |             |
| Premium Adhesive 7870   | 6.81             | 0.04710                        | 77.400              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.00                         |             |             |
| Aerosol Silicone Spray SILHF  | 5.01             | 0.00242                        | 77.400              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.000                        |             |             |
| <b>Cleaning Solvent</b>   |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  | <b>Totals for Step 1</b>                |                             |                         | <b>0.00</b>                | <b>0.000</b>              | <b>0.00</b>                  | <b>0.00</b> | <b>0.00</b> |
| Cleaning Solvent 9800   | 7.01             | 0.00410                        | 77.400              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.00                         |             |             |
| <b>State Potential to Emit</b>  |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  | <b>0.00</b>                             | <b>0.00</b>                 | <b>0.00</b>             | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  | <b>0.00</b> |             |
| <b>Worst Case Coating for HAP - Add Cleanup Solvent to Worst Case Coating for HAP</b> |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  | <b>0.00</b>                             | <b>0.000</b>                | <b>0.00</b>             | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  | <b>0.00</b> |             |

**METHODOLOGY**

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

**Appendix A: Emissions Calculations  
VOC/HAP and PM/PM10 Emissions  
Adhesive Coating Process (EU-2) - Plant 1**

**Company Name: Vahala Foam, Inc.  
Address City IN Zip: 930 Herman Street, Elkhart, Indiana 46515  
Address City IN Zip: 160 County Road 15, Elkhart, Indiana 46515  
Permit Number: 039-33923-00574  
Reviewer: Brian Williams**

| Material   | Density (lb/gal) | Weight % Volatile (H <sub>2</sub> O & Organics) | Weight % Water & Exempt | Weight % Organics | Volume % Water & Exempt | Weight % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Material Usage (Lb/Hr) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | PTE VOC (lbs/hour) | PTE VOC (lbs/day) | PTE VOC (tons/year) | PTE PM/PM10 (tons/year) | **Transfer Efficiency | Pounds VOC/gal Solids | PTE PM/PM10 (lbs/hour) |
|--|------------------|---|-------------------------|-------------------|-------------------------|---------------------------------|------------------------|---------------------|------------------------|---|----------------------------------|--------------------|-------------------|---------------------|-------------------------|-----------------------|-----------------------|------------------------|
| <b>Adhesive Application - EU-2</b>   |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  |                    |                   |                     |                         |                       |                       |                        |
| Premium Adhesive 7870  | 6.81             | 71.00%  | 40.00%                  | 31.00%            | 38.69%                  | 29.00%                          | 0.08450                | 30.00               | 17.26                  | 3.44  | 2.11                             | 5.35               | 128.44            | 23.44               | 5.48                    | 75%                   | 7.28                  | 1.25                   |
| Aerosol Silicone Spray SILHF   | 5.01             | 93.50%  | 25.00%                  | 68.50%            | 18.95%                  | 6.50%                           | 0.00242                | 30.00               | 0.36                   | 4.23  | 3.43                             | 0.25               | 5.98              | 1.09                | 0.03                    | 75%                   | 52.80                 | 0.01                   |
| <b>Cleaning Solvent</b>  |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  |                    |                   |                     |                         |                       |                       |                        |
| Cleaning Solvent 9800  | 6.55             | 100.00%   | 100.00%                 | 0.00%             | 78.74%                  | 0.00%                           | 0.00410                | 30.00               | 0.81                   | 0.00  | 0.00                             | 0.00               | 0.00              | 0.00                | 0.00                    | 100%                  | #DIV/0!               | 0.00                   |
| <b>Totals for Step 1</b>   |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>5.60</b>        | <b>134.42</b>     | <b>24.53</b>        | <b>5.51</b>             |                       |                       | <b>1.26</b>            |
| <b>Potential to Emit - Worst Case Coating Stage and Cleaning Materials (Coatings are Mutually Exclusive)</b> |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>5.60</b>        | <b>134.42</b>     | <b>24.53</b>        | <b>5.508</b>            |                       |                       | <b>1.258</b>           |

Coating applied using spray application and manual (hand wiping) cleaning. Overspray controlled by dry filters.

**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)  
 Pounds VOC per Gallon of Solids = [Density (lb/gal) \* Weight % Organics] / (Volume % Solids)  
 PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
 PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
 PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency) \*8760 hours/year \*1ton/2000 lbs  
 PTE PM/PM10 (lbs/hour) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency)  
 Add Worst Case Coating to Cleanup Solvents = Adhesive for VOC and for Particulate Matter

**HAZARDOUS AIR POLLUTANTS**

| Material  | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Ethyl Benzene | Weight % Isocyanate Compounds | Weight % Methanol | Weight % MIBK | Weight % Toluene | Weight % Xylene | Ethyl Benzene Emissions (ton/yr) | Compound s Emissions (ton/yr) | Methanol Emissions (ton/yr) | MIBK Emissions (ton/yr) | Toluene Emissions (ton/yr) | Xylene Emissions (ton/yr) | Total HAP Emissions (ton/yr) |
|---|------------------|--------------------------------|---------------------|------------------------|-------------------------------|-------------------|---------------|------------------|-----------------|----------------------------------|-------------------------------|-----------------------------|-------------------------|----------------------------|---------------------------|------------------------------|
| <b>Adhesive Application - EU-2</b>  |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  |                               |                             |                         |                            |                           |                              |
| Premium Adhesive 7870   | 6.81             | 0.08450                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                          | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.00                         |
| Aerosol Silicone Spray SILHF  | 5.01             | 0.00242                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                          | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.000                        |
| <b>Cleaning Solvent</b>   |                  |                                |                     |                        |                               |                   |               |                  |                 |                                  |                               |                             |                         |                            |                           |                              |
| Cleaning Solvent 9800   | 6.55             | 0.00410                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%         | 0.00%            | 0.00%           | 0.00                             | 0.00                          | 0.00                        | 0.00                    | 0.00                       | 0.00                      | 0.00                         |
| <b>State Potential to Emit</b>  |                  |                                |                     |                        |                               |                   |               |                  |                 | <b>0.00</b>                      | <b>0.000</b>                  | <b>0.00</b>                 | <b>0.00</b>             | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  |
| <b>Worst Case Coating for HAP - Add Cleanup Solvent to Worst Case Coating for HAP</b> |                  |                                |                     |                        |                               |                   |               |                  |                 | <b>0.00</b>                      | <b>0.000</b>                  | <b>0.00</b>                 | <b>0.00</b>             | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  |

**METHODOLOGY**

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

**Appendix A: Emissions Calculations  
VOC/HAP and PM/PM10 Emissions  
Adhesive Coating Process (EU-3) - Plant 1**

**Company Name: Vahala Foam, Inc.  
Address City IN Zip: 930 Herman Street, Elkhart, Indiana 46515  
Address City IN Zip: 160 County Road 15, Elkhart, Indiana 46515  
Permit Number: 039-33923-00574  
Reviewer: Brian Williams**

| Material   | Density (lb/gal) | Weight % Volatile (H <sub>2</sub> O & Organics) | Weight % Water & Exempt | Weight % Organics | Volume % Water & Exempt | Weight % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Material Usage (Lb/Hr) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | PTE VOC (lbs/hour)       | PTE VOC (lbs/day) | PTE VOC (tons/year) | PTE PM/PM10 (tons/year) | **Transfer Efficiency | Pounds VOC/gal Solids | PTE PM/PM10 (lbs/hour) |
|--|------------------|---|-------------------------|-------------------|-------------------------|---------------------------------|------------------------|---------------------|------------------------|---|----------------------------------|--------------------------|-------------------|---------------------|-------------------------|-----------------------|-----------------------|------------------------|
| <b>Adhesive Application - EU-3</b>   |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  |                          |                   |                     |                         |                       |                       |                        |
| Premium Adhesive 7870  | 6.81             | 71.00%  | 40.00%                  | 31.00%            | 38.69%                  | 29.00%                          | 0.04710                | 40.00               | 12.83                  | 3.44  | 2.11                             | 3.98                     | 95.46             | 17.42               | 4.07                    | 75%                   | 7.28                  | 0.93                   |
| Premium Adhesive 7130  | 6.84             | 72.00%  | 40.00%                  | 32.00%            | 38.86%                  | 28.00%                          | 0.04710                | 10.00               | 3.22                   | 3.58  | 2.19                             | 1.03                     | 24.74             | 4.52                | 0.99                    | 75%                   | 7.82                  | 0.23                   |
| Aerosol Silicone Spray SILHF   | 5.01             | 93.50%  | 25.00%                  | 68.50%            | 18.95%                  | 6.50%                           | 0.00242                | 50.00               | 0.61                   | 4.23  | 3.43                             | 0.42                     | 9.97              | 1.82                | 0.04                    | 75%                   | 52.80                 | 0.01                   |
| <b>Cleaning Solvent</b>  |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>Totals for Step 1</b> |                   |                     |                         |                       |                       |                        |
| Cleaning Solvent 9800  | 6.55             | 100.00%   | 100.00%                 | 0.00%             | 78.74%                  | 0.00%                           | 0.00410                | 50.00               | 1.34                   | 0.00  | 0.00                             | 0.00                     | 0.00              | 0.00                | 0.00                    | 100%                  | #DIV/0!               | 0.00                   |
| <b>Potential to Emit - Worst Case Coating Stage and Cleaning Materials (Coatings are Mutually Exclusive)</b> |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>5.42</b>              | <b>130.16</b>     | <b>23.75</b>        | <b>5.105</b>            |                       | <b>1.166</b>          |                        |

Coating applied using spray application and manual (hand wiping) cleaning. Overspray controlled by dry filters.

**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)  
 Pounds VOC per Gallon of Solids = [Density (lb/gal) \* Weight % Organics] / (Volume % Solids)  
 PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
 PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
 PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency) \*8760 hours/year \*1ton/2000 lbs  
 PTE PM/PM10 (lbs/hour) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency)  
 Add Worst Case Coating to Cleanup Solvents = Adhesive for VOC and for Particulate Matter

**HAZARDOUS AIR POLLUTANTS**

| Material  | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Ethyl Benzene | Weight % Isocyanate Compounds | Weight % Methanol | Weight % Hexane | Weight % Toluene | Weight % Xylene | Ethyl Benzene Emissions (ton/yr) | Isocyanate Compounds Emissions (ton/yr) | Methanol Emissions (ton/yr) | Hexane Emissions (ton/yr) | Toluene Emissions (ton/yr) | Xylene Emissions (ton/yr) | Total HAP Emissions (ton/yr) |             |
|---|------------------|--------------------------------|---------------------|------------------------|-------------------------------|-------------------|-----------------|------------------|-----------------|----------------------------------|---|-----------------------------|---------------------------|----------------------------|---------------------------|------------------------------|-------------|
| <b>Adhesive Application - EU-3</b>  |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  |   |                             |                           |                            |                           |                              |             |
| Premium Adhesive 7870   | 6.81             | 0.04710                        | 40.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.00                         |             |
| Premium Adhesive 7130   | 6.84             | 0.04710                        | 10.000              | 0.00%                  | 0.00%                         | 0.00%             | 30.00%          | 10.00%           | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 4.23                      | 1.41                       | 0.00                      | 5.64                         |             |
| Aerosol Silicone Spray SILHF  | 5.01             | 0.00242                        | 50.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.000                        |             |
| <b>Cleaning Solvent</b>   |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>Totals for Step 1</b>                |                             |                           |                            |                           |                              |             |
| Cleaning Solvent 9800   | 6.55             | 0.00410                        | 50.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                    | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.00                         |             |
| <b>State Potential to Emit</b>  |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>0.00</b>                             | <b>0.00</b>                 | <b>0.00</b>               | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  | <b>0.00</b> |
| <b>Worst Case Coating for HAP - Add Cleanup Solvent to Worst Case Coating for HAP</b> |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>0.00</b>                             | <b>0.000</b>                | <b>0.00</b>               | <b>4.23</b>                | <b>1.41</b>               | <b>0.00</b>                  | <b>5.64</b> |

**METHODOLOGY**

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

**Appendix A: Emissions Calculations  
VOC/HAP and PM/PM10 Emissions  
Adhesive Coating Process (EU-4) - Plant 2**

**Company Name: Vahala Foam, Inc.  
Address City IN Zip: 930 Herman Street, Elkhart, Indiana 46515  
Address City IN Zip: 160 County Road 15, Elkhart, Indiana 46515  
Permit Number: 039-33923-005  
Reviewer: Brian Williams**

| Material   | Density (lb/gal) | Weight % Volatile (H <sub>2</sub> O & Organics) | Weight % Water & Exempt | Weight % Organics | Volume % Water & Exempt | Weight % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Material Usage (Lb/Hr) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | PTE VOC (lbs/hour) | PTE VOC (lbs/day) | PTE VOC (tons/year) | PTE PM/PM10 (tons/year) | **Transfer Efficiency | Pounds VOC/gal Solids | PTE PM/PM10 (lbs/hour) |             |
|--|------------------|---|-------------------------|-------------------|-------------------------|---------------------------------|------------------------|---------------------|------------------------|---|----------------------------------|--------------------|-------------------|---------------------|-------------------------|-----------------------|-----------------------|------------------------|-------------|
| <b>Adhesive Application - EU-4</b>   |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  |                    |                   |                     |                         |                       |                       |                        |             |
| Premium Adhesive 7870  | 6.81             | 71.00%  | 40.00%                  | 31.00%            | 38.69%                  | 29.00%                          | 0.04710                | 30.00               | 9.62                   | 3.44  | 2.11                             | 2.98               | 71.59             | 13.07               | 3.06                    | 75%                   | 7.28                  | 0.70                   |             |
| Aerosol Silicone Spray SILHF   | 5.01             | 93.50%  | 25.00%                  | 68.50%            | 18.95%                  | 6.50%                           | 0.00242                | 30.00               | 0.36                   | 4.23  | 3.43                             | 0.25               | 5.98              | 1.09                | 0.03                    | 75%                   | 52.80                 | 0.01                   |             |
| <b>Cleaning Solvent</b>  |                  |   |                         |                   |                         |                                 |                        |                     |                        |   | <b>Totals for Step 1</b>         |                    |                   | <b>3.23</b>         | <b>77.57</b>            | <b>14.16</b>          | <b>3.08</b>           |                        | <b>0.70</b> |
| Cleaning Solvent 9800  | 6.55             | 100.00%   | 100.00%                 | 0.00%             | 78.74%                  | 0.00%                           | 0.00410                | 30.00               | 0.81                   | 0.00  | 0.00                             | 0.00               | 0.00              | 0.00                | 0.00                    | 100%                  | NA                    | 0.00                   |             |
| <b>Potential to Emit - Worst Case Coating Stage and Cleaning Materials (Coatings are Mutually Exclusive)</b> |                  |   |                         |                   |                         |                                 |                        |                     |                        |   |                                  | <b>3.23</b>        | <b>77.57</b>      | <b>14.16</b>        | <b>3.08</b>             |                       |                       | <b>0.70</b>            |             |

Coating applied using spray application and manual (hand wiping) cleaning. Overspray controlled by dry filters.

**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)  
 Pounds VOC per Gallon of Solids = (Density (lb/gal) \* Weight % Organics) / (Volume % Solids)  
 PTE VOC (pounds/hour) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
 PTE VOC (pounds/day) = Pounds of VOC/Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
 PTE VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 PTE PM/PM10 (tons/year) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency) \*8760 hours/year \*1ton/2000 lbs  
 PTE PM/PM10 (lbs/hour) = Max. (units/hour) \* Gal of Mat (gal/unit) \* Density (lbs/gal) \* (1- Weight % Volatile) \* (1-Transfer efficiency)  
 Add Worst Case Coating to Cleanup Solvents = Adhesive for VOC and for Particulate Matter

**HAZARDOUS AIR POLLUTANTS**

| Material  | Density (Lb/Gal) | Gallons of Material (gal/unit) | Maximum (unit/hour) | Weight % Ethyl Benzene | Weight % Isocyanate Compounds | Weight % Methanol | Weight % Hexane | Weight % Toluene | Weight % Xylene | Ethyl Benzene Emissions (ton/yr) | Isocyanate Compound s Emissions (ton/yr) | Methanol Emissions (ton/yr) | Hexane Emissions (ton/yr) | Toluene Emissions (ton/yr) | Xylene Emissions (ton/yr) | Total HAP Emissions (ton/yr) |             |             |             |
|---|------------------|--------------------------------|---------------------|------------------------|-------------------------------|-------------------|-----------------|------------------|-----------------|----------------------------------|--|-----------------------------|---------------------------|----------------------------|---------------------------|------------------------------|-------------|-------------|-------------|
| <b>Adhesive Application - EU-4</b>  |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  |  |                             |                           |                            |                           |                              |             |             |             |
| Premium Adhesive 7870   | 6.81             | 0.04710                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                     | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.00                         |             |             |             |
| Aerosol Silicone Spray SILHF  | 5.01             | 0.00242                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                     | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.000                        |             |             |             |
| <b>Cleaning Solvent</b>   |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>Totals for Step 1</b>                 |                             |                           | <b>0.00</b>                | <b>0.000</b>              | <b>0.00</b>                  | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |
| Cleaning Solvent 9800   | 6.55             | 0.00410                        | 30.000              | 0.00%                  | 0.00%                         | 0.00%             | 0.00%           | 0.00%            | 0.00%           | 0.00                             | 0.00                                     | 0.00                        | 0.00                      | 0.00                       | 0.00                      | 0.00                         |             |             |             |
| <b>State Potential to Emit</b>  |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>0.00</b>                              | <b>0.00</b>                 | <b>0.00</b>               | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  | <b>0.00</b> |             |             |
| <b>Worst Case Coating for HAP - Add Cleanup Solvent to Worst Case Coating for HAP</b> |                  |                                |                     |                        |                               |                   |                 |                  |                 |                                  | <b>0.00</b>                              | <b>0.000</b>                | <b>0.00</b>               | <b>0.00</b>                | <b>0.00</b>               | <b>0.00</b>                  | <b>0.00</b> |             |             |

**METHODOLOGY**

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

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only - Plant 1  
MM BTU/HR <100**

**Company Name:** Vahala Foam, Inc.  
**Address City IN Zip:** 930 Herman Street, Elkhart, Indiana 46515  
**Address City IN Zip:** 160 County Road 15, Elkhart, Indiana 46515  
**Permit Number:** 039-33923-00574  
**Reviewer:** Brian Williams

|                                 |               |                                 |                   |  |
|---------------------------------|---------------|---------------------------------|-------------------|--|
| Heat Input Capacity<br>MMBtu/hr | HHV<br>mmBtu  | Potential Throughput<br>MMCF/yr | <b>Heat Input</b> | <b>Unit</b>                            |
| 2.40                            | mmscf<br>1020 | 20.6                            | 2.40              | Radiant Space Heaters R1-R12 - Plant 1 |

| Emission Factor in lb/MMCF    | Pollutant |       |               |      |                    |      |      |
|-------------------------------|-----------|-------|---------------|------|--------------------|------|------|
|                               | PM*       | PM10* | direct PM2.5* | SO2  | NOx                | VOC  | CO   |
|                               | 1.9       | 7.6   | 7.6           | 0.6  | 100<br>**see below | 5.5  | 84   |
| Potential Emission in tons/yr | 0.02      | 0.08  | 0.08          | 0.01 | 1.03               | 0.06 | 0.87 |

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

| Emission Factor in lb/MMcf    | HAPs - Organics |                 |              |           |           |
|-------------------------------|-----------------|-----------------|--------------|-----------|-----------|
|                               | Benzene         | Dichlorobenzene | Formaldehyde | Hexane    | Toluene   |
|                               | 2.1E-03         | 1.2E-03         | 7.5E-02      | 1.8E+00   | 3.4E-03   |
| Potential Emission in tons/yr | 2.164E-05       | 1.237E-05       | 7.729E-04    | 1.855E-02 | 3.504E-05 |

| Emission Factor in lb/MMcf    | HAPs - Metals |           |           |           |           |
|-------------------------------|---------------|-----------|-----------|-----------|-----------|
|                               | Lead          | Cadmium   | Chromium  | Manganese | Nickel    |
|                               | 5.0E-04       | 1.1E-03   | 1.4E-03   | 3.8E-04   | 2.1E-03   |
| Potential Emission in tons/yr | 5.153E-06     | 1.134E-05 | 1.443E-05 | 3.916E-06 | 2.164E-05 |

|                     |                     |
|---------------------|---------------------|
| <b>Total HAPs =</b> | <b>0.02</b>         |
| <b>Single HAP =</b> | <b>0.019 Hexane</b> |

| Emission Factor in lb/MMcf            | Greenhouse Gas |          |          |
|---------------------------------------|----------------|----------|----------|
|                                       | CO2            | CH4      | N2O      |
|                                       | 120,000        | 2.3      | 2.2      |
| Potential Emission in tons/yr         | 1,237          | 2.37E-02 | 2.27E-02 |
| Summed Potential Emissions in tons/yr | 1,237          |          |          |
| CO2e Total in tons/yr                 | 1,244          |          |          |

**Methodology**

All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu  
 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/1,000 MMBtu  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 CO2e (tons/yr) = 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  
Natural Gas Combustion Only - Plant 2  
MM BTU/HR <100**

**Company Name:** Vahala Foam, Inc.  
**Address City IN Zip:** 930 Herman Street, Elkhart, Indiana 46515  
**Address City IN Zip:** 160 County Road 15, Elkhart, Indiana 46515  
**Permit Number:** 039-33923-00574  
**Reviewer:** Brian Williams

|                                 |             |                      |                   |   |
|---------------------------------|-------------|----------------------|-------------------|---|
| Heat Input Capacity<br>MMBtu/hr | HHV         | Potential Throughput | <b>Heat Input</b> | <b>Unit</b>                             |
|                                 | mmBtu       | MMCF/yr              | 1.58              | Radiant Space Heaters R13-R16 - Plant 2 |
|                                 | mmscf       |                      | 0.40              | Thermocycle Heater R17 - Plant 2        |
| <b>1.98</b>                     | <b>1020</b> | 17.0                 |                   |   |

| Emission Factor in lb/MMCF    | Pollutant |       |               |      |                    |      |      |
|-------------------------------|-----------|-------|---------------|------|--------------------|------|------|
|                               | PM*       | PM10* | direct PM2.5* | SO2  | NOx                | VOC  | CO   |
|                               | 1.9       | 7.6   | 7.6           | 0.6  | 100<br>**see below | 5.5  | 84   |
| Potential Emission in tons/yr | 0.02      | 0.06  | 0.06          | 0.01 | 0.85               | 0.05 | 0.71 |

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

| Emission Factor in lb/MMcf    | HAPs - Organics |                 |              |           |           |
|-------------------------------|-----------------|-----------------|--------------|-----------|-----------|
|                               | Benzene         | Dichlorobenzene | Formaldehyde | Hexane    | Toluene   |
|                               | 2.1E-03         | 1.2E-03         | 7.5E-02      | 1.8E+00   | 3.4E-03   |
| Potential Emission in tons/yr | 1.785E-05       | 1.020E-05       | 6.377E-04    | 1.530E-02 | 2.891E-05 |

| Emission Factor in lb/MMcf    | HAPs - Metals |           |           |           |           |
|-------------------------------|---------------|-----------|-----------|-----------|-----------|
|                               | Lead          | Cadmium   | Chromium  | Manganese | Nickel    |
|                               | 5.0E-04       | 1.1E-03   | 1.4E-03   | 3.8E-04   | 2.1E-03   |
| Potential Emission in tons/yr | 4.251E-06     | 9.353E-06 | 1.190E-05 | 3.231E-06 | 1.785E-05 |

| Emission Factor in lb/MMcf            | Greenhouse Gas |          |          |
|---------------------------------------|----------------|----------|----------|
|                                       | CO2            | CH4      | N2O      |
|                                       | 120,000        | 2.3      | 2.2      |
| Potential Emission in tons/yr         | 1,020          | 1.96E-02 | 1.87E-02 |
| Summed Potential Emissions in tons/yr | 1,020          |          |          |
| CO2e Total in tons/yr                 | 1,026          |          |          |

|                     |                     |
|---------------------|---------------------|
| <b>Total HAPs =</b> | <b>0.02</b>         |
| <b>Single HAP =</b> | <b>0.015 Hexane</b> |

**Methodology**

All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu  
 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/1,000 MMBtu  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 CO2e (tons/yr) = 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: Emission Calculations  
Fugitive Dust Emissions - Paved Roads**

**Company Name:** Vahala Foam, Inc.  
**Address City IN Zip:** 930 Herman Street, Elkhart, Indiana 46515  
**Address City IN Zip:** 160 County Road 15, Elkhart, Indiana 46515  
**Permit Number:** 039-33923-00574  
**Reviewer:** Brian Williams

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

| Type  | Maximum number of vehicles per day | Number of one-way trips per day per vehicle | Maximum trips per day (trip/day) | Maximum Weight Loaded (tons/trip) | Total Weight driven per day (ton/day) | Maximum one-way distance (feet/trip) | Maximum one-way distance (mi/trip) | Maximum one-way miles (miles/day) | Maximum one-way miles (miles/yr) |
|---|------------------------------------|---|----------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|----------------------------------|
| Vehicle (entering plant) (one-way trip) - Plant 1 | 4.0                                | 1.0   | 4.0                              | 1.0                               | 4.0                                   | 300                                  | 0.057                              | 0.2                               | 83.0                             |
| Vehicle (leaving plant) (one-way trip) - Plant 1  | 4.0                                | 1.0   | 4.0                              | 1.0                               | 4.0                                   | 300                                  | 0.057                              | 0.2                               | 83.0                             |
| Vehicle (entering plant) (one-way trip) - Plant 2 | 4.0                                | 1.0   | 4.0                              | 1.0                               | 4.0                                   | 300                                  | 0.057                              | 0.2                               | 83.0                             |
| Vehicle (leaving plant) (one-way trip) - Plant 2  | 4.0                                | 1.0   | 4.0                              | 1.0                               | 4.0                                   | 300                                  | 0.057                              | 0.2                               | 83.0                             |
| <b>Totals</b>                                     |                                    |   | <b>8.0</b>                       |                                   | <b>8.0</b>                            |                                      |                                    | <b>0.5</b>                        | <b>165.9</b>                     |

Average Vehicle Weight Per Trip = 

|      |
|------|
| 15.0 |
|------|

 tons/trip  
Average Miles Per Trip = 

|      |
|------|
| 0.04 |
|------|

 miles/trip

Unmitigated Emission Factor, Ef =  $[k * (sL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

|           | PM    | PM10   | PM2.5   |   |
|-----------|-------|--------|---------|---|
| where k = | 0.011 | 0.0022 | 0.00054 | lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)  |
| W =       | 15.0  | 15.0   | 15.0    | tons = average vehicle weight (provided by source)  |
| sL =      | 9.7   | 9.7    | 9.7     | g/m <sup>2</sup> = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3) |

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext =  $E_f * [1 - (p/4N)]$   
where p = 

|     |
|-----|
| 125 |
|-----|

 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
N = 

|     |
|-----|
| 365 |
|-----|

 days per year

|                                   | PM    | PM10  | PM2.5  |         |
|-----------------------------------|-------|-------|--------|---------|
| Unmitigated Emission Factor, Ef = | 1.377 | 0.275 | 0.0676 | lb/mile |
| Mitigated Emission Factor, Eext = | 1.259 | 0.252 | 0.0618 | lb/mile |

| Process   | Unmitigated PTE of PM (tons/yr) | Unmitigated PTE of PM10 (tons/yr) | Unmitigated PTE of PM2.5 (tons/yr) | Mitigated PTE of PM (tons/yr) | Mitigated PTE of PM10 (tons/yr) | Mitigated PTE of PM2.5 (tons/yr) |
|---|---------------------------------|-----------------------------------|------------------------------------|-------------------------------|---------------------------------|----------------------------------|
| Vehicle (entering plant) (one-way trip) - Plant 1 | 0.06                            | 0.01                              | 0.00                               | 0.05                          | 0.01                            | 0.00                             |
| Vehicle (leaving plant) (one-way trip) - Plant 1  | 0.06                            | 0.01                              | 0.00                               | 0.05                          | 0.01                            | 0.00                             |
| Vehicle (entering plant) (one-way trip) - Plant 2 | 0.06                            | 0.01                              | 0.00                               | 0.05                          | 0.01                            | 0.00                             |
| Vehicle (leaving plant) (one-way trip) - Plant 2  | 0.06                            | 0.01                              | 0.00                               | 0.05                          | 0.01                            | 0.00                             |
| <b>Totals</b>                                     | <b>0.23</b>                     | <b>0.05</b>                       | <b>0.01</b>                        | <b>0.21</b>                   | <b>0.04</b>                     | <b>0.01</b>                      |

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particle Matter (<2.5 um)  
PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

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

**TO:** Rebecca L Stahly  
Vahala Foam, Inc.  
PO Box 2602, 930 Herman Street  
Elkhart, IN 46515

**DATE:** January 2, 2014

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

**SUBJECT:** Final Decision  
First Minor Revision to MSOP  
039-33923-00574

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:  
Daniel P Vahala, Responsible Official  
Doug Elliott, Consultant  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 6/13/2013

# Mail Code 61-53

|                            |   |   |   |  |
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| 1    |                | Rebecca L Stahly Vahala Foam, Inc. 930 Herman St, PO Box 2602 Elkhart IN 46515-2602 (Source CAATS)     |         |                  |                            |               |                 |          |          |          |                |
| 2    |                | Daniel P Vahala Chairman Vahala Foam, Inc. 930 Herman St, PO Box 2602 Elkhart IN 46515-2602 (RO CAATS) |         |                  |                            |               |                 |          |          |          |                |
| 3    |                | Elkhart City Council and Mayors Office 229 South Second Street Elkhart IN 46516 (Local Official)       |         |                  |                            |               |                 |          |          |          |                |
| 4    |                | Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)               |         |                  |                            |               |                 |          |          |          |                |
| 5    |                | Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)            |         |                  |                            |               |                 |          |          |          |                |
| 6    |                | Mr. Doug Elliott D & B Environmental Services, Inc. 401 Lincoln Way West Osceola IN 46561 (Consultant) |         |                  |                            |               |                 |          |          |          |                |
| 7    |                |  |         |                  |                            |               |                 |          |          |          |                |
| 8    |                |  |         |                  |                            |               |                 |          |          |          |                |
| 9    |                |  |         |                  |                            |               |                 |          |          |          |                |
| 10   |                |  |         |                  |                            |               |                 |          |          |          |                |
| 11   |                |  |         |                  |                            |               |                 |          |          |          |                |
| 12   |                |  |         |                  |                            |               |                 |          |          |          |                |
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| 14   |                |  |         |                  |                            |               |                 |          |          |          |                |
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